

FOREST MANAGEMENT PLAN



for

Two Rivers Park City of Priest River

December 2024



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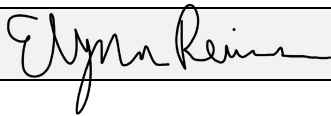
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Forest Management Plan

for

City of Priest River – Two Rivers Park

Date of Original Plan: December 2024

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An F&W Forestry Services Company

Introduction

The primary purpose of this plan is to serve as a comprehensive guide for the maintenance and sustainability of the forestland under this ownership. It functions both as an educational resource, offering insights into various aspects of forest management, and as an action plan, applying this knowledge to the forest's unique characteristics.

The plan includes many separate components. The first and foremost element is the identification of your objectives. All recommended activities are then based upon these ownership goals. Secondly, the current condition of the forestland is described, based upon a qualitative field inventory and observations. Recommendations for future management activities are then presented. Finally, an action plan and Appendices are included to detail future management opportunities and to provide additional information on various aspects of the property.

As you read this plan, please keep in mind that it is intended to serve only as a general guideline. It is designed to be flexible and will need to evolve over time.

Landowner Goals and Objectives

Forest management objectives combine to reflect the desires and goals of the landowner. This management plan is based upon achieving the following set of objectives:

1. To promote a forest that is healthy and resilient to threats from fire, insect, and disease for future generations to enjoy and manage effectively.
2. To maintain or improve the growth, health, and vigor of the forest.
3. To maintain and enhance wildlife habitat.
4. To maintain and promote aesthetic values, recreation and community gathering spaces.
5. To promote native vegetation and natural species composition that are well suited to the site, and minimize and control noxious weeds.
6. To achieve these goals through active forest management using sound principles.
7. Manage the property in alignment with the values as stated in the Two Rivers Park Mission Statement, and support the vision outlined in the Two Rivers Park Master Plan.

SECTION I. Background Information

Property Description

Total Ownership Acres: 38.420¹

Total Forested Acres: 28.5

Legal Description:

25-56N-5W GOV LOT 4, NENE LYING S OF GNRR, GOV LOT 5 S OF GNRR LESS PT TAX 89

Parcel Number:

RPR00000250501A

Fire Protection District: West Pend Oreille

FPD Phone Number: (208) 448–2035

Adjacent Land Use:

The City of Priest River was gifted the property in March of 2022. Located on the southeast edge of the city, the property is situated at the confluence of the Pend Oreille River and Priest River. Nearby land is highly variable, with a combination of urban residential and urban commercial, rural residential, publicly owned recreation sites, as well as industrial and non-industrial timberlands present. The parcel immediately north of the property is zoned mixed use residential. Stimson Lumber Company owns and operates a mill south of the parcel, just across the Pend Oreille River.

The city of Priest River and the surrounding area has seen increasing development over recent years, further highlighting the need to manage the forestland for optimal forest health and public recreation to preserve valuable public open spaces.

Accessibility:

This 38.420-acre parcel is currently not open to the public for access. Boner Park West, located just east of the Pend Oreille River on the north shore of the river, is currently the best access point and is slated to become the main access point for the property once public access is granted.

Within the parcel, a network of old skid trails and abandoned roads provide access throughout the property. With some improvements these trails can be re-utilized. The entirety of the forestland can be accessed using conventional, ground-based harvesting equipment.

¹ From Bonner County Assessor records.

Topography, Elevation, Aspect:

The site is primarily flat with banks sloping east to the Priest River and south down to the Pend Oreille River. Due to the property's river frontage, this site contains important wetland habitat. Erosion and deposition, and to some extent, Lake Missoula Ice Age floods are prominent geological forces that shaped the topography. Elevation of the property is approximately 2,070.

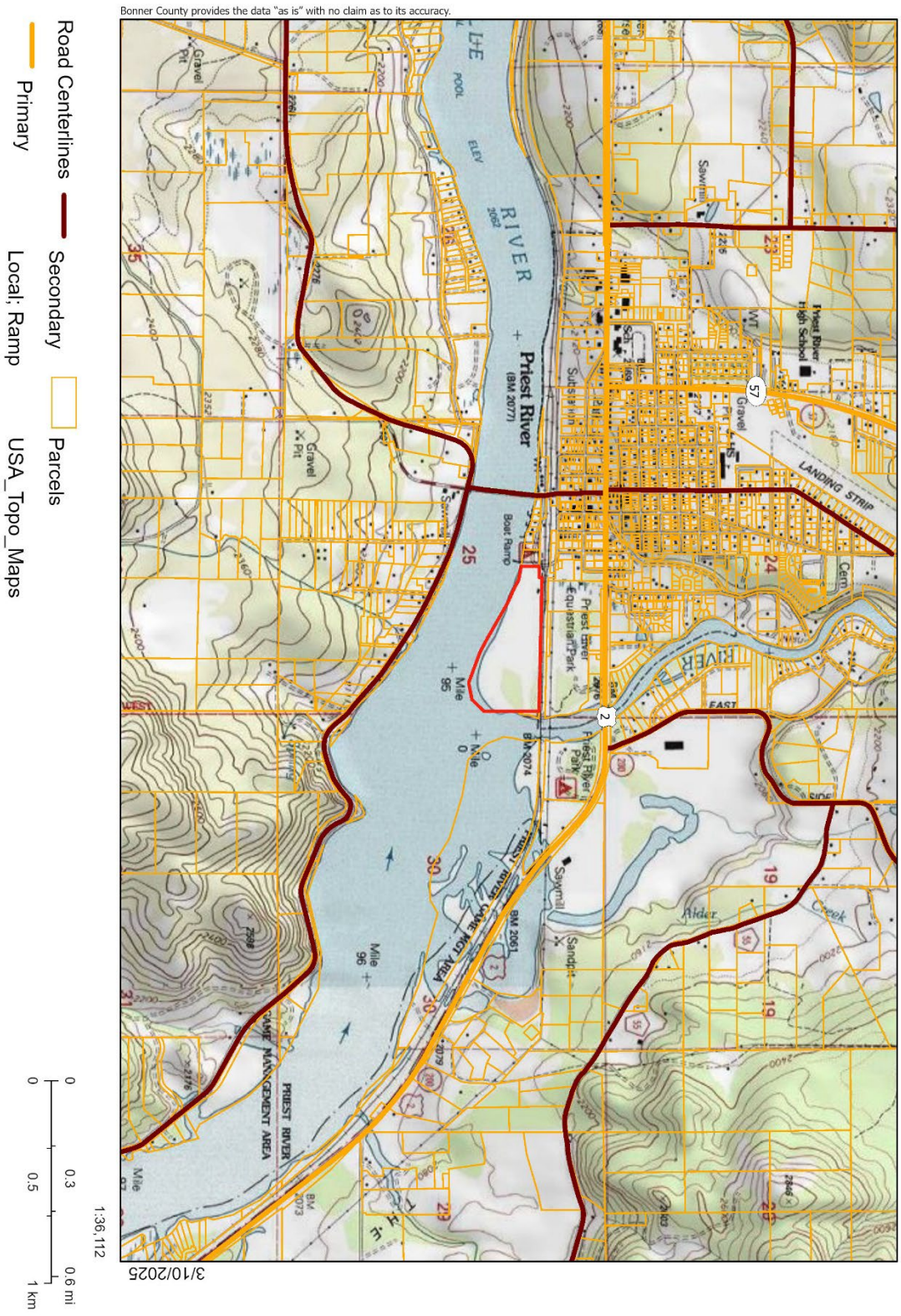


Photo: View from the bank of the Pend Oreille River, looking southwest.

Two Rivers Park Aerial



Two Rivers Park Topographic



Special Sites and Social Considerations

A. Archeological, Cultural and Historic Sites

A “special site” designation examines biological, geological, ecological, cultural, or historical features unique to an individual ownership. Examples of special sites may contain cultural, historical, or archaeological significance, including artifacts. Certain geological, biological, or ecological features may also qualify as a special site.

Some special sites, such as an American Indian camp or burial site, may be protected by law. Others, such as an old homestead, an awesome viewpoint or a favorite tree or rock outcropping, may only require awareness or use restrictions to protect it from degradation or vandalism.

Evidence of older cultural resources, like indigenous sites, are not obvious because they have been masked over time by changing land uses and vegetative cover. It often takes a trained individual to identify these sites.

No significant archeological or cultural sites were observed during fieldwork. Historically, the property was owned and operated by Joslyn Manufacturing, Inc. as a mill and pole treatment facility.² The mill was in operation from the early 1900’s through the mid/late 1900’s.

The City of Priest River Two Rivers Park property holds incredible historical value, due to its history and the city’s commitment to the preservation of open space.

² Site history information gathered from Joslyn Park Master Plan; <https://priestriver-id.gov/two-rivers-park>.



Photo: 1945 postcard of the confluence of Priest and Pend Oreille Rivers, by Ross Hall.³



Photo: Postcard of Priest River, approximate date 1980.⁴

³ PG 9, Postcard Collection, University of Idaho Library Special Collections and Archives, <http://www.lib.uidaho.edu/special-collections/>, Source Identifier: pg_9_01_17a.

B. Aesthetics

It cannot be overstated just how exceptional this property is; it is truly one of a kind. With spectacular riverfront views, amazing recreational opportunities, and valuable wildlife habitat, one feels honored to be able to spend any amount of time in this gorgeous landscape.

The property consists of natural forest land with diverse and persistent forest, shrub and herbaceous cover and special habitat features such as water, wetland, edge effect, snags, rocky outcroppings, grassy openings and other attributes that provide year-round wildlife habitat. Views of the Pend Oreille River and surrounding watershed can be enjoyed from various vista-points around the property.

Management recommendations and actions taken therein will aim to achieve the aesthetic goals outlined in the “Joslyn Park Master Plan” document, while maintaining the current natural feel of the property. The property is slated to become a much enjoyed community space, and thus it is imperative to think about the long-term aesthetics when conducting management activities. To preserve the natural characteristics of the existing site it will become particularly important to prevent future outbreak of insect and disease to the best of the City’s ability, working within budgetary and capacity constraints. Excerpts from the Joslyn Park Master Plan that discuss park vision can be found in the Appendix.

C. Recreation

The property currently does not allow public access or recreation on site, but the site has potential to accommodate a myriad recreational opportunities. After acquisition of the property the City and their Planning Team began to work closely together to develop a conceptual park plan. Throughout 2022 this plan was developed, and a large portion of these developments included fleshing out the recreational component for the park.

A Steering Committee was formed to help establish goals for the park and to review public comment and feedback. Synthesizing the comments received during public outreach proved to be very helpful in directing the ultimate park concept. The amenities and recreational opportunities that received the most support and public enthusiasm include but is not limited to: RV Park, Marina, Waterfront Trails, Playground, Restrooms, Concert Venue/Pavilion, and a Swimming Beach.

Accessible outdoor spaces are incredibly important and provide immense value for communities. The vision statement for the park centers around creating a community

⁴ "Priest River, Idaho.", Northwest Historical Postcards Collection, University of Idaho Library Digital Collections, <https://www.lib.uidaho.edu/digital/postcards/items/nwpostcards889.html>

gathering space and providing a variety of recreational opportunities; any forest management activities recommended will be informed by this key and foundational component of the park plan goals and values. See the Joslyn Park Master Plan map for full scope and location of proposed recreational features.

D. Forest of Recognized Importance

According to the American Forest Foundation, a Forest of Recognized Importance (FORI) represents a globally, regionally, and nationally significant large landscape area of exceptional ecological, social, cultural, or biological value. These forests are evaluated at the landscape level, rather than the stand level, and are recognized for a combination of unique values, rather than a singular attribute. Social or cultural values might include historical sites or forest-based economic factors that support local communities. Biological values worthy of protection include rare or unusual plant or animal species. FORI examples include National Parks and Monuments, State and County Parks, Natural Area Preserves, Natural Resource Conservation Areas, and other similar forested areas of major significance.

This forestland does not currently lie within or adjoin a Forest of Recognized Importance. This information is offered here should the City of Priest River ever decide to pursue this type of certification in the future.

E. Conservation-based Estate/Legacy Planning or Land Transfer

Two national forest conservation concerns include the conversion of forestland into other uses and the fragmentation of forests into smaller and smaller units. Municipalities can put property into a conservation easement; it would be remiss not to include information on this option available for preserving this forestland. A conservation easement typically excludes most development and is a way to ensure that a given property stays intact as forestland for perpetuity. The Forest Legacy Program, jointly sponsored by the U.S.D.A. Forest Service and Idaho Department of Lands, offers a potential opportunity for a conservation easement. In addition, local land trusts, such as the Kaniksu Land Trust or Trust for Public Land, can provide advice and direction for protecting forestland.

F. Organizations for Forest Landowners

Not applicable for the goals and objectives of this future municipal park.

Soil, Water and Air Protection

A. Soils *(Refer to the soil survey map in the Appendix.)*

The USDA-Natural Resources Conservation Service Web Soil Survey identifies two major soil-mapping units. A soils map and associated information is included in the Appendix.

The two soils present are Mission silt loam, 0 to 2 percent slopes, and Wrencoe silty clay, 0 to 2 percent slopes. Mission silt loam, 0 to 2 percent slopes, is formed in silty glacial lake-laid sediment derived from mixed sources and has a mantle of volcanic ash and loess (wind blown soil). The surface layer is grayish brown, neutral silt loam about 2 inches thick. The upper part of the subsoil is yellowish brown, slightly acid silt loam about 9 inches thick and the lower part is mottled, light gray and pale brown, medium acid, dense silt loam about 9 inches thick.

Permeability of this soil is very slow, and combined with a fairly shallow hard pan, limits rooting depth to 10 or 20 inches. Runoff is slow and the hazard of water erosion is slight.

This soil is used for cultivated crops, hay and pasture, but is also used for timber production, livestock grazing, wildlife habitat and recreation.

Western red cedar, western white pine, grand fir and Douglas-fir are the main woodland species on this soil type. The main limitations for timber harvesting are seasonal wetness and susceptibility of the soil to compaction. Plant competition and hazard of wind throw due to a relatively shallow hardpan are the main concerns in the production of timber.

Wrencoe silty clay, 0 to 2 percent slopes, is found on low stream terraces of flood plains and bottom lands. It is a very deep, very poorly drained organic soil which is found in depressional areas on drainage ways, flood plains and bottom lands. It formed in organic material derived dominantly from herbaceous plants but includes some woody material. It is found at elevations from 2,050 to 3,000 feet. The average annual precipitation is about 30 inches. The average annual temperature is about 43 degrees Fahrenheit and the average frost-free period is about 90 days.

Permeability of this soil is moderate. Effective rooting depth is limited by a seasonal high water table that is at a depth of 0 to 4 feet from January to December. Available water capacity is very high. Runoff is very slow and the hazard of water erosion is none. This soil is subject to very long periods of flooding in winter and spring.

Water erosion across the forestland can be minimized by re-establishing plant cover, such as grass or clover, on exposed soils, also helps to prevent soil erosion, as well as the establishment of noxious weeds, and provides a food source for wildlife and cattle.

Soil compaction can happen wherever machinery or livestock travel on the land, especially when the soil is saturated. On forestlands, compaction can be caused by the use of wheeled skidders or tracked equipment in wet conditions, although tracked machinery generally causes less compaction. Compaction can be minimized by scheduling harvest activities during dry or frozen weather, or when significant snow is present. Wherever possible, utilizing existing roads, skid trails and landings will help limit the area affected by soil compaction.

In general, these soil types are well-suited for conifer growth and offer moderate to high forest productivity. They also are suited for wildlife habitat and recreation.

B. Roads and Stream Crossings

Controlling sediment loading in streams is particularly critical since it negatively impacts water quality and fish habitat downstream. To minimize potential sedimentation, special attention must be paid to preventing soil erosion. Erosion can also damage road surfaces and wash soil into stream channels. The key to controlling erosion is minimizing the area on which water runs over bare ground - these areas include road surfaces, skid trails, and other areas with high erosion potential.

There are no running streams on the parcel, but the parcel borders the Pend Oreille River, Priest River and contains approximately 10 acres of wetland. Proper planning, designing, constructing, and maintaining forest roads can significantly decrease or eliminate erosion and sedimentation into streams. Roads constructed for the purpose of forest management or other maintenance activities on the Two Rivers Park property should adhere to Best Management Practices⁵ guidelines for road construction.

C. Water and Wetlands

Idaho Forest Practices Act defines stream as a natural water course with a definite bed and bank that carries water continuously or intermittently. This property contains extensive river frontage and important wetland habitat, a map of which is located in the Appendix. The area along the Pend Oreille River bank and adjoining uplands define the property's riparian area. The riparian area is a sensitive environment, and this area is protected during forest management activities under the Idaho Forest Practices Rules through the utilization of a Streamside Protection Zone (SPZ).

The construction of new roads, landings, and skid trails is generally not permitted in the SPZ along streams.

⁵ *Forest roads* (no date) *Forestry Management Practices* | *UI Extension*. Available at: <https://www.uidaho.edu/extension/idahoforestrybmps/topic-areas/forest-roads>.

Plans are under way to conduct restoration activities and bank stabilization work along the bank of the Pend Oreille River. Review the Joslyn Park Master Plan or contact the City of Priest River for more information on design and engineering considerations for these projects.

The U.S. Fish and Wildlife Service's National Wetland Inventory shows two distinct wetland areas on the property. The prominent wetland area is located in the south and southeast area of the property. 1.42 Acres is Freshwater Emergent Wetland habitat; these wetlands are usually dominated by perennial plants, and surface water persists throughout the growing season in most years. 8.17 acres is considered Freshwater Forested/Shrub Wetland; these wetlands are characterized by woody vegetation, and surface water will be present for extended periods particularly in the early growing season but will be absent by the end of the growing season most years. This area supports a mix of native hardwoods and conifer trees. A

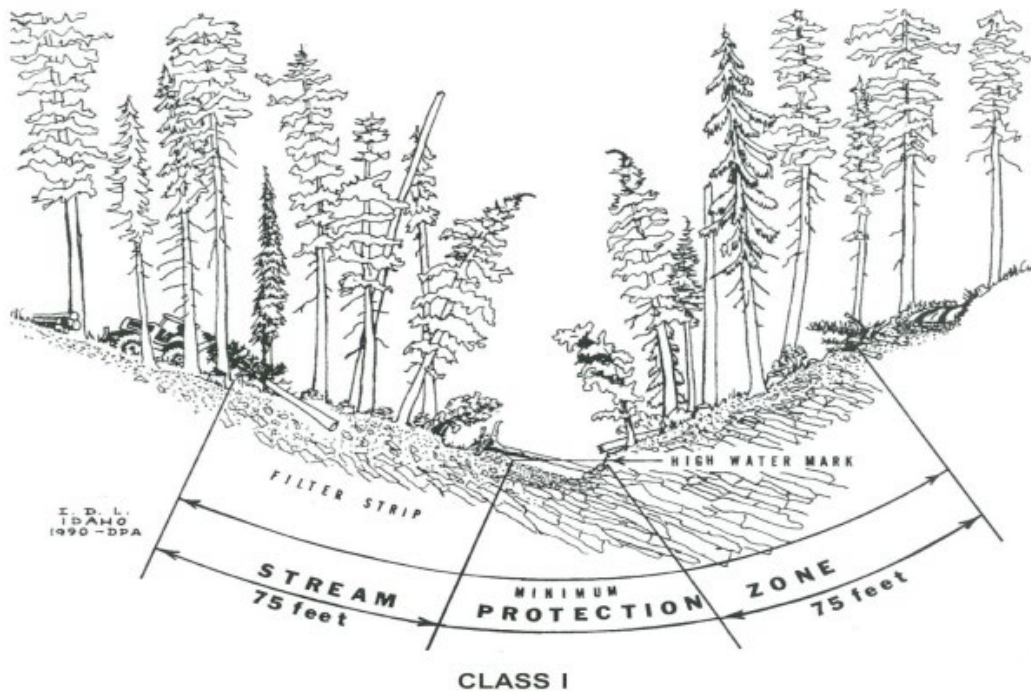


Photo: Graphic showing the minimum stream protection zone for a Class 1 Stream. Wider SPZ's are often recommended for streams or lakes with a fishery or domestic use, such as the Pend Oreille River.⁶

⁶Source: Idaho Department of Lands SPZ document. https://www.idl.idaho.gov/wp-content/uploads/sites/2/forestry/forester-forums/fpa6_rev.pdf

D. Carbon Sequestration and Climate Resilience

Our forests play a very important role in global carbon cycling and forest management activities can dramatically influence a forest's ability to capture and store (sequester) carbon.

Generally speaking, practices that improve long-term forest productivity and utilize forest products wisely store much more carbon than would be the case in an unmanaged forest. For example, timber harvesting releases carbon through fuels used in the harvesting process and slash treatments, but it also moves a large amount of carbon to where it can be stored for many years, such as in lumber for building construction. In turn, the newly planted forest grows and begins to store more carbon. In fact, young growing trees sequester carbon at higher rates than older trees.

Increasing rates of development in the area poses a real threat to wildlife habitat continuity, land carbon sequestration potential, water quality and more. Managing this parcel as a municipal park assures that much of the property will be retained in a largely undeveloped condition and that it will continue to provide ecosystem services such as carbon storage.

Fish, Wildlife and Biodiversity

A. Fish and Wildlife *(Indicate the presence of fish and wildlife. Consider current and future desired habit conditions for fish and wildlife.)*

A wide variety of wildlife species inhabit and utilize this property. During fieldwork, multiple wildlife species were observed including pine squirrels, various songbirds, chipmunk, and a pileated woodpecker. There were recent signs of deer present. River otters have been noted by citizen naturalists. Birds of prey such as osprey and bald eagle are known to nest here or nearby the property, and the adjacent river hosts bull trout, a Threatened species.

The following wildlife species are likely to be present on the property during portions of the year:

elk	Coopers hawk
hairy woodpecker	raccoon
downy woodpecker	snowshoe hare
red-tailed hawk	coyote
chipmunk	Stellar's jay
squirrel	white-tailed deer
mule deer	red-tailed hawk
waterfowl species	moose
pocket gopher	wild turkey
shrew	meadow vole
bat	porcupine
ruffed grouse	black bear
bald eagle	osprey
owls	raven
cougar	various song birds
Bald Eagle	Golden Eagle

This property boasts multiple outstanding wildlife habitat features. Terrain features, edge habitat, diverse vegetation types, and the property size and proximity to other forested ownerships serves well for many wildlife species. The following paragraphs discuss important habitat features found on the property and suggest ways to augment the value of these resources.

Habitats of particular value include areas of mature forest canopy with large trees' pockets of closed canopy timber, thickets of smaller trees, open field, forest edge adjacent to open forage area, and proximity to water.

Another important feature for wildlife on this property is the variety of plant communities this land supports. Within this diversity, hiding and thermal cover are well represented, provided by trees with full crowns, pockets of closed-canopy forest, and thickets of sapling-sized trees, while a variety of forage is offered by small openings, harvested areas with planted grasses and recently disturbed sites.

One of the more outstanding habitat feature occurs at the transition area between distinctly different plant communities, known as an ecotone⁷ or edge habitat. Ecotones typically foster highly diverse wildlife activity. Ecotones and edge habitats are well-represented on this land between the various timber types, river adjacency, pockets of natural regeneration, and the grassy areas.

⁷ Ecotone is the technical term for the transition area where two ecological communities meet. Ecotones are commonly places of high biological diversity.



Photo: The Pend Oreille River is a popular fishing ground for fish eating birds of prey such as the bald eagle and osprey.

Snags (standing dead trees) and large defective or rotten trees serve as another key habitat that supports a variety of species. As many as 56 vertebrate species are known to inhabit snags and rotten trees in the Inland Northwest. Bluebirds, nuthatches, creepers, and woodpeckers are a few examples of species especially attracted to areas with numerous snags. Cavities created by woodpeckers are often used later by secondary cavity-nesters. (Secondary cavity-users are those that cannot excavate cavities for themselves. Along with various bird species, other examples of common secondary cavity-nesters include flying squirrels and bats.)

Wildlife biologists estimate one to six snags per acre, clumped or dispersed, are needed by most cavity nesters. Generally, larger snags offer more useful habitat for a longer period of time and trees greater than 12 inches DBH⁸ are preferred.

Suitable snags are plentiful on this property. Damaging agents, including bark beetles, stem decay and root disease have created snags within the ownership. The presence of these snags is one of the few benefits associated with the tree mortality that is occurring on portions of your forest. It is important to preserve some of these snags, but these should be strategically preserved so as not to pose a hazard to the public once public access is granted. Grouping

⁸ DBH equates to the diameter at breast height or 4.5 feet from the ground.

snags with live trees protects cavity-nesting species, reduces the likelihood of snags falling prematurely, and minimizes safety hazards.

Large downed dead trees (greater than 10" diameter) create another valuable wildlife habitat component when they are found on the ground. Retention and careful handling during operations are critical to maintaining their ecological benefits.

Large organic debris (LOD) is utilized by small species like forest amphibians as habitats, as perches, and as drumming sites by species like grouse. LOD also enhances the soil as it decays. Furthermore, decay organisms themselves often serve as a food source for other species, such as black bears. It is recommended to leave the largest downed woody debris intact and avoid damaging it during operations.

B. Threatened and Endangered Species (*Address rare, threatened and endangered species.*)

According to the U.S. Fish and Wildlife Service Species by Location Report , the following endangered or threatened fauna are potentially affected by activities in this location:

- North American Wolverine, *Gulo gulo luscus* Threatened
- Bull Trout, *Salvelinus confluentus* Threatened
- Monarch Butterfly, *Danaus plexippus* Proposed Threatened
- Suckley's Cuckoo Bumble Bee, *Bombus suckleyi* Proposed Threatened

The project area is nearby the former range for Woodland caribou, an endangered species. This property is located approximately 20 air-miles south of the Selkirk Mountain Woodland Caribou Recovery Zone and it does not contain preferred woodland caribou habitat.

This property also is located 20 air-miles south of the Selkirk Grizzly Bear Recovery Zone, and it could be possible that it is used by few, if any, grizzly bears. During spring, grizzly bear seek low-elevation riparian sites and wet meadows, but this property is not in an area where grizzly bears would frequent because of the highway proximity and human development surrounding.

There are Bald and/or Golden Eagles on the property, both of which are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Appropriate regulations should be followed while planning and implementing activities on the property. For information on how to best avoid and minimize disturbance to nesting bald eagles, review the National Bald Eagle Management Guidelines.⁹ Ensure management activities are

⁹ (2007) *National Bald Eagle Management Guidelines*. Available at: https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines_0.pdf.

informed by reproductive activities of bald eagles and take necessary mitigation measures so as to minimize impact on the migration and roost sites.

With mindful management techniques this property will continue to provide habitat for many special plants and animals, including potentially rare and sensitive species.

Management Guidelines for Maintaining Essential Elements of Wildlife Habitat:

Snags and Logs: Strive for 6 foraging snags/acre and 1 – 2 cavity nesting snags/acre. Favor snags and logs greater than 15 ft. long/tall and greater than 12” in diameter. A variety of size classes is beneficial.

Large Trees: Keep old-growth trees, including defective trees. Strive for a minimum average of 2 – 3 per acre, dispersed or in clumps.

Openings: Openings that contain very few trees and brush can vary from 1/10 to 5 acres in size. They can comprise 5 – 15% of the landscape. Aim for irregular shapes.

Patches: Patches of thick shrubs and/or small trees to promote nesting and hiding cover can be 30 – 50 ft. across and preferably 100 – 300 ft. in length. Aim for 10 – 20% of the landscape.

Shrubs: Maintain a diverse mix of native species including desirable browse and food species for wildlife. Keep them positioned in clumps and beyond any adjacent tree’s overhanging limbs (dripline).

Timing: Fall is often the best time for work to avoid interfering with wildlife nesting and denning, or triggering insect outbreaks.

Seeding: On disturbed soils or areas of burned soil, use native and certified weed-free seed mixes.

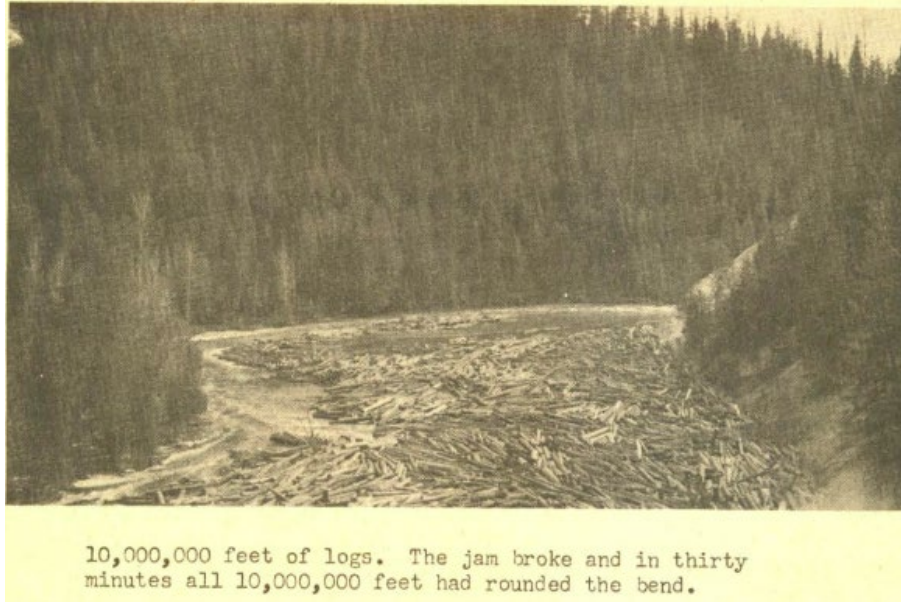
SECTION 2. Forest Descriptions, Desired Conditions & Recommendations

Past Management, Forest Health & Fire

A. Forest History and Past Management

The character of this forest is the result of events that have taken place over a long period of time. Remnant stumps, old roadcuts, tree spacing, and species composition provide evidence of these past events.

Prior to early settlement days, fire was likely the most influential force on forest development. Generally speaking, a fire regime of frequent low intensity fires most likely influenced the forest on this parcel. Whether caused by lightning or set by Native Americans to manipulate vegetation, these frequent and uncontrolled fires maintained a more open forest across the landscape than we are accustomed to seeing today. Historic forests in this regime contained large, old fire-resistant trees such as western larch and ponderosa pine and there were fewer Douglas-fir and grand fir. In the late 1800s and early 1900s, timber harvesting and subsequent fires cleared this property, as it did in many areas of North Idaho. This initiated a new period in forest development where wildfires were controlled and the fire regimes that shaped the previous forests interrupted.



Historical photo of a log drive (Photo from Bonner Conty Historical Society).¹⁰

¹⁰ Photo, page 2, "The First Home Town Primer", A publication of the Bonner County Historical Society; July 1974.

The geology of this parcel was undoubtedly shaped by anthropomorphic forces in addition to the wind, water and ice that erode and shape the land. Before to the invention of the log truck and the system of permanent logging roads and well maintained highways that we're accustomed to seeing today, logs were transported to the mill via a log drive. When logging operations moved into the mountains in the early 1900's, lumber companies faced transportation challenges. To transport logs from the woods to the mill, often the only option was a network of flumes, creeks, rivers and lakes utilizing the power of water to float and move logs. From 1916 through the 1940's, booms of logs in Priest Lake would be towed to the Priest River outlet and sent down the river to the town of Priest River, where they were sorted along with the rest of the logs from upriver on the Pend Oreille River.

In more modern history, it appears that several selective logging jobs as well as commercial manufacturing facilities operated on the property have influenced forest development. Exact dates and timeframes of all past management activities are not currently known. The Two Rivers Park property, now owned and managed by the City of Priest River, was previously a mill and pole treatment facility owned and operated by Joslyn Manufacturing, Inc. The facility was operational between approximately 1920 and 1958, during which time creosote was utilized for pole treatment process leading to contamination of portions of the site.

The west portion of the property is characterized by more pines approximately 60 years old, which have grown in since the closing of the mill and pole treatment facility. The trees on the east half of the parcel are slightly more mature second growth after the initial property clearing, making some of these trees approximately 120+ years old.

The contamination in the creosote affected area was voluntarily remediated in 2018 by the previous owners. This area is primarily grass, noxious weeds and brush.

B. Forest Health

The forest is a complex system characterized by interactions among numerous components, including living organisms and non-living elements like soil and climate. Assessing whether these interactions are effectively sustaining a healthy forest environment is a complex task, with ownership goals playing a crucial role in this evaluation.

In line with ownership goals, a healthy forest is broadly defined as one that is relatively resilient to threats from insects, diseases and fires, while providing recreation, valuable wildlife habitat and aesthetic values.

Further evaluation of forest health involves consideration not only of individual trees, but to larger issues such as changes in forest structure and development, declines in native species diversity (both plant and animal), changing land uses and changing climatic conditions. It is

not just about individual trees. A dying tree can be an important element of a healthy forest, but it can also be a symptom of larger-scale forest health concerns.

For example, fire helps a forest by creating snag habitat, increasing species diversity and improving conditions for native species. However, when fire exclusion is practiced and trees become overcrowded, wildfire and insect damage turn into serious threats as a result, potentially causing environmental harm and reducing productivity.

The most prevalent insect and disease agents found on this ownership are outlined in the following paragraphs.

- **Root disease** (also referred to as “root rot”) is a very common malady in this region and has a major impact on this forest. It is a fungus that spreads underground from the roots of infected trees to the roots of healthy trees via root contact or by tiny root-like structures. This often results in clumps of dead and dying trees, known as “root rot pockets.” Root disease may also kill single trees scattered throughout the forest. There are several kinds of root disease, including *Armillaria*, *Annosus* and *Laminated*. Infection can occur in all tree species found in the region, but mainly impacts grand fir and Douglas-fir.



Photo: Roots of an uprooted grand fir show signs of Laminated Root Rot.

Root rot kills trees by destroying the root structure. Infected trees may survive for many years following infection, gradually declining in vigor as their ability to absorb water and nutrients is reduced. Indications of root disease include slowed tree growth, crowns fading from dark green to pale yellow, older needles falling off prematurely, the presence of excessive pitch at ground level, dark brown staining of the bark within

three feet of the ground, and Douglas-fir and grand fir snags in the forest (particularly in clumps). Additionally, wind-throw is more common in root disease pockets.

Root disease persists in the soil, and infection will continue to occur as long as susceptible trees are present. Although susceptible trees can reach merchantable size in root rot areas, forest productivity is reduced when the proportion of susceptible species is high.

Long-term strategic forest management indicates that the most effective way to reduce root disease is to shift species composition to increase the percentage of less susceptible tree species and reduce the number of susceptible trees. Thus, western larch and pines should be favored over Douglas-fir, grand fir or western hemlock trees when harvesting or thinning in a mixed-conifer forest. If only Douglas-fir, grand fir and hemlock are present, then an excellent long-term management approach is to remove most of these trees in small patches to create openings, which can be planted with western larch or pine seedlings. *Care must be taken if thinning in root disease.* Research has shown that thinning in root disease affected areas can in fact exacerbate the spread of the disease. In a root disease pocket, it is recommended to create a group select opening, and transitioning species composition to root rot resistant species such as western larch, white pine, and ponderosa pine.

Why is root disease such a major forest health problem in our area? Forest ecologists suspect its prevalence in the Inland Northwest partially results from man's suppression of wildfire and from logging practices since European settlement, which caused an overall change in tree species mix. Research and historical records indicate that western white pine, western larch and ponderosa pine once played a much larger role in our local ecology, while Douglas-fir and grand fir were far less common than they are today.

On this ownership, root disease is affecting the mature grand fir component in the east half of the property. Since grand fir is one of the dominant species in this portion of the property and is highly susceptible, root disease will continue to spread here. Specific recommendations to mediate the effect of root disease are included in the management unit information.

- The ***fir engraver bark beetle*** (*Scolytus* spp.) infests mainly grand fir and is attacking grand fir on this property. The fir engraver usually attacks grand fir trees that have been stressed for a variety of reasons including root rot, dense stand conditions, sunscald, logging damage, or even droughty weather. Because of these factors, grand fir has suffered substantial mortality throughout much of North Idaho in the past decade.



Photo: Egg galleries of Scolytus beetle (left), beetle entry holes on standing grand fir (right).

The beetles feed in the phloem layer of inner bark, which carries food made in the leaves down to the branches, trunk and roots. Trees are often top-killed. White colored pitch streaming from boreholes on the stem of the tree is another indicator. Grand fir that manages to survive repeated attacks begins to develop rough, scaly bark and pockets of rot within the stem. Specific recommendations to mitigate or disincentivize fir engraver beetle attacks are included in the management unit information.

- Indian paint fungus (*Echinodontium tinctorium*) is a fungus that causes decayed heartwood and results in weakened or hollowed stems. It is affecting a handful of grand fir on the property. In its advanced stages the fungus rust-red, and punky or stringy in nature. Trees infected with Indian paint fungus heartrot become weakened and are prone to breakage, broken tops and frost cracks.
- Minor evidence of ***Western Pine Beetle*** attacks were sporadically observed in large ponderosa pine. These beetles generally are opportunists that take advantage of trees under stress from dense stand conditions and storm damage. Like the fir engraver, feeding larvae girdle and often kill the tree. Also, the tree is inoculated with blue stain fungi (carried by the beetle) which clogs the water transport system and stains the wood.

Western pine beetle attack trees during summer and pitch tubes and re-brown boring dust indicate successful attacks. Egg galleries wind both laterally and longitudinally

in a maze-like, serpentine pattern. Woodpeckers often flake away bark in search of over-wintering larvae.

Western pine beetle attacks on pine trees complicate harvesting and log marketing because the blue stain fungus greatly diminishes market value of the wood. In fact, the price paid by sawmills for blue stained pine is currently less than the costs associated with logging and delivery. Thus, once a pine tree is killed by bark beetles, it may already be too late to salvage its sawlog value, but it can usually be sold as pulp.

- Mortality from **pine engraver beetle (*Ips pini*)** is present, and the potential for future outbreak is high due to the presence of small diameter ponderosa pine and lodgepole pine on the property. It is critical to understand proper timing of management activities to prevent pine engraver beetle outbreaks. Outbreaks are most severe in small diameter ponderosa and lodgepole pines. Pine engraver outbreaks are often associated with the availability of green pine slash in the spring. It is recommended to avoid creating slash from about December through early August. Green slash created during this timeframe can attract adult beetles, which will lay eggs underneath bark, increasing the risk of greater damage when the adult beetles emerge. Consult the Idaho Department of Lands “Forest Pest Fact Sheet” for more information on how to reduce likelihood of a beetle outbreak.¹¹
- With the presence of mature Douglas-fir, it will be important to monitor annually for ***Douglas-fir beetle***. Douglas-fir beetle typically breeds in windthrown, scorched, or weakened Douglas-fir. Outbreaks usually start due to external disturbances such as wind events, fire or other climatic stresses. Large diameter trees are usually attacked first, where adult beetles feed under the bark and excavate egg galleries. Douglas-fir beetle outbreaks are usually short in duration, but mortality can be severe.

There are multiple management options to explore to prevent or manage a Douglas-fir beetle outbreak. Reducing the stand density can reduce susceptibility to Douglas-fir beetle. Additionally, increasing the proportion of other species (decreasing the proportion of Douglas-fir) in the stand can reduce beetle susceptibility as well as mitigate for other forest health issues like root disease and defoliators.

Another management option for prevention of Douglas-fir beetle is the use of antiaggregation pheromones. Bark beetles emit pheromones to communicate and mass attack trees. Pheromones are chemicals that signal to other members of the same

¹¹ Idaho Department of Lands “Forest Pest Fact Sheet”, https://www.idl.idaho.gov/wp-content/uploads/sites/2/2020/03/Pine_Engraver_FINAL_3_19_2020.pdf.

species. Antiaggregation pheromones are used to signal to the bark beetles that a given tree is fully occupied. The antiaggregation pheromone for Douglas-fir beetle is methylcyclohexenone (MCH).

Guide to ordering and administering MCH pouches*

Formulation: There are a few different formulations of MCH out there, but Idaho Department of Lands forest health specialists usually recommend the ‘double bubble’ 1000 mg plastic bubble caps. This is because it involves less labor and less plastic material than the classic ‘single bubbles’ and they work just as well. Alternatively there is a ‘splat MCH’ which is applied with a caulking gun.

Rate: The rate of application depends on the formulation. If the double bubbles are to be used, they should be applied at a rate of 15-20 per acre. Bubbles should be applied in a grid, with one stapled every 54 feet regardless of the tree species (it can even be a dead tree, it’s more about the spacing when doing a grid application). If there are any green down DF, tag those too. Bubbles can be applied heavier around the perimeter of a unit, and extra bubbles applied to trees over 24” DBH as well.

Timing: The best time to apply MCH in North Idaho is about the 3rd week in April, before temps consistently hit 60 degrees. MCH pouches need to be applied before beetles fly in the spring. Ultimately this depends on temperatures more than dates, so if it is a very cool spring, it can be pushed back a little. Most DFBs will emerge and fly to attack new trees in late April/May. Sometimes, there is a second flight in July- but it is MUCH smaller than the peak spring flight and not usually responsible for a lot of mortality. The pheromone pouches are effective for one season.

Ordering: Contact the Idaho Department of Lands forest health specialist for information on where and how to order MCH pouches.

Application: The bubbles should be stapled 6-8 feet up on the north side or in a shaded place, in a grid pattern predetermined by application rate chosen.

**Consult a consulting forester or forest entomologist if considering Douglas-fir beetle management using MCH.*

- Another important disease to consider is ***white pine blister rust***. Although white pine only comprises a small portion of the tree species in this forest, this disease was observed on several trees.

Introduced from Europe in the early 1900s, white pine blister rust decimated western white pine populations throughout the west. Infection occurs only through green needles, during periods of high humidity, when it spreads through the branch and into the bole, consequently girdling the tree. The result is outright death or weakening of the tree so that other pests, such as bark beetles, can attack and kill the tree.

Western white pine that have dead tops, branches with reddish brown needles, and/or heavy white resin flowing from the boles are probably infected with white pine blister rust. In the spring, the fungus often sporulates at the canker margins producing yellow to orange spores.

Western white pine blister rust does not spread from white pine to white pine, but needs an alternate host to perpetuate - most commonly a species of *Ribes* (gooseberry). This, coupled with the fact that the spores can travel very long distances, makes the disease very difficult to control

Although blister rust is an aggressive pathogen, there are methods to maintain western white pine within the ecosystem. For example, remove mature trees with bole infections during harvest operations and favor leaving trees that appear to be free of blister rust or, in very rare cases, have survived infection. These trees may be resistant to the rust and, therefore, an important seed source for sustained management of western white pine.

Since white pine seedlings that have genetic resistance to blister rust are available, planting is another management decision that can offset the impact of blister rust. White pine needs a moderate amount of sunlight to become established and grow; consequently, small openings are usually necessary for successful planting.

When performing pre-commercial thinning operations, it is important to recognize white pine blister rust and favor only those trees showing no sign of the disease. Since a majority of infections take place in the lower branches, it is also beneficial to prune white pine trees, especially during the sapling/pole stage.

- ***Western Gall Rust*** was noticed affecting a few young ponderosa pine seedlings and was noted on older trees as well. This disease forms round swellings, or galls, on branches or stems. Branches or small stems are killed when insects, porcupines or other fungi attack galled tissue. Galls growing on the trunk often forms crooks or forks that weakens the tree stem, thus increasing the potential of breakage from wind or snow.

The forest is a dynamic system; change is constantly occurring. Natural growth and low levels of tree mortality are perpetually bringing about subtle changes, while dramatic changes often arise from sources of major disturbance such as logging, wildfire, and insect epidemics. All these factors play a critical role in maintaining forest health. Insects and diseases are to the forest what predators and scavengers are to the animal kingdom: they remove the weak and unfit and although they are not helping the individual, they help to improve the overall strength of the population. Many times we can substitute forest management activities (for example logging and planting) for these naturally occurring processes. In this manner, we can

simulate ecologically inherent processes, while generating benefits (revenue, fire hazard reduction, wildlife habitat, etc.) that are compatible with your objectives.

C. INVASIVE SPECIES

Noxious weeds are defined as introduced, non-native plants that spread readily to displace native vegetation. They have the potential to cause serious environmental problems, including loss of biodiversity, alteration of soil characteristics, threat to rare plants and sensitive areas, and reduced wildlife habitat, just to name a few.

By state law, Idaho landowners are required to control listed noxious weeds¹². More information on weed identification, control requirements and control methods is available through the State of Idaho Noxious Weed Program website and the Bonner County Weed Control Department (208) 255-5681.

Noxious weeds throughout the forestland are minimal. They mostly occur in the grassy area in the northwest corner of the property. Common mullein, Canada thistle, spotted knapweed, common tansy and meadow hawkweed were observed.

It is important to understand the damages and risks associated with the spread of undesirable plants, whether associated with human traffic, management activities or normal biological spread. An excellent source of knowledge about noxious weeds is the Idaho Panhandle Noxious Weed Handbook¹³. Much of the information in the following paragraphs can be found in this booklet.

The first step in developing a weed management program is to identify areas containing noxious weeds, or other weeds of concern, and then identifying a control option (or options) best suited to each area.

A good weed management plan often will utilize several techniques.

1. Mechanical methods, which involving hand-pulling, mowing, mulching, tilling, hoeing, and burning, can physically slow weed growth but usually will not eliminate their presence. Mowing weeds before seeds develop will help prevent weeds from reproducing in this manner. This also can help reduce fire danger and improve

¹² In the State of Idaho, a noxious weed control act was passed to identify invasive plant species and protect Idaho lands from destructive noxious weeds. Under Idaho State Statute Title 22 Agriculture and Horticulture, Chapter 24-Noxious Weeds, Section 22-2407-it is the landowner's responsibility to control noxious weeds on their lands, at their expense, to preserve the landscape and provide quality wildlife habitat and functioning watersheds.

¹³ A PDF of this booklet can be found online at <https://www.kcgov.us/413/Noxious-Weeds>.

aesthetics. If hand-pulling is used for individual plants, it is important to ensure removal of the taproot to prevent sprouting.

2. Chemical spraying of herbicides can be used to slow or kill weed growth. When using herbicides, you are legally required to follow the label directions and precautions.
3. Biological control involves using living organisms to control weed growth. Organisms include insects that chew plants or diseases that damage or kill weeds. Even livestock, such as goats, sheep, cattle and llamas, can be used eat plants, but careful livestock management must be used to prevent over-grazing, which can make weed problems worse. Although biological controls can slow weed growth, they seldom eliminate the entire plant.

Cultural control utilizes methods to improve growing conditions for desirable plants that can out-compete weed growth. Providing adequate amounts of fertilizer and water are two methods to help desirable plants out-grow weeds.

When conducting future management or development activities, consider measures to help prevent new weeds from becoming established. One preventative measure that can be very successful is to seed exposed soil with grass or other weed-free vegetation as soon as possible after disturbance and when adequate soil moisture is present.

D. FIRE RESILIENT FORESTS

Native plant communities were historically shaped by relatively frequent fire intervals. As numerous fires across the Inland Northwest have reminded us during recent drought years, fires will continue to burn across this landscape, even with vastly improved fire-suppression techniques.

How a fire will behave depends on weather, topography, and fuels (three factors commonly known as the Fire Behavior Triangle). Since we cannot control weather or topography, we must look to meet this challenge with vegetation (fuels) management and fire-suppression tactics.

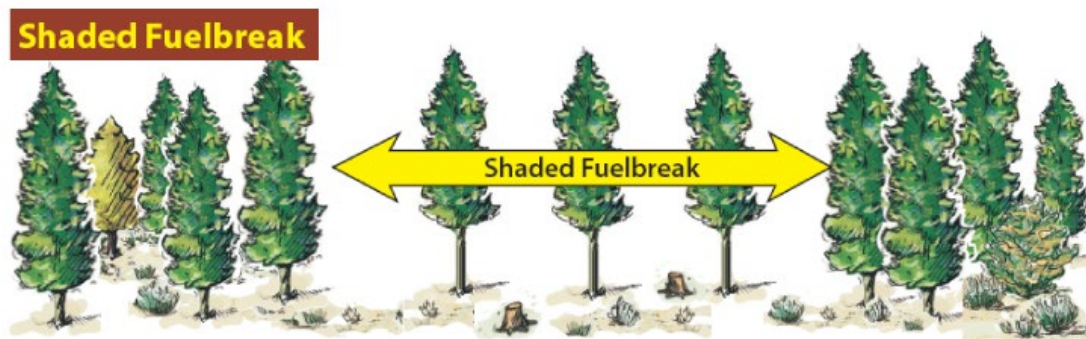
Fuels: Forest-vegetation fuels fall into three general categories: surface or ground fuels (including leaf litter), ladder fuels that allow fire to climb, and the forest canopy. The amount and type of these fuels will determine how difficult a fire is to control and the degree of resource damage, or benefit, it will have. For example, a fire is typically easiest to control in a forest having an open canopy and light surface fuels, and hardest to control when ladder fuels allow flames to climb trees and spread from crown to crown. Once burning in a dense canopy, the fire can spread rapidly and become virtually impossible to control. Furthermore, these fuel-rich fires cause the most damage to the forest. A high intensity fire burning in heavy fuels and concentrated pine needle duff destroys organic soil layers, damages tree roots that

are typically insulated by the soil, and kills older trees whose thick bark would normally protect them.

Under the right circumstances, fire is not always harmful. In areas of lighter fuels where fire behavior will often categorize as lower intensity, fire can hugely benefit the site by consuming medium and fine ground fuels, increasing soil fertility and stimulating growth and reproduction of fire-dependent species. However, decades of fire exclusion can allow fuel to accumulate in forest communities to the point where a fire would seriously threaten the surrounding community, as well as damage the site's natural resources and ecological processes. Identifying areas where fuels have built to this point is an important first step in creating a more fire-resilient landscape.

This property contains all three forest vegetation fuel types in a mosaic of concentrations. As conditions are currently, fire suppression efforts will be challenging due to heavy fuel loading and challenging access. Additionally, the ignition potential on this site is incredibly high. The railroad adjacency is concerning as railcars can throw sparks or unknowingly drag material which start fires. Perhaps most important to note is the unauthorized camping and presence of squatters. A cooking fire could easily spread in windy conditions or if not extinguished correctly.

Roads and trails can act as fuel breaks, as well as provide access for fire suppression efforts. Reintroducing active forest management activities as well as building trails for public access will aid both fire suppression personnel and law enforcement to access the property for increased public safety.



A shaded fuelbreak is a type of fuelbreak in forested areas where trees have been thinned, canopies have been raised by the removal of lower branches (ladder fuels), and the understory vegetation has been managed to reduce the threat of catastrophic wildfire.

Forest Overview

A. MERCHANTABLE TIMBER INFORMATION

The forested area covers approximately 28.5 acres and contains exceptional potential for a healthy and vigorous forest. Currently the overstory trees are in poor to moderate health, and tree health will continue to decline without intervention.

Species composition, tree size and tree heights vary widely across the property. Generally, there is a higher proportion of ponderosa pine, lodgepole pine and western white pine found on the west half of the parcel. Most of the hardwood species such as paper birch, alder, and black cottonwood are located in or around the riparian wetland areas in the south and southeast of the property. Larger diameter grand fir, ponderosa pine and western larch are found in the east half of the property.

A full forest inventory is outside of the scope of this report. Overstory species composition is estimated in the following table.

WESTERN HEMLOCK	Trace	DOUGLAS FIR	20 %	BIRCH	Trace
WESTERN RED CEDAR	5 %	LODGEPOLE PINE	20 %	PACIFIC YEW	0 %
WESTERN WHITE PINE	5 %	PONDEROSA PINE	20 %	BLACK COTTONWOOD	Trace
WESTERN LARCH	10 %	SUBALPINE FIR	0 %	QUAKING ASPEN	Trace
GRAND FIR	20 %	ENGELMANN SPRUCE	0 %		

B. PRE MERCHANTABLE INFORMATION

Pre-merchantable-sized trees include all stems that do not meet merchantable sawlog specifications.

Douglas-fir and grand fir are the predominate pre-merchantable trees per acre.

WESTERN HEMLOCK	Trace	DOUGLAS FIR	35 %	BIRCH	0 %
WESTERN RED CEDAR	Trace	LODGEPOLE PINE	10 %	PACIFIC YEW	0 %
WESTERN WHITE PINE	Trace	PONDEROSA PINE	10 %	BLACK COTTONWOOD	0 %
WESTERN LARCH	Trace	SUBALPINE FIR	0 %	QUAKING ASPEN	0 %
GRAND FIR	45 %	ENGELMANN SPRUCE	0 %		

C. FOREST PRODUCTIVITY and SUSTAINABILITY

Forest or site productivity is a term describing the potential of an area to grow wood under fully stocked conditions, i.e., no openings in the forest. Many factors affect site productivity, including soil type and depth, moisture availability, slope, aspect and elevation.

This site should have relatively high productivity however productivity is not being fully actualized due to the severe insect and disease issues afflicting the forest stand. This is impacting the sustainability of the forest resource, meaning if interventions are not taken, more trees will die than are there to replace them.

D. TRESSPASS

Evidence of trespass is scattered throughout the property. Trash, cut trees, recently abandoned camping and cooking areas and fire pits can be found in multiple locations, particularly in the most densely forested areas in the east and southeast portions of the property. A well-trodden trail that cuts south from the railroad into the property is one obvious point of entry. Unauthorized utilization of the property poses a public safety hazard and threatens the health and resilience of the forest resource. Management recommendations will offer suggestions for improving the visibility to the hidden unauthorized campsite areas, and creating easier property access for first responders.



Photo: Example of the approximately 6 camping and/or dumping sites found during site visits in the Fall of 2024.

SECTION 3. Action Plan

Recommendations Summary

The management approach taken will be based on management objectives for the property, the timeline of park development projects, funding availability among other factors. The City of Priest River is committed to long-term health of this forest and promoting a resilient forest ecosystem.

In alignment with landowner objectives and current forest conditions, the recommended management actions center around bolstering long-term forest health while enhancing wildlife habitat and aesthetic values. In addition, the aim is to increase overall forest resilience to disturbances such as climate change, wildfire, insects, and disease.

Implementation Plan

The following prioritized action plan is recommended:

1. A ***sanitation/salvage harvest*** will be necessary to slow the progress of insect and disease concerns seen across the site. During this forest health treatment operation, remove all hazard trees currently inhibiting safe public access. Identify snags that are intact and sound that are not hazard trees for wildlife habitat.

Target date: 2025-2030

The majority of overstory trees are in decline, or in direct threat of succumbing to worsening forest health conditions. Affected trees could be removed and remaining overstory trees can be made more resilient to insect and disease under the umbrella of sound, long-term management.

When harvesting does occur, it should target the removal of trees that are infected with root disease, those that are suffering from or susceptible to bark beetle attacks or that have poor vigor or small crowns. Throughout the operation, trees showing the best growth characteristics should be left uncut.

The management approach taken to minimize loss of volume due to root disease and bark beetles is going to depend on landowner objectives. Thinning is generally not recommended within root rot affected areas, as studies have shown that thinning may increase the rate of spread of the disease. The most advisable long-term approach to reducing loss from root disease is over time transitioning species composition from more susceptible species to less susceptible species, by using a group-select opening harvest method and replanting with root disease resistant species. This in effect means reducing the grand fir and Douglas-fir component throughout the east half of the property, and managing for western larch and pine species.

During harvest operations, wildlife and character trees should be retained for wildlife and aesthetics, as long as they do not pose a hazard to human life. Following the harvest, exposed soil should be seeded with a native and wildlife friendly grass/clover mix.

Due to the high visual profile and future recreational usage of the ownership, it is recommended to transparency and open communication with residents, city hall, foresters, wildlife biologists, and equipment operators to ensure the optimal end result can be achieved.

2. Conduct ***Hazardous Fuels Treatments (HFT)*** to reduce the fire hazard. Target these efforts along the north property boundary, and future Two Rivers Park parking area to the west. Consider including treatments along skid trails and forest roads that could be used in the future to facilitate safer ingress or egress in case a wildland fire event occurs.

Target date: 2025 - 2026 or immediately following harvest activity;
maintenance should be ongoing

3. Explore opportunities for ***reforestation***. Following the harvest operation, it may be appropriate to plant any small openings that were created. If so, reforest with western larch, western white pine (white pine blister rust resistant) and ponderosa pine. These species are resistant to root disease and encouraging higher proportions of root disease resistant species will increase the overall health and resilience of the forest over time.

Target date: After harvest, or where openings are created

4. Conduct ***pre-commercial thinning (PCT)*** in dense pockets of advanced regeneration. PCT reduces competition between trees, allowing the remaining trees to accelerate in growth and vigor. Vigorously growing trees are less susceptible to attack by insects or root diseases and properly thinned stands have better air circulation, which discourages several needle diseases and other kinds of fungus. Thinned stands also allow filtered sunlight to reach ground level, which usually encourages the growth of grasses, forbs and shrubs that can be food sources for wildlife.

Target date: 2028-2032

During thinning, focus on removing weak or suppressed trees and leaving strong, dominant or co-dominants with large crowns. Discriminate against trees with signs of disease or physical problems such as animal damage, logging damage, forks, crook, broken tops, etc. If these factors appear equal between trees then select for retention based on species. Favor (in order) western larch (if present), western white pine (blister rust-free), ponderosa pine, western redcedar, lodgepole pine, Douglas-fir, grand fir and lastly, western hemlock.

Trees should be thinned so the resulting spacing is about twelve feet between trees, but this does not mean an arbitrary distance between trees must be adhered to. Some variation in spacing will be necessary to accommodate differences in tree quality, vigor and other

considerations. For example, you may wish to use the tighter spacing where several high quality, preferred species exist. You also may choose to leave a tighter spacing along the edge of openings.

Thinning slash can be cut or lopped so it lies as close to the ground as possible, to promote decay. Thinning slash also can be hand-piled wherever openings exist, covered to keep dry, and burned during open burning season and when rainy conditions exist. If it is available, borrowing or renting a curtain burner would be a clean and safe option for the property. Chipping is another option. Considering the critical visual character of this area, thorough slash disposal is recommended, likely utilizing a chipper or curtain burner.

Late summer, fall and early winter are the best times to conduct thinning operations, because trees are still growing until early July. During this time, new buds are fragile, and tree bark is easily damaged.

PCT can be accomplished using hand tools or a chainsaw or mechanized equipment.

5. **Monitor** for insect and disease activity and storm damage. Take appropriate action as needed.

Target date: Annually

6. **Monitor for noxious weeds** and invasive species establishment, especially after any management activities and soil disturbance. Contact the Bonner County Weed Control office at (208) 255-5681 for more information and control recommendations concerning noxious weeds. Consider engaging with citizen volunteer groups to aide in noxious weed identification and mechanical removal.

Target date: Inspect annually

7. **Inspect trails** and forest roads for erosion concerns. Mitigate as necessary.

Target date: Inspect annually

8. **Maintain detailed records** of all forest management activities to aid in future planning.

Target date: Ongoing

9. **Public engagement, education and outreach** - Work with local schools to develop field trip opportunities for students to learn about native North Idaho flora and fauna, Priest River natural history. Work with the Idaho Department of Lands Urban and Community Forester and consider applying for Tree City USA status.

10. Identify locations on the property, particularly along the riparian areas, to restore native

riparian plant communities and encourage pollinator habitat. These restoration projects can serve high ecological benefits as well as community education and opportunity for public engagement through volunteer work.

These recommendations are based on the current forest conditions and your present objectives.

Summary

This spectacular property contains a rich blend of productive forests, plentiful large ungulate forage, desirable wildlife habitat, recreational opportunities and scenic vistas. The City of Priest River is committed to being a conscientious steward of this land for many years to come. It appears that it would be wise to address the evolving forest health concerns, as well as prioritize removal of hazard trees and reduce fire hazard so as to speed up the timeline for public access and open up recreational opportunities. By implementing these recommendations your forest can be enhanced and gently molded into a healthier, more vigorous ecosystem.

Management recommendations are based on current forest conditions and the present objectives. Unfortunately, changes in the forest resource may occur. These can include dramatic mortality due to insects, wind, wildfire, or other events. Also, management objectives could change due to unforeseen circumstances. Remember that these recommendations are flexible and can be changed to better fit the community's needs.

We appreciate the opportunity to work with you and wish you the best in your forest stewardship endeavors!

Appendix

1. Joslyn Park Master Plan – Excerpts from public comments regarding requests to consider during Forest Management activities.
2. USDA-Natural Resources Conservation Service Web Soil Survey Map.
3. Wetland Map.

1. Northern parcel (10.4 acres)
2. potential future railroad Crossing
3. Capped Contamination Area - no excavation
4. park Entry from Railroad Ave.
5. possible Boat Launch Improvements
6. future Marina
7. Reserved for future Commercial
8. parking Lot - with boat trailers

9. soccer field
10. Maintenance Building and Yard
11. plaza space
12. Children's play Area
13. park pavilion/performance venue and Restroom
14. park "Meadow"
15. New Swim Beach

16. Dog Park
17. Lighted Softball/Baseball fields with Restroom
18. Waterfront park Trail (all trails ADA compliant)
19. possible trail connection below railroad Bridge
20. Wetland Boardwalk Interpretive Walk
21. Land Dedicated To City
22. ADA Swim Access
23. ADA Kayak Launch

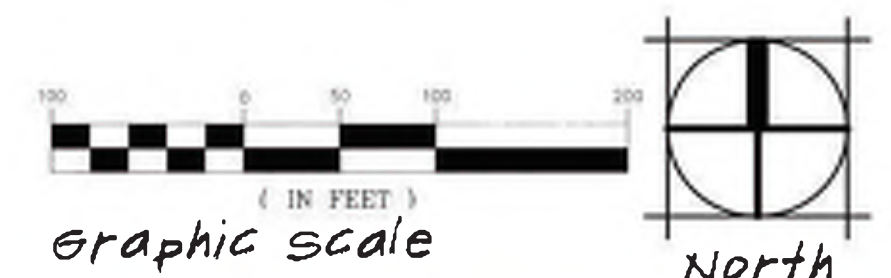
24. RV Campground with shelter and Restrooms
25. Trailside Water Access & floater Take out
26. Fishing Dock
27. undeveloped Natural Area
28. shade structure
29. Restroom
30. General Riverbank stabilization
31. stormwater Upgrade
32. Marine fueling station

December 1, 2022



Acre	
1/2 Acre	1/4 Acre

Acre scale



JOSLYN PARK - PREFERRED MASTER PLAN

B W A

LANDSCAPE ARCHITECTS

WELCH-COMER
ENGINEERS | SURVEYORS





May 26, 2022

City of Priest River

552 High Street

Priest River, Idaho 83856

208-448-2123, EXT 100

<http://priestriver-id.gov>

cc Laurel Thomas, CMC City Clerk/Treasurer

RE: Selkirk Conservation Alliance's comments on the proposed Joslyn Park conceptual drawings 1&2 prepared by Welch Comer & Associates spring 2022

Selkirk Conservation Alliance (SCA) would like to thank the City of Priest River for working collaboratively with the community members of our beautiful area and giving thoughtful, considerate attention to the comments of the public. Land use decisions made by you have a direct effect on the health, safety and general welfare of the people of this region in addition to our lakes, rivers, wildlife, agriculture lands, forests, surface and groundwater resources and wetlands.

Important wetland and forestland habitat

The proposed Joslyn Park site is located at the confluence of the Pend Oreille & Priest Rivers. The majority of this site (see attached USFWS wetlands map) is mapped USFWS, National Wetlands Inventory - Freshwater Emergent & Freshwater Forested Wetlands. The rest of the site is populated by dense coniferous woodland (see attached satellite imagery of site). Wetlands are federally protected sites and are extremely important for the litany of ecosystem functions they perform in addition to the role they play in the conservation of regional biodiversity.

Both conceptual site plans would see much of the wetlands and dense forested areas on site filled in and removed.

Wetland ecosystems are among the most biologically diverse and productive ecosystems on the planet. Wetlands provide habitat for thousands of species of aquatic and terrestrial plants and animals (including many rare and endangered species). In addition, wetlands provide many (FREE) ecosystem services to the public including flood control and protection and shoreline erosion control. In Idaho, wetlands make up only one to two

percent of the land mass and yet they are critical for the survival of 80 to 90 percent of the state's species. Currently only 44% of the original wetlands in the state of Idaho remain.

In addition to terrestrial wildlife, the confluence of the Pend Oreille & Priest Rivers is extremely important for fisheries management and Bull Trout (*Salvelinus confluentus*) conservation efforts. Both Pend Oreille and Priest Rivers have been identified by the US Fish & Wildlife Service as critical habitat for Bull Trout recovery within the Columbia Headwaters Recovery Unit. State and federal management plans call for the protection and conservation of these threatened species and the habitats they depend on for spawning and long term survival.

Maintaining river shading, conserving wetlands and shoreline riparian vegetation and NOT replacing existing vegetation with rip-rap is critical for the long term protection of terrestrial and aquatic species and habitats including federally threatened and endangered species such as; Bull Trout.

In addition Best Management Practices (BMP'S) to prevent sediment from entering the Pend Oreille and Priest Rivers during development activities must be fully in place and functioning. Sediment from development activities and runoff has the great potential to negatively impact local Bull Trout spawning and rearing habitat at the confluence of these two river systems.

Further, Priest River has been determined by the state of Idaho to be a highly valuable waterway and is listed as "protected" under the Idaho Comprehensive State Water Plan for recreation and wildlife.

SCA recommends that all possible measures be taken to conserve and protect all mapped wetland areas on site.

The site is located within a mapped FEMA Flood Hazard Zone - AE

FEMA Flood Hazard Zone AE is a high risk flood zone and building in this zone would require federal, state and local permitting. Because of the high probability of damage from flooding, Bonner County Building Code requires all buildings and certain other structures located within this zone are elevated/built one foot above the 100 year base flood elevation.

Storm-water management concerns

Both conceptual site maps contain plans to develop numerous paved areas on site, RV camping area, numerous parking lots, large fertilized lawn areas and a dog park. These uses pose a great threat to water quality and the site must have a Storm-water management plan and system that contains runoff from these areas and prevents water quality contamination.

Natural and Beneficial Functions of Floodplains

Natural floodplains generally include marsh areas, such as those located along rivers and lakes throughout the county and at the confluence of the Pend Oreille and Priest River systems. Our natural floodplains reduce damage by allowing flood waters to spread out over large areas which helps facilitate absorption into the ground, reduces flow rates and serve as flood storage areas to reduce downstream peaks. The wetlands at the confluence of the Pend Oreille and Priest River systems help to prevent downstream flooding (and the damage it causes) in the City of Priest River. Conserving this large wetland system is in the best interest of the community for long term flood control and management.

In closing,
Multi-objective resource planning necessarily involves making trade-offs aimed at achieving the greatest number and best combination of objectives. SCA is not opposed to developing park areas within the city however we must develop these sites in areas that do not threaten important forest and wetland sites.

Wise development must consider the value of conserving the wild places and spaces we all hold so dear. These wild places are what makes this area so very special and why we all call it home!

Selkirk Conservation Alliance (SCA) is one of north Idaho's oldest conservation organizations and has been working to protect and conserve the lower Selkirk Mountain ecosystem with a particular focus on the Priest Lake and Priest River Watersheds for the past 35 years.

Respectfully submitted,

Amy Anderson

Selkirk Conservation Alliance
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Paul Sieracki

George Gehrig

Priest River, ID 83856

Sandpoint, ID 83852

October 25, 2022

To: Priest River Mayor Kevin Wylie, the City Council and the Joslyn Park Advisory Committee.

Comments on the Refined Proposal for Joslyn Park from the Inland Empire Task Force and the Northern Rocky Mountain Biodiversity Challenge.

We are encouraged with the latest proposal for the Joslyn Park project. The advisory committee recommended the following important measures:

1. Landscaping with native species.
2. Preservation of the undisturbed portion of the forest adjacent to Priest River and its confluence with the Pend Oreille River. There is a large Grand Fir (left) and several larger ponderosa pine (right) in the undisturbed forest area.
3. Daylighting the stream that is now in a wooden culvert from the wetland on the north side of the railroad tracks and making this flow an asset, instead of a current liability due to the collapsing culvert.



4. Using a combination of natural vegetation and riprap to restore the eroding riverbanks.

Please consider these general suggestions to be implemented in Joslyn Park.

Biodiversity Monitoring. There are many examples of cities proactively working to Identify and measure current biodiversity and habitat resources, set conservation targets for natural areas and indicator species, and engage citizens in creating a monitoring program for biodiversity indicators to measure the success of the strategy over time. Things like these could be

modeled in Joslyn Park, then be incorporated city wide biodiversity conservation strategy and plan. An excellent example is Surrey, British Columbia:

<https://www.surrey.ca/renovating-building-development/land-planning-development/environmental-protection/biodiversity>

Pollinator Support. Native plants are critical components of a healthy ecosystem. Park additions could include the creation of pollinator gardens with selected native plants. Community engagement could lead to Priest River taking a regional leadership position by becoming a Xerces Society Bee City USA (<https://beecityusa.org>), and encouraging individuals to certify their properties as Homegrown National Parks (<https://homegrownnationalpark.org>).

Use Dark Sky Principals and Solar Power for any Lighting.

Direct all lighting down with full cutoff fixtures, do not use blue white lighting even though it may be less expensive.

<https://www.darksky.org/our-work/lighting/lighting-for-citizens/lighting-basics/>

There still seems to be too many activities in the 38 acre area. We have the following site specific suggestions to consider and these refer to the maps in the Appendix.

Dog park (Area 16. Please keep the area timbered or locate more to the east of the forested area to reduce forest fragmentation.

“Meadow” (Area 14). The meadow in the forest would like the Dog Park, fragmenting and requiring the removal of larger trees. We suggest removing the baseball field east of #17 or move both of the baseball fields west to overlap more of the soccer field at #9.

Western Monarch Butterfly. Consider a significant monarch breeding planting of native milkweeds and other monarch friendly plants (<https://xerces.org/monarchs/western-monarch-conservation>).

Shoreline road. We have concerns that the construction of the shoreline road will negatively impact the riparian area and or result in the removal of the very large ponderosa pines, the red alder and the river birch. The need for a service road along the shore of Priest River on the east edge of the park is questionable at best. (Map 3).

Fill lost areas to erosion. Idaho Fish and Game is proposing to restore portions of the wetland on the east side of Priest River. Creating wetlands at the confluences on the Joslyn side by adding a small structure would increase wildlife use of the area. Part of this project could also be funded by IDFG and mitigation money from Albeni Falls Dam. (see Photo 1 and closeup and Map 2 in the Appendix). Any expansion like this would have to be completed in a ecologically sound manner, for example like the Clark Fork Delta project.. This area is located by blue hashmarks in Map 3.

View tower. This was omitted in the proposed plan and would be a great asset to the park, enabling people to get an elevated and protected look over the Priest River Delta. #26 or thereabouts would be a great location for birding and nature watching. (Map 3). Also see the example in the first comments letter.

Stream restoration. Daylighting the outflow from the wetland north of the proposed park would not only eliminate the danger of falling into the collapsing wooden culvert but would be an



additional park attraction and would enhance flora and fauna.

Gallery Forest. It appears that the black cottonwood gallery forest would not be impacted by the proposed service road.

Beaver Friendly. Please protect new plantings and choice trees from beavers by fencing. But encourage beaver occupancy of the area. Beavers are currently utilizing white (or hybrid red and white) alder and black cottonwoods along the shoreline by the wetland. Trapping should be prohibited in the park and City if not prohibited already.

Bald Eagle and Great Blue Heron Roosting Areas. These occur in the cottonwood gallery forest and along the Priest River shore and should not be impacted by large tree removal.

Bull Trout. Please consult with the US Fish and Wildlife Service on shoreline restoration in relation to the endangered bull trout and with the newly forming Lower Priest River Restoration group. They may have funds to assist with bank restoration.

Administrative issues.

Public meetings.

Please advertise these meetings and have an email list. There are many people who did not receive any notification of the meetings. Why were some of the groups that submitted letters not included in any email list of public meetings?

Public disclosure of comment letters so that others may read and learn is important to keep channels open and gain trust. We request that these letters be posted to the City website along with information on the park.

Working to restore these areas will help buffer the impacts of climate change and maintain biodiversity.

Thank you for the opportunity to comment on this encouraging proposal. Previous comments are attached for reference.

Respectfully Submitted,

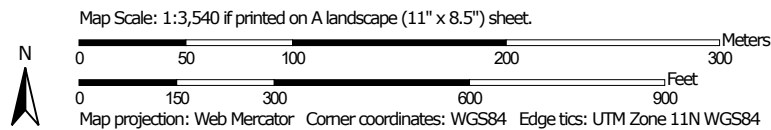
Paul Sieracki
Inland Empire Task Force

George Gehrig
Northern Rocky Mountain Biodiversity
Challenge

Soil Map—Bonner County Area, Idaho, Parts of Bonner and Boundary Counties (Two Rivers Park)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

4/6/2025
Page 1 of 3

Soil Map—Bonner County Area, Idaho, Parts of Bonner and Boundary Counties
(Two Rivers Park)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

Survey Area Data: Version 20, Aug 22, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 14, 2023—Aug 13, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
31	Mission silt loam, 0 to 2 percent slopes	26.9	76.3%
64	Wrencoe silty clay, 0 to 2 percent slopes	7.9	22.4%
65	Water	0.5	1.3%
Totals for Area of Interest		35.2	100.0%



U.S. Fish and Wildlife Service

National Wetlands Inventory



Two Rivers - Surface and Water Wetlands



U.S. Fish and Wildlife Service, National Standards and Support Team,
wetlands_team@fws.gov

January 8, 2025

Wetlands

	Estuarine and Marine Deepwater		Freshwater Emergent Wetland		Lake
	Estuarine and Marine Wetland		Freshwater Forested/Shrub Wetland		Other
			Freshwater Pond		Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.