Forest Management Plan
for the
Klickitat Canyon Community Forest

Advisory Committee

The Department of Natural Resources would like to thank the members of the advisory committee for the hours of volunteer time they committed to the process of developing this management plan.

Jacob Anderson—Klickitat County Natural Resources Department

Steve Andringa—Yakama Nation Tribal Forestry

Karl Amidon—Rancher

John Bonn—Klickitat County Resident, Mt. Adams Fish & Game Club

Neil Kayser—Rancher

Jay McLaughlin—Mt Adams Resource Stewards (MARS), Glenwood Community Council, Glenwood School Board

Ian Sinks—Columbia Land Trust

Darrel Spies—Logger, MARS board member

James White—Klickitat County Resident, MARS board member, South Gifford Pinchot Forest Collaborative, Klickitat Wildlife Area AC member

Teunis Wyers—Kreps Ranch, MARS board member, Chamber of Commerce

Property Information:

County: Klickitat

Legal Description: Township 6N, Range 13E, Portions of Sections: 2,3,4,5, and 10

Location to nearest town: Approximately 8 miles east of Glenwood, WA

Plan Preparation Date:

11/9/2017

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Summary

The Klickitat Canyon Community Forest (KCCF) was purchased via a Forest Legacy Grant and with financial support from the Columbia Land Trust and established as a Community Forest by the Washington Department of Natural Resources (DNR) in January of 2017. Located near Glenwood, in scenic Klickitat County, Washington, the 2,405-acre KCCF property encompasses deep canyons and mixed conifer forest. The property surrounds the Klickitat Salmon Hatchery on three sides and is adjacent to the closed area of the Yakama Reservation. The Klickitat Canyon Natural Resource Conservation Area and State Trust lands adjoin the property to the west. There are privately held working forest and range lands to the south and east.

The Department of Natural Resources convened a citizen advisory committee that was responsible for developing a management plan for the KCCF with a limited timeline. The Forest Legacy Grant requires a completed management plan for the property within one year of acquisition. The community forest program requires this plan to be developed with the participation of a citizen advisory committee. The KCCF advisory committee met monthly between May 2017 and September 2017 to develop resource descriptions and discuss community interests (key goals) in the property. Many committee members provided language that is directly incorporated into this plan. The Mount Adams Resource Stewards (MARS) manages a community forest near this property and has a management plan for the greater area. The MARS plan was frequently used as a guide by the committee when creating goals, strategies, and recommendations. For the local area the MARS community forest is very important, and integrating this property with that effort was highlighted.

Key Goals

In developing this plan, the Advisory Committee identified key goals for the property. They are the following:

Community Connections

- Encourage public access whenever possible
- Complement Glenwood's efforts towards becoming a fire-adapted community
- This community forest should be considered an opportunity for educating students about working forests
- The partnership between the Klickitat Salmon Hatchery and this community forest is important for the local economy and the recovery of endangered salmonids

Forest Health and Management

- The community wants to be surrounded by a forest it can be proud of
- A healthy, diverse forest comprised of large, old trees will be more fire-resilient
- All forest product opportunities should be evaluated, especially emerging markets
- Frugal forestry practices should reflect the return on investment from silvicultural activities

Water Quality and Aquatic Habitat

- Given the proximity to the Klickitat Salmon Hatchery, additional care should be given to the protection of important water resources needed to culture salmon; both on and immediately surrounding the hatchery property.
- When possible, management activities should complement the restoration and protection of riparian and aquatic habitat
- The cold waters in this reach of the Klickitat River are immensely important for the spawning and rearing of native Chinook salmon and Steelhead
- The Klickitat Salmon Hatchery provides significant economic and biological benefit to the area

Wildlife

- The property provides opportunities for maintaining wildlife connectivity corridors between forested and riparian habitats and maintains un-fragmented connections of forest cover
- Management activities will consider strategies that retain the variety of habitat types and native species occurring on the property

- In addition to Threatened and Endangered species, the Advisory Committee identified native wildlife species occurring on the property, and emphasized the importance of healthy wildlife populations along with healthy forests

Recreation & Access

- The Advisory Committee encouraged increased efforts to improve public access while providing continued existing access
- Knowing the financial constraints a working forest has, the expectations for the recreational experience are limited to what can occur with minimal development and coexist without environmental degradation

Cultural Resources

- This property is located within the homeland of several bands of the Klickitats, now part of the Yakama Nation
- There are prehistoric and historic sites within the property that will be considered and protected when management activities are developed

Each section of this plan delves further into the details of these key goals. While they are discussed individually, all of the key goals are interrelated. There may be individual places on the property where one element of the forest is emphasized; however, all key goals for the KCCF will be factored into developing more specific plans for various management activities.

History

Previous to Euro-American settlement, this region was used extensively by Native Americans. Native peoples passed through the area en route to huckleberry fields at higher elevations to the west, and salmon fishing and trading areas on the Columbia and lower Klickitat Rivers. The broad wet meadows of the Glenwood Valley were vital to Native Americans for gathering camas, a main staple of their diet. Wetlands were home to abundant waterfowl for hunting. Evidence suggests that fire was often intentionally set and used in forests by these early inhabitants, likely to enhance plant resources, allow for ease of travel, as well as more ideal habitat to support hunting of deer and other quarry.

The first Euro-American settlers arrived in the late 1800's and were quickly drawn to the area's rich stands of timber. Small sawmills were established throughout the upper White Salmon/Trout Lake and Glenwood Valleys. One of the larger operations in the Glenwood Valley was located at the Mill Pond; it was closed around 1930 in favor of the Klickitat mill. The Klickitat mill eventually closed in 1994. Early mills targeted the most valuable and available timber of that era. In the early 1900's in the Glenwood Valley, old growth ponderosa pine sustained milling of boards for boxes that were used for the region's growing fruit industry.

It should be noted that tens of thousands of acres were accumulated by the J. Neils Lumber Co. in the Glenwood Valley and vicinity in the early and mid-1900's. These lands were later acquired by St. Regis, then Champion International, and at some point were referred to as the Klickitat Tree Farm that included over 100,000 acres in Klickitat and Yakima Counties. In 1939, a sustained yield plan created by Dr. Walter Meyers of Yale's School of Forestry was adopted for these properties – said to be the first of its kind in the United States. Between forward-thinking silviculture on these lands and what were cutting-edge operational approaches to harvesting and moving timber via "truck logging", the Klickitat Tree Farm was ahead of its time. The 1960's and 70's brought about different perspectives and a growing understanding of the most important disturbance agent on the lands southeast of Mt. Adams: wildfire. Generally, wildfires in relatively dry, east slope of the Cascades forests burned frequently. The frequent, low-intensity fires left behind surface vegetation, and regeneration in patches. In addition, large, fire-resistant ponderosa pine and Douglas-fir remained across the landscape. Prehistoric fire return intervals varied from 33-100 years in mixed conifer forests and 11-16 years in ponderosa pine forests. Fire ecologists with the U.S. Forest Service, Mt. Hood and Gifford Pinchot National Forests estimate return intervals of 6-45 years in forest types dominated by ponderosa pine, and 70 to 100 years in plant communities similar to mixed conifer types in the Mt. Adams region. Large "stand replacement" fires were less common than on more moist forests west of the cascades, but did occur.

Aggressive fire suppression policies beginning in the early 20th Century in an effort to protect life and property significantly altered the fire regime of these forests. With removal of ground fire as a frequent disturbance agent, forests are now comprised of more trees per acre, with shade-tolerant and fire-sensitive species (particularly grand fir) more prominent in many stands. The change in relative species composition was exacerbated by early timber management (described above), which removed a significant proportion of the large, fire-resistant ponderosa pine and Douglas-fir. As a result, today's

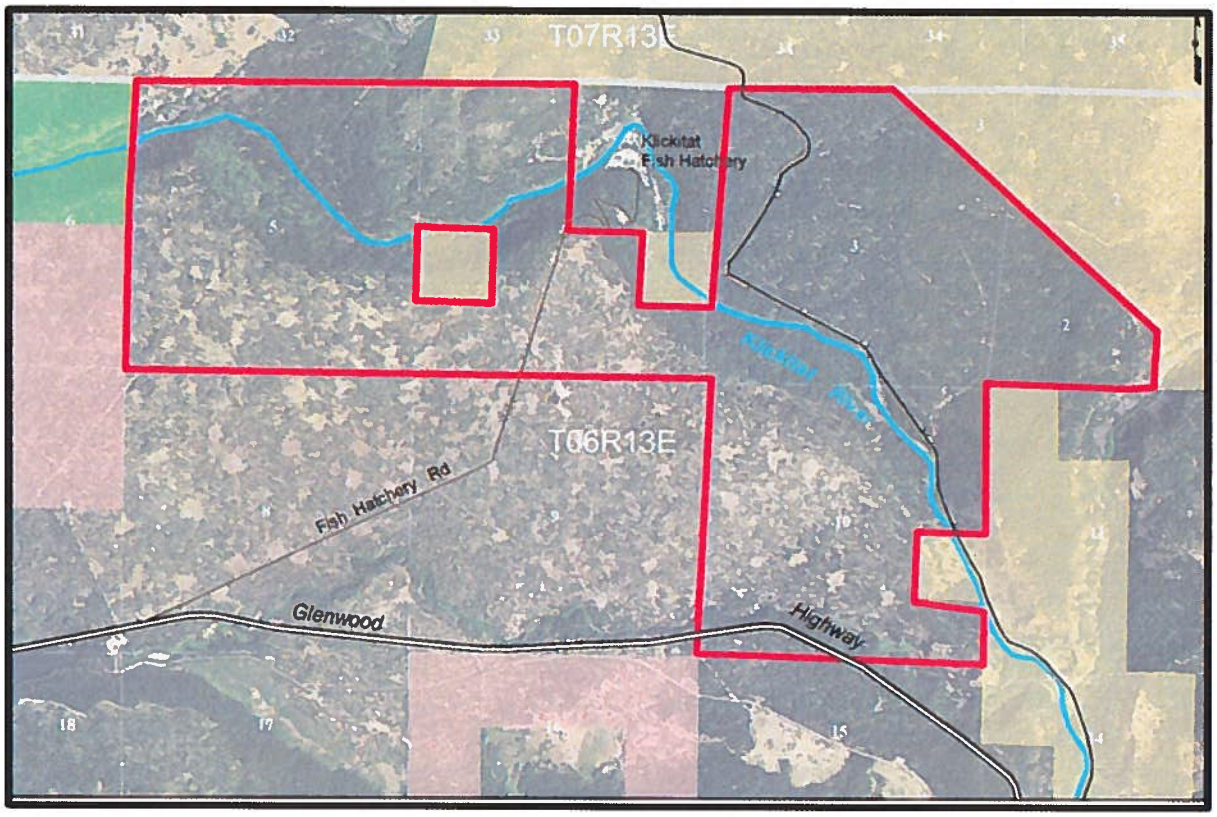
forests, tend to be denser, contain more fire-sensitive species, and have fewer large individual ponderosa pine and Douglas-fir trees.

The 21st century has seen a shift in the types of financial management models for timberlands. Increased liquid capital demands for core operations, rising Wall Street-pressures to improve returns, and a realization that many timberland assets have been undervalued, have resulted in an increased willingness by the financial sector to invest in forestland. This combination has caused millions of acres to change hands from large, integrated forest product companies to investment management vehicles such as Timber Investment Management Organizations (TIMOs). TIMOs are private companies acting as investment managers for institutional clients, primarily pension funds, endowments, and wealthy individuals. With these changes, there can arise a disconnect between forest management and the values of surrounding communities. Timberlands are owned as liquid direct investments or partnership shares, generally in separate accounts, but frequently in pooled funds. In addition, Real Estate Investment Trusts (REITs) are companies focusing mostly or exclusively on real estate and timberland ownership with a high degree of liquidity through the public trading of shares on a stock exchange. The jury is still out as to the long-term impact of this ownership shift on forest management activities; however, there are growing concerns about the commitment of these ownership entities to forests in general and to sustainable forests. Locally, the community has noted the change and has been supportive of the community forest model as a means to reconnect long-term forestry values to land ownership.

Implementation of Key Goals

Community Connections

Input from the advisory committee emphasized the linkage between the forest and the community. The goals in this section are emphasizing the tie between the community forest and the community. Public access was identified as a key goal of the community. In order for the community to be connected to the forest, community members need to be able to enjoy it.



Linkages with Glenwood as a fire-adapted community is another important key goal. Glenwood is situated in a pine-dominated forest where fire is a part of the natural ecology. The community needs to be as resilient to fire as the surrounding forest stands. A Fire-Adapted Community acknowledges and takes responsibility for its wildfire risk, and implements appropriate actions at all levels. Actions address residents' safety, homes, neighborhoods, businesses, infrastructure, forests, open spaces and other community assets. It is important for the community forest to complement the work the Glenwood community is doing to become better adapted to fires. By integrating silviculture, prescribed fire, and considering the community forest as part of the *Firewise* community, the community forest can become part of a fire-adapted landscape that contributes toward a resilient community. Land management and wildfire are closely related. Ranching, farming, timber and logging operations, species management, and development can influence wildfire risk. This forest would complement the Mount Adams Resource Stewards (MARS) community-based conservation of working forest lands in the area.

Another key goals in building community connections is the availability of the community forest to the community for educational purposes. This would be accomplished by encouraging local schools to use the KCCF as an outdoor classroom. In addition, educating visitors about the uniqueness of the forest, working lands, community stewardship, and access rules through signage, would provide outreach to the general public and user groups. This same message would be communicated through land managers to users. The Advisory Committee advised that managers should work with groups using the forest to help deliver these same messages.

Klickitat Salmon Hatchery (KSH) production provides significant economic and biological benefits over a wide area. United States and Canadian fishing economies benefit from ocean fisheries supplied in part by KSH production. Within the Pacific Northwest and locally, the KSH supports the guided fishing industry and sporting retailers. Production from the KSH supports substantial sport and tribal harvest in the Columbia River and the Klickitat River. The Klickitat River has deep cultural importance to the Yakama People. The Lyle Falls Fishery in the lower river is one of the best places for tribal members to pass along traditional fishing methods. In addition, there are multiple ecosystem benefits: from salmon carcasses supplying marine-derived nutrients to the Klickitat River, to KSH salmon production providing an important food source for the endangered resident killer whales of Puget Sound.

Community Connection Strategies include:

- Maintaining access for multiple-use recreation, organized events, and stewardship that is similar to current day uses.
- Exploring opportunities to partner with local community groups, clubs, and organizations who are interested in stewardship of the forest. These groups would be able to construct and maintain trails, help with reforestation, and other stewardship projects.
- Create opportunities for schools to take part in activities.

Forest Health and Management

As mentioned in the Community Connections section, there is a clear relationship between the community and its contribution to a fire-adapted community. The forest management practices listed below will help promote a healthy, complex forest structure of large, old trees with the proper stocking levels that reduce the fire-spread hazard. By controlling stocking, the forest will be able to continue to grow vigorously, which helps minimize the threat of insect and disease infestations. This, in turn, also reduces the impacts of fire by eliminating excessive fuel loading in the forest.

The location of the Klickitat Canyon property on the east slope of the Cascade Range means the arid forest is subject to many types of insects and mortality agents. All of these are present on the landscape in small numbers and can impact trees to varying degrees depending on stocking stress, drought, and climate change impacts. These insects and agents include:

- Douglas-fir beetle
- Spruce beetle
- Fir bark beetles
- Bears
- Western spruce budworm
- Pine needle cast
- Ips beetle
- Douglas-fir tussock Moth
- White Pine Blister Rust

This community forest property provides a great link between conserved lands lower in the Klickitat canyon to the Klickitat Canyon Natural Resource Conservation Area, State Trust Lands, Yakama Nation's forest lands, and the Gifford Pinchot National Forest. Not only does establishment of this community forest provide habitat connectivity for wildlife, but also benefits the Klickitat River watershed, promotes continuous working forest lands, and contributes to resilient forest conditions by promoting long-term forest management prescriptions.

The community wants the forests around them to be managed in a way community members can be proud of. The Advisory Committee highlighted sustainable production of timber for the long-term as a key goal when developing management activities so that those activities reflect community values. The continual management for timber production will complement the health of the forest and its resilience to insects, disease, and fire, while still providing important habitat for wildlife. The advisory committee provided input on what management actions to consider taking:

- Aggressive reforestation of past harvest units
- Promoting vigorous growth through thinning and limiting vegetative competition
- Ensuring the lands are accessible to the community to participate in management
- Promoting large old trees that are fire/insect/disease-resilient by favoring dominant tree retention

- Aggressively mitigating areas of diseased or dying trees
- Utilizing harvest prescriptions that blend intensity of harvests such that there doesn't appear to be distinct harvest unit lines.

Forest Management Practices

In terms of implementation, the advisory committee envisions these lands being managed for economic return, to emulate natural processes, providing habitat, and to maintain site productivity. All silvicultural practices will be consistent with resource values.

The dominant tree species on most of these lands are Douglas-fir and ponderosa pine. Frequent fire would have naturally played an important role in maintaining open stand conditions. One approach would be to harvest smaller units, which creates wider tree spacing and thus more open stand conditions. More open stands, particularly with larger trees, are more likely to survive fires than the dense forests that occupy many of these sites today.

For silvicultural prescriptions in the Klickitat Canyon Community Forest, the following principles should be considered:

Rotation Age

Rotation age for these forests would be in the range of 60-80 years in order to maintain open ponderosa pine forest, and to provide jobs and economic benefit to the community. The expectation of growth for ponderosa pine is to be 20-24 inches DBH in 80 years.

Regeneration Harvest with Reserve Trees

Most regeneration harvests will utilize this option. Harvest unit size would generally be 2-7 acres, although larger units may be required due to insects, diseases, economic drivers, or disturbances such as fire. Opening size and reserve tree requirements would follow State of Washington Forest Practices requirements as a minimum.

Harvests will be designed to provide light and moisture conditions conducive to establishment of larch, Douglas-fir and ponderosa pine. In addition, harvests will be designed to provide for structural diversity in the new stand, with legacy reserve trees, down logs, and small patches of intact forest maintained. Shelterwood, seed tree, and uneven-age harvest systems (group selection) may be utilized in special situations where merited.

Shelterwood, Seed Tree and Uneven-Age Harvest

Shelterwood and seed-tree harvest would be limited to special situations, where there is need to shelter young trees from heat or frost. These situations normally occur on dry, southerly exposures, or low, flat sites where growing season frost may be a problem. Shelterwoods would normally be regenerated by planting. A final removal of shelterwood trees, except for reserve trees, would be scheduled once regeneration is established.

Site Preparation

There should be little need for the use of site preparation for establishing planted trees beyond scalping as part of the planting operation. Some limited use of herbicides may be necessary.

Natural Regeneration

Natural regeneration will be utilized on these forests in an opportunistic manner. If observations show a good seed crop at the time of harvest, planting may be delayed in order to see if there is adequate natural regeneration during the next field season. This may allow opportunities to forego the cost of planting trees. Natural regeneration will be used cautiously, however; competing vegetation will become established and can fully utilize the site in a short period of time. Planting should not be delayed more than one year.

Planting

Ponderosa pine and Douglas-fir would be the primary species utilized, representing 70- 80% of the trees planted. Douglas-fir, western larch, and western white pine are associated species and may be occasionally used where appropriate to foster species diversity. Locally adapted, genetically improved stock would be used, to help maintain genetic diversity and vigor. Initial tree density would generally be 300 trees per acre, about a 12-foot spacing.

Typically there are not many problems with animal damage on these sites. Control of animal damage to young seedlings may be required in some instances. Where deer or elk browsing may be a problem, "bud caps" or repellants may be used to protect the tree's terminal leader.

Pre-commercial Thinning

Pre-commercial thinning may be important on these dry, fire-prone sites in order to grow large, fire-resistant trees. Thinning should target an 18- or 20-foot spacing in order to provide for maximum growth on residual trees. Ponderosa pine, Douglas-fir, and larch will be the favored trees to retain on these dry sites.

Commercial Thinning

Commercial thinning may be important in order to maximize tree size, provide resistance to fire, and provide some large trees for wildlife and other resource values. Thinned stand densities would be determined by rotation length, and would use stocking-level guides. Ponderosa pine will be the favored tree to retain on these dry sites.

Salvage and Sanitation Harvest

Salvage and sanitation harvests would be considered on a case-by-case basis, in situations where insects, diseases, wind or fire create significant volumes of dead or dying trees. In instances where mortality is light, trees might not be salvaged. Salvage and sanitation harvests may be a good opportunity for interface with small local logging operations.

Management practices may vary on lands managed for special landscape features, such as riparian or wetland areas, wildlife habitat, fuel breaks, areas with high aesthetic value/visual corridors, or important recreation areas.

Low site considerations (Ponderosa pine, pine-oak):

Given the limited return on investment, mechanical site preparation with natural regeneration methods would dominate. Any methods that would serve to scarify and expose mineral soil would be adequate, with consideration given to the negative consequences of soil compaction, disturbance and impacts to plant communities and wildlife that may be justification for special emphasis area designation. Monitoring for high cone/mast years would be considered to ensure adequate regeneration. This may be less of an issue in pine sites where regeneration can be prolific versus higher sites that are quickly colonized by shrub species.

Even though low sites are an area where it is least likely to yield economic benefits, pre-commercial thinning (PCT) may be necessary when high levels of natural regeneration are achieved, as often can be the case in ponderosa pine stands. Pre-commercial thinning may also be important for areas where visual/aesthetic considerations are the focus; fuel breaks represent yet another pre- commercial thinning strategy. Whenever possible, grants should be utilized to cover the costs of PCT rather than burdening the economic returns of the timber sales. The impact of PCT on wildlife considerations varies. Benefits include shorter timeframes for attaining larger-diameter, mature stand characteristics, and more diverse understories – with grass and forb layers. Thermal cover may be reduced by PCT.

Miscellaneous Forest Products

Miscellaneous forest products include mushrooms, huckleberries and other fruits, cones, shrub and tree transplants, Christmas trees, tree boughs, and rock. These resources have the capability to produce revenue from the property, provided they are properly managed. We do not anticipate large amounts of these products being utilized, but recognize that product demand will exist locally.

Mushroom harvesting is popular in local forests. Many people pick mushrooms as a recreational activity, or as a supplemental income. Tree cones may also have high demand, both for tree seed and for decorative purposes.

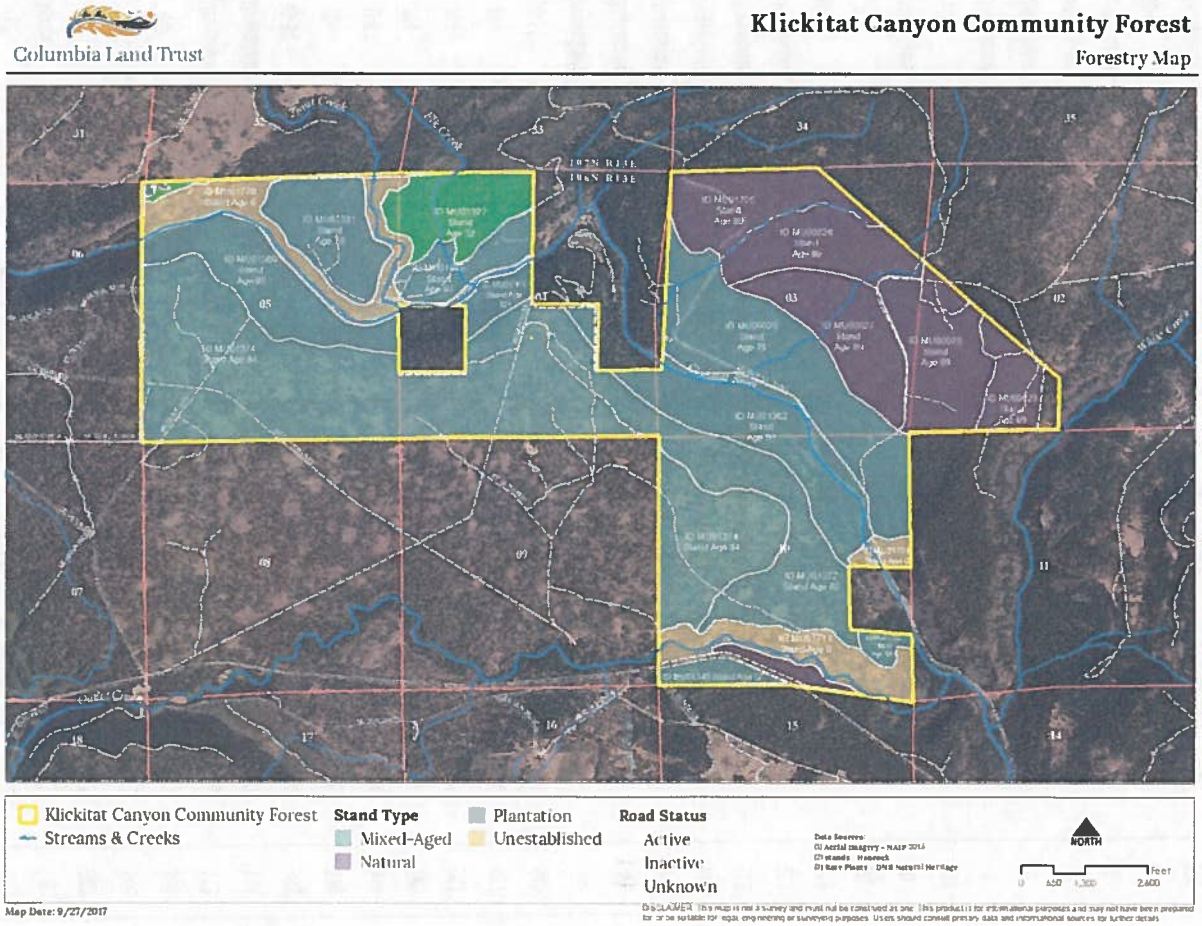
Given the reliance on revenues from the community forest to support operations of the community forest, the advisory committee is open to exploring new/emerging forest-based markets as they arise. Some examples could be carbon sequestration and biomass products. The committee is also encouraging the pursuit of grants for funding forestry operations.

Firewood gathering will be allowed via the Department's free firewood permit program in designated areas.

Noxious weeds will be monitored and controlled as needed, consistent with Klickitat County Weed Board direction.

Forest Inventory

The map below shows the inventory units identified by the previous owner. The corresponding table shows the corresponding stand data collected and the operability of those stands.



StandID	LandUseName	MajorSpecies1	MajorSpecies2	StandAge	AgeClass	EstabYear	EstabTypeDescription	SiteClass	GrossAcres	NetAcres	DFSiteIndex	TPAc	BAAc	MBFAc
MU00025	Forested Uneven-aged	DF		75	70+	1941	Mixed-Aged	IV	213.1629	194.6517	71	739	179	15.1825
MU00026	Forested Even-aged			0	Clearcut		Clearcut	IV	127.2388	121.2316	71	0	0	0
MU00027	Forested Even-aged	DF	PP	89	70+	1927	Natural	IV	184.5686	176.3829	71	382	177	16.4631
MU00028	Forested Even-aged	DF	PP	89	70+	1927	Natural	IV	115.5192	111.8125	71	540	174	13.6645
MU00029	Forested Even-aged	DF		89	70+	1927	Natural	IV	39.2343	37.8731	71	355	167	12.5054
MU01324	RMZ	DF		99	GrossUnavailable	1917	Natural		17.0542	16.5529	70	113	121	14.3286
MU01326	RMZ	DF		114	GrossUnavailable	1902	Mixed-Aged		6.4762	6.4762	70	114	103	11.0489
MU01327	Forested Even-aged	PP		32	30-34	1984	Plantation	III	91.1545	87.9477	84	305	110	4.482
MU01331	Forested Uneven-aged	DF		76	70+	1940	Mixed-Aged	IV	96.0081	93.9424	71	578	152	14.2558
MU01333	Forested Even-aged	PP	DF	4	0-4	2012	Plantation	V	4.3622	4.3622	64	344	0	0
MU01335	Forested Even-aged	DF	PP	91	70+	1925	Natural	V	13.6617	12.8438	57	289	158	16.1839
MU01336	Forested Even-aged	DF		91	70+	1925	Natural	V	10.6845	10.6845	57	587	220	17.1206
MU01340	Forested Uneven-aged	DF		97	70+	1919	Mixed-Aged	V	58.9258	52.6307	54	497	136	11.3669
MU01346	Forested Uneven-aged	DF	PP	52	50-54	1964	Mixed-Aged	III	22.7948	22.7076	80	543	170	13.3436
MU01356	RMZ	PP		116	GrossUnavailable	1900	Mixed-Aged		0.0137	0.0137	63	84	86	8.3634
MU01357	RMZ	PP		115	GrossUnavailable	1901	Mixed-Aged		0.0129	0.0081	63	84	86	8.3634
MU01360	RMZ	DF		93	GrossUnavailable	1923	Mixed-Aged		127.3862	120.9252	70	113	124	14.5083
MU01361	RMZ	DF		121	GrossUnavailable	1895	Mixed-Aged		28.184	26.8973	70	114	103	11.0489
MU01362	RMZ	DF		93	GrossUnavailable	1923	Mixed-Aged		160.4718	138.4761	72	113	125	14.6574
MU01363	RMZ	DF		120	GrossUnavailable	1896	Mixed-Aged		12.6972	12.6821	70	114	103	11.0489
MU01372	Forested Uneven-aged	DF	PP	62	60-64	1954	Mixed-Aged	II	232.4363	227.8037	89	919	81	6.3966
MU01374	Forested Uneven-aged	PP		84	70+	1932	Mixed-Aged	V	611.1985	595.5002	64	71	55	4.7188
MU01671	RMZ			0	GrossUnavailable		Unestablished		0.0325	0.0098	71	0	0	0
MU01706	Forested Even-aged	DF		89	70+	1927	Natural	IV	23.5784	23.1473	71	391	148	11.8653
MU01714	RMZ			0	GrossUnavailable		Unestablished		84.3425	64.5705	71	0	0	0
MU01716	Swamp			0	GrossUnavailable		Unestablished		0.0001	0.0001	64	0	0	0
MU01724	Rock			0	GrossUnavailable		Unestablished		15.7368	13.7706	75	0	0	0
MU01726	RMZ			0	GrossUnavailable		Unestablished		111.7745	74.6396	71	0	0	0
MU02546	Forested Uneven-aged	PP	DF	63	60-64	1953	Mixed-Aged	IV	0.0741	0.0471	74	274	82	7.4493
MU02694	Leave Area	DF	PP	112	GrossUnavailable	1904	Mixed-Aged		1.9208	1.9208	63	176	116	10.8183
MU02799	Forested Uneven-aged	DF	PP	81	70+	1935	Mixed-Aged	IV	12.0179	11.8039	71	1334	75	4.892

Grazing and Range

Grazing in this area has occurred in this area since the late 19th century. The advisory committee recognizes that the Klickitat Canyon Community Forest alone is too small to support a grazing operation. However, if adjacent landowners are supportive of a grazing permit that includes portions of the property, this activity should be considered. Some additional considerations for grazing include:

- Manage the timing, duration, and frequency of grazing activities to allow the sustainable regrowth of vegetation
- Promote range infrastructure and/or practices that help protect sensitive areas such as streams, special resources, and springs while still allowing for watering of livestock
- Consider wildlife grazing needs

Water Quality and Aquatic Habitat

Watershed Overview

The Klickitat River sub-basin covers an area of 1,350 square miles in south central Washington State. It begins in the Cascade Mountains below Cispus Pass near 5,000 feet elevation and flows over 95 miles to join the Columbia River at Lyle, Washington, 34 miles upstream of Bonneville Dam (elevation 74'). It is one of the longest undammed rivers in the Pacific Northwest. The Klickitat Sub-basin stretches west to the Cascade Mountain crest, north and east to the basalt ridges and plateaus of the Yakama Reservation, and south to the Columbia River Gorge. The landscape consists primarily of a basalt plateau with a total thickness of several thousand feet, which is incised by deep (700 to 1,500 feet), steep-walled canyons carved by the watershed's network of streams and rivers. This geology has created several cascades and waterfalls on the main-stem and tributaries. Two notable waterfalls on the main-stem are Lyle Falls and Castile Falls.

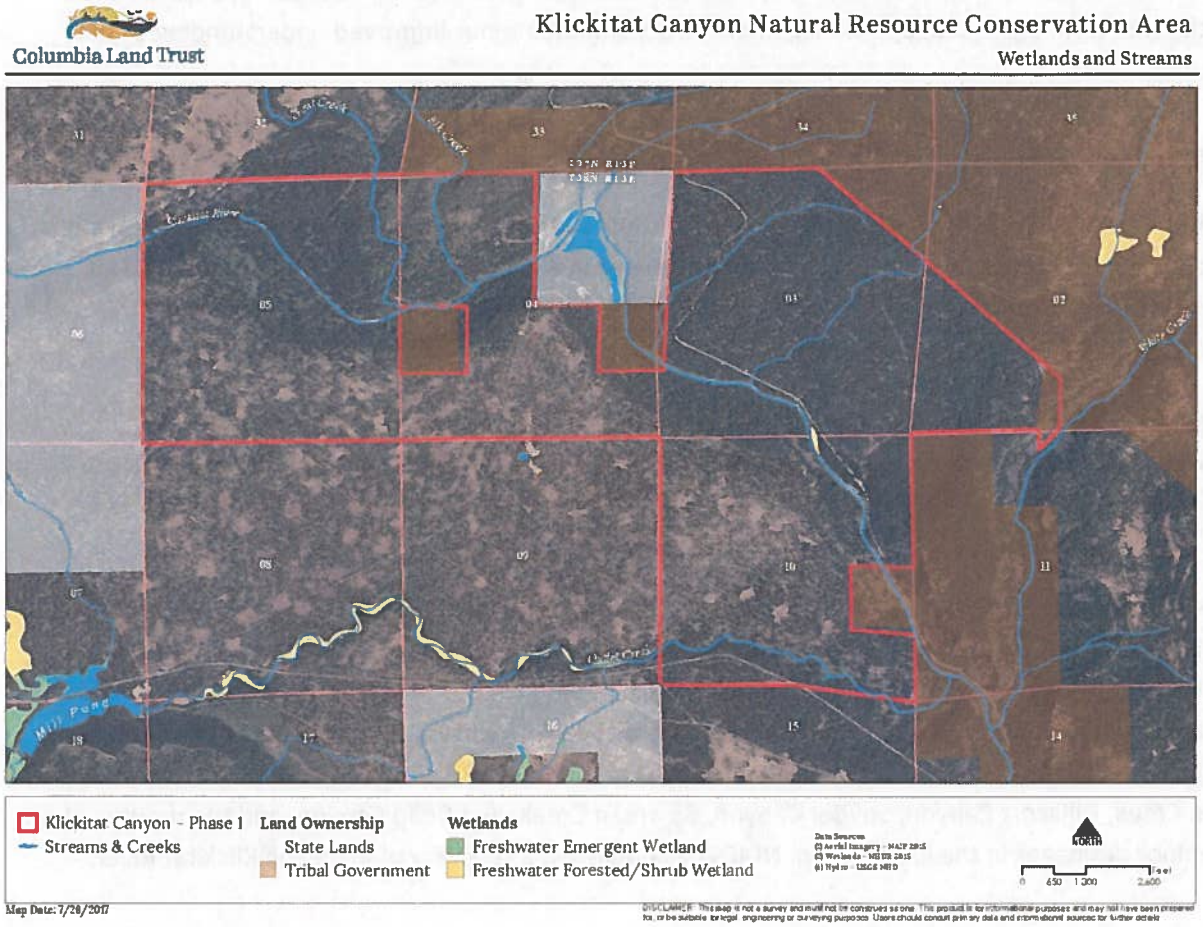
Watershed function is most influenced by physiography, climate and soils. The greater Klickitat River watershed's relatively gentle topography, with a deeply incised canyon, combined with porous soils result in an upland landscape that does not have an abundance of available water. Due to moderate elevation and a climate with frequent rain-on-snow events, snowpack is usually absent by the beginning of the growing season. Spring rain events and the infrequent summer thunderstorm are the main moisture drivers for upland plant life. This changes somewhat as mild sloping flattens in the broad reaches of the Glenwood Valley floor, but these areas, dominated by wet meadows and pasture, are largely beyond the consideration of this plan.

Anthropogenic influences on watershed function in the Mt. Adams area are dominated by roads and timber harvest practices, though residential development has the potential to have a much larger impact if development increases substantially. All of these influences usually result in flashier systems, where precipitation moves through a system in larger volumes over less time than if the watershed were pristine. While this can be problematic from perspectives concerned with flood control and water retention (for irrigation purposes, for example), It has not been a significant issue in discussions with the advisory committee.

In discussing watershed management, it is important to understand cause-and-effect relationships, and how they may relate to other downstream users of water resources. Fish habitat requirements such as adequate flow and temperature have been a major driver in watershed management policy in the Pacific Northwest; low flow and high temperature are less of a concern in the main-stem Klickitat River due to glacial input, but are a limiting factor in several tributary streams in this area.

Silvicultural practices focusing on gap size and orientation (to maximize duration of snow cover, or impact of shade on soil moisture/evaporation rates), as well as species composition in stands where deciduous species are present (to affect throughfall rates), could be meaningful. Small-scale trials experimenting with these management techniques would be a likely starting point.

Climate change also should be factored into discussions regarding watershed management. Most models predict slightly increased precipitation levels for the broader region, but with warmer winter temperatures/higher snow levels. This would have consequences for irrigation water supply, flood potential, and aquatic life in non-glacial streams, and will likely introduce additional stress to the area's forests, whether it is via accumulated water "debt", or reduction of cold-weather influences on forest-damaging insects.



Riparian Management

Washington State Forest Practice Rules (Title 222 WAC) specifically mandate the protection of riparian zones based on a stream classification system. The majority of streams are intermittent and seasonal streams and associated riparian areas have minimal protections. However, perennial, fish-bearing streams require more complex riparian zones. Management will follow state regulations.

With the interest in water retention for aquatic and terrestrial wildlife, irrigation, and flood control one strategy for perennial and intermittent streams is use of beavers. Beavers are largely regarded as a pest throughout much of the area, historically were eliminated from much of their natural habitat, and have slowly been returning. Reintroducing beavers is a low-cost, highly efficient means to provide a host of

ecological benefits including water storage. A landscape analysis of potential beaver habitat could identify areas where conflict with human and forest management goals would be minimized, yet where beavers could enhance water storage capacity within the particular drainage.

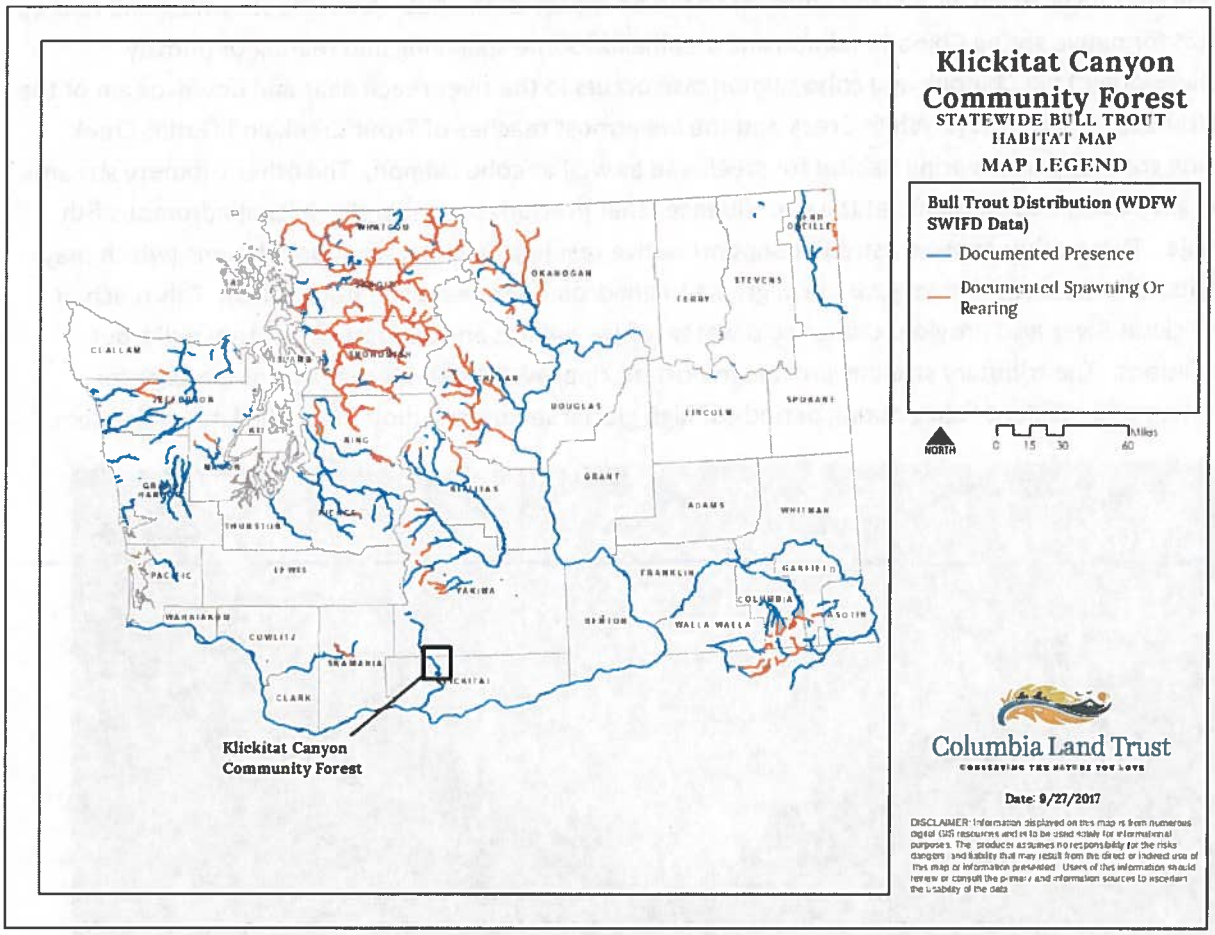
Similar to streams and riparian zones, wetlands are explicitly covered in state forest practice rules. Vegetated buffers will be identified and maintained according to harvest permits. Wetlands are a unique and important habitat worthy of special protection, consideration and study, and it is possible that current forest practices do not adequately maintain wetland function in some cases. We will strive to identify shortcomings and adapt management to accommodate our improved understanding of this resource.

Fisheries Resource

Klickitat Canyon Community Forest (KCCF) lands include portions of the Klickitat River main-stem and several of its tributaries. On the northern part of the property are Deer Creek, Trout Creek, and Elk Creek (and their confluences with the Klickitat River). On the southeast portion of the property is lower Outlet Creek, and the property also abuts a small portion of White Creek.

The Klickitat River sub-basin supports two species of Pacific salmon, Chinook (*Oncorhynchus tshawytscha*) and coho (*O. kisutch*), as well as steelhead (*O. mykiss*). The following stocks are found in the Klickitat sub-basin: spring Chinook; summer Chinook; early run fall (tule) Chinook; late run fall (upriver bright) Chinook; steelhead (summer and winter); and coho (primarily late run).

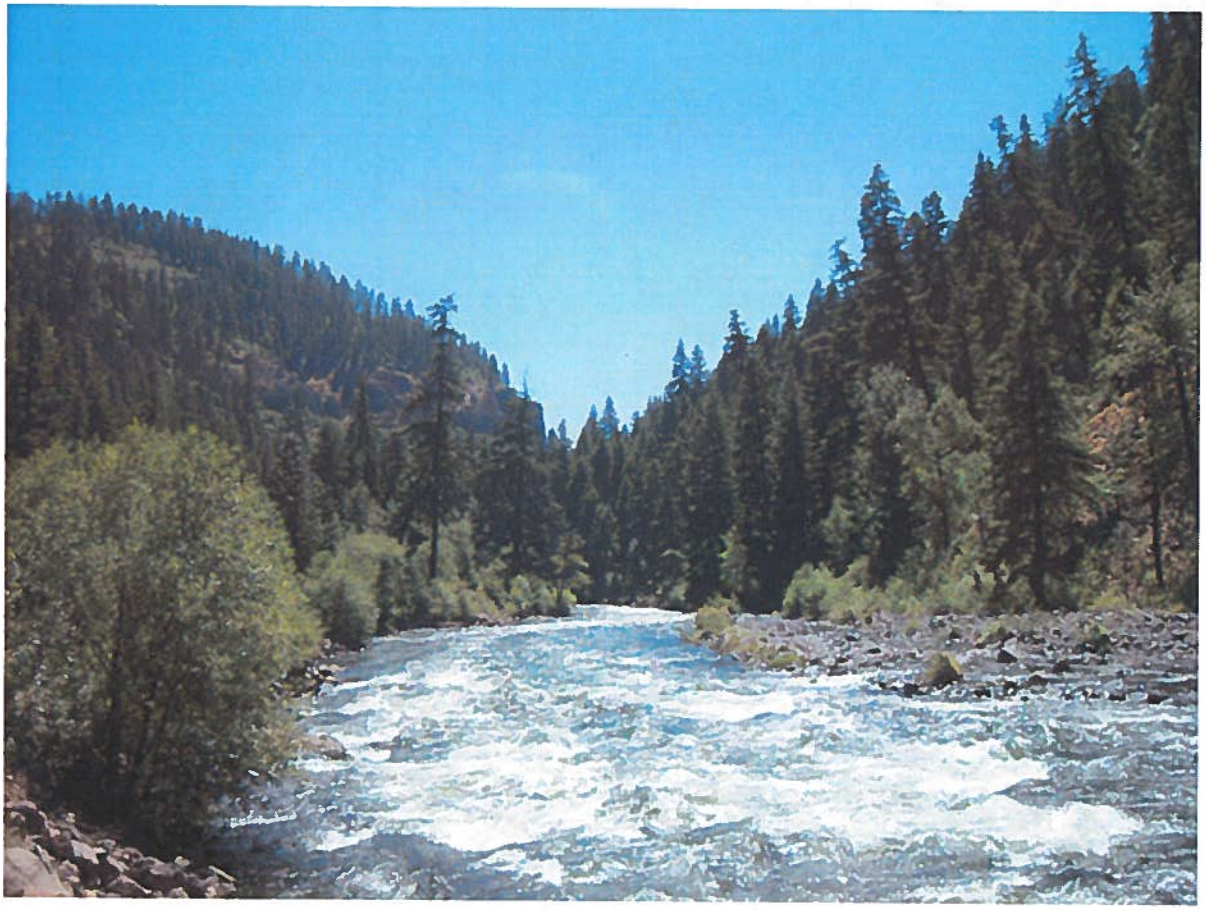
The Klickitat River supports two salmonid species that have been listed under the Endangered Species Act (ESA): Mid-Columbia steelhead and Columbia River bull trout (*Salvelinus confluentus*). National Marine Fisheries Service (NMFS) has identified critical habitat for the Mid-Columbia steelhead within the Klickitat basin (70 FR 52630, Sept. 2, 2005). The critical habitat includes the main-stem Klickitat River (exclusive of Tribal reservation and trust lands), the Little Klickitat River to Three Creeks, and portions of Swale Creek, Dillacort Canyon, Snyder Canyon, Bowman Creek, and Dead Canyon, and the mouths of a few minor drainages in the lower basin. NMFS has published a recovery plan for the Klickitat River.



Pacific lamprey (*Entosphenus tridentatus*) is another anadromous species of interest in the Klickitat sub-basin. Although historic abundance and distribution are relatively unknown, efforts are underway to collect information on the present distribution and status. Fine sediment delivery from Mt. Adams glaciers provides required rearing conditions during the ammocoete life stage of the species.

Resident fish in the Klickitat include rainbow (*Oncorhynchus mykiss*), west-slope cutthroat (*O. clarki lewisi*), brook (*Salvelinus fontinalis*) and bull trout (*S. confluentus*). Naturally reproducing populations of rainbow trout are widespread within the sub-basin. West slope cutthroat trout were historically present; however, current distribution and abundance is severely limited. Brook trout were introduced into the Klickitat sub-basin in the late 1970s and early 1980s, and may have affected both cutthroat and bull trout populations. The potential for hybridization and competitive interactions between brook and bull trout are of concern to fisheries managers in this area.

The Klickitat River reach within and adjacent to the boundary of the KCCF provides spawning and rearing habitat for native spring Chinook salmon and steelhead. Some spawning and rearing of (mostly hatchery-origin) fall Chinook and coho salmon also occurs in the river reach near and downstream of the Klickitat Salmon Hatchery. White Creek and the lowermost reaches of Trout Creek and Outlet Creek provide spawning and rearing habitat for steelhead as well as coho salmon. The other tributary streams generally have steep gradients at their confluences that precludes or severely limits anadromous fish passage. These other tributary streams support native resident rainbow trout populations (which may contribute some downstream juvenile migrants to anadromous steelhead populations). This reach of the Klickitat River also provides critical cold water refuge habitat and supports migratory bull trout populations. The tributary streams provide important clear-water habitat that acts as a refuge for migratory and resident fishes during periods of high glacial sediment runoff in the Klickitat main-stem.



Klickitat Salmon Hatchery – Background and Importance

Originally constructed between 1950 and 1954, the Klickitat Salmon Hatchery (KSH) was funded under the federal Mitchell Act (Public Law 75-502) of 1938 as mitigation for impacts to fish of Columbia River hydropower and water diversion development and operation. It is the centerpiece of artificial propagation activities in the Klickitat sub-basin, and is used at least in part to rear and release spring and fall Chinook and coho salmon. In addition, steelhead smolts are released annually directly into the lower

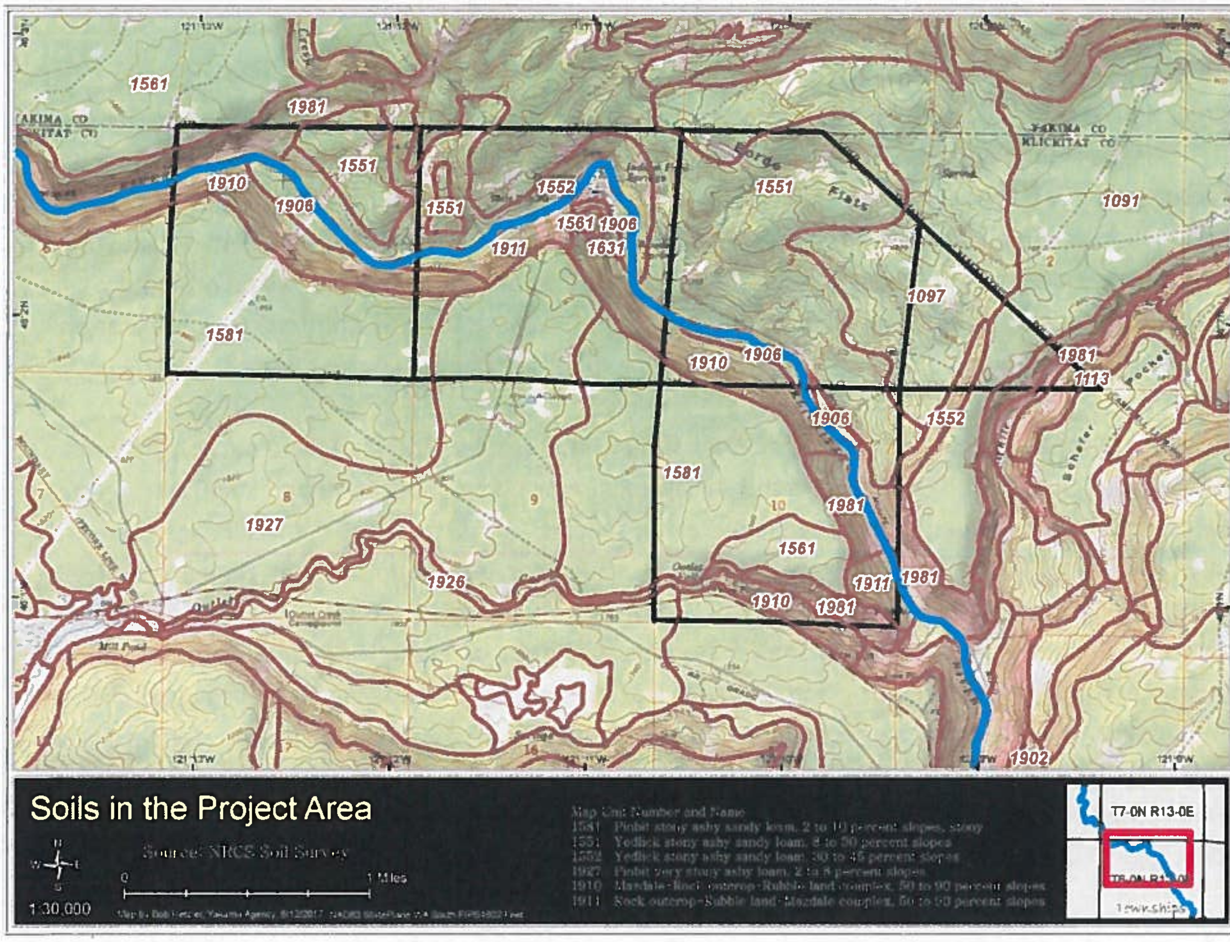
Klickitat at several locations downstream of the Klickitat Hatchery. On June 2, 2003, a Memorandum of Understanding (MOU) was completed that describes the operational responsibility of the KSH and the Lyle Falls and Castile Falls fishways between the WDFW and the Confederated Tribes and Bands of the Yakama Nation. In May of 2006, the Yakama Nation officially assumed responsibility for the operation of the KSH. Annual production at the KSH targets 4,000,000 fall Chinook, 800,000 spring Chinook, and 1,000,000 Coho to meet *US v. OR* production agreements.

The KCCF borders portions of the Klickitat River near river mile 42.0 and abuts the Klickitat Salmon Hatchery property on three sides. Four critical spring waters sources supply the KSH (Indian Ford A Upper, Indian Ford A Lower, Indian Ford B, and Wonder Springs). The spring water is used to support every life stage of growth at the hatchery (egg, fry, parr, smolt, and adult-holding water). The outstanding quality of this spring water supply makes for ideal salmon culturing. In particular, the clarity of these springs make them highly desirable during the egg incubation stage (Sept. – March) when the delivery of "sediment free" water is critical. Sediment delivery into the spring sources can drastically impact salmon production. Extraordinary measures must be in place to ensure that there is no degradation to existing conditions. The Wonder Springs source and collection intake is located on KCCF property. A 1953 water right (S4-01258CWRIS) and right-of-way agreement for the purposes of aquaculture are assigned to the property title. From the intake, the pipeline delivers water to Rearing Pond #26. The pipeline travels both above and below ground and under the river for approximately 1,000 feet. From the collection source, the pipeline extends approximately 150 ft. on the KCCF property before crossing onto WDFW property (parcel #06130400000100). This critical water source annually rears up to 1,000,000 fall Chinook and 400,000 spring Chinook which are directly released into the Klickitat River at the hatchery.

Soils

Soils on the community forest property are mostly young Andisols and Inceptisols, reflecting their proximity to the volcanic Mt. Adams and several smaller buttes and cones that were once active. Glaciers, water and mud flows were major influences in shaping the landscape. The soil parent materials are derived from volcanic ash and volcanic rocks (basalt) and are of low to moderate productivity. They are well drained, highly porous and not prone to high levels of erosion or compaction. The site index ranges from site class 2 to 3. The rocky soils and inherent soil productivity lend themselves to timber production, livestock grazing and wildlife habitat, but not to higher-valued agricultural uses. The soils have a xeric moisture regime with warm and dry summers and cool and moist winters. The soils are dry in the area for 60 to 90 consecutive days following the summer solstice, which causes the forest productivity to be restrained by drought more than by availability of nutrients or sunlight/growing period. Some of the canyon walls are modeled with a high mass-wasting potential due to slope and parent material.

The soils include the Mazdale, Pinbit and Yedlick series. On the west side of the Klickitat River, the Mazdale soils are found on the steep, north-facing side canyons. They contain large amounts of cobbles and stones thorough the soil profile, and are intermixed with areas of rock outcrop and rubble land. Mazdale soils are very deep with a very stony ashy loam surface and very cobbly loam solum. In contrast, the Pinbit soils occupy the gently sloping terraces and uplands on the west side of the river. They are very deep soils derived from ash and alluvium and have a stony ashy loam surface over an ashy sandy loam solum. On the east side of the Klickitat River, the Yedlick soils occupy the hilly to steep terrain on mountain slopes. These soils are very deep and very gravelly with a loam texture.



Soils in the Project Area
Source: NRCS Soil Survey
0
1 Miles
1:30,000
Map Unit Number and Name
1581 Pinbit stony ashy sandy loam, 2 to 10 percent slopes, stony
1551 Yedlick stony ashy sandy loam, 8 to 30 percent slopes
1552 Yedlick stony ashy sandy loam, 30 to 45 percent slopes
1927 Pinbit very stony ashy loam, 2 to 8 percent slopes
1910 Mazdale-Rock outcrop-Rubble land complex, 50 to 90 percent slopes
1911 Rock outcrop-Rubble land-Mazdale complex, 50 to 90 percent slopes
T7-0N R13-0E
YAKIMA CO
KLICKITAT CO
Gorge Flats
Schafer Pocket
1581
1981
1910
1906
1551
1552
1561
1631
1911
1091
1097
1113
1927
1926
1902

Wildlife

There is a diverse set of habitats available on this small forest property. These range from riparian, talus, cliffs, oak woodlands, dry forest, and moist forest. Many of these habitats are important for different species and require special considerations. A site-by-site analysis of habitat needs will be needed when developing prescriptions for forest management. During forest management activities, efforts will be made to protect legacy snags. Large down logs and woody debris will be retained where appropriate and in adequate quantities to provide habitat. Where Oregon white oaks are present on the property they should be "daylighted" by removing excessive conifer competition.

Many wildlife species occur in the Klickitat River sub-basin. Biologists and staff have observed a wide variety of wildlife species in and around the Klickitat River including: bobcat, belted kingfisher, western gray squirrel, black tail deer, amphibians, several bat species, (including myotis), black bear, coyote, cougar, bobcat, wolverine, striped skunk, river otter, mule deer, elk, mountain goat, Douglas squirrel, Northern flying squirrel, Townsend's chipmunk, porcupine, bushy-tailed woodrat, snowshoe hare, pika, rubber boa, gopher snake, and garter snakes. Aquatic species include rough-skinned newt, coastal tailed frog, western toad, Pacific tree frog and Cascades frog. Numerous bird species have also been observed, including wild turkey, double crested cormorant, great blue heron, sharp-shinned hawk, Cooper's hawk, northern goshawk, red-tailed hawk, blue grouse, several owl species, Vaux's swift, hairy woodpecker, pileated woodpecker, northern red shafted flicker, several jay species, raven, songbirds, bald eagle, golden eagle, killdeer, spotted sandpiper, common nighthawk, and belted kingfisher.

Northern Spotted Owl

There is a historic Northern Spotted Owl nest, not known to be currently occupied, adjacent to the property. Forest Practices Rules define a 0.7 mile radius owl circle around the historic nest. A nest core must be identified and protected on the property.

Klickitat River Bald Eagle Habitat

The Klickitat River provides bald eagles with habitat for foraging, roosting, and nesting. Bald eagles have been observed in the community forest by Yakama Nation staff working at the Wahkiacus field office, and WDFW has mapped the area as a regular concentration site for Klickitat River bald eagles.

Columbian Black-tailed Deer Winter Range

Columbian black-tailed deer are managed as a game species by the WDFW. They prefer brushy, logged lands and coniferous forests. During the winter, they move to lower elevation areas where cover can prevent snow from accumulating beyond 12 inches, although they can cope with snow up to 24 inches if not dense or crusty. This area is one of two general locations where WDFW documents the overlap of black-tailed deer with mule deer in Washington.

Rocky Mountain Elk Winter Range

Rocky Mountain Elk are managed as a game species by the WDFW. Ideal elk habitat includes productive grasslands, meadows, or clearcuts, interspersed with moderately dense canopy forests.

They are hardy animals and typically choose cover only during extreme weather. During the winter months, elk eat primarily grasses that are available and not covered by deep snow but will also gnaw on aspen or other deciduous tree trunks. They typically move into lower valleys and denser vegetation, such as mature forests, during the winter months. The lower elevation and proximity to the Klickitat River moderate the effects of winter relative to surrounding habitat at higher elevations.

Western Grey Squirrel

Western grey squirrel nests are typically found in the zone where Douglas-fir and white oak overlap. Their nests may be stick nests or tree cavities and are primarily used for refuge from predators and/or rearing young. Typically, a nest survey would be conducted during harvest unit layout and a protection strategy for all nests provided. Protection would be the maintenance of a contiguous forest canopy around the nests, and a spring disturbance restriction during the nesting period. An on-site consultation with a WDFW habitat biologist would confirm the level of protection needed. The "daylighting" of oaks may improve mast production, which allows greater food sources for squirrels.

Magpies and Crows

Magpies and crows are opportunists when it comes to food, but are considered important for insect pest control because they mostly eat insects. However, they also eat just about anything else including small mammals, birds, hatchlings, eggs, seeds and fruit. Additionally, they are known for cleaning carcasses of dead animals. In addition to consuming a wide variety of food, they use a diversity of habitats including thickets for nesting, open areas for hunting, and scattered trees for cover.

Beavers

The most important habitat attribute requirement for beavers is flowing water from streams, lakes or marshes. The deciduous trees and shrubs typically found in riparian areas provide beavers with food and building materials for the lodges they nest in. Additionally, beaver ponds can provide valuable habitat for ungulates and birds as well as rearing habitat for juvenile fish.

Cougars and Wolves

Both of these large predators require forested and open habitat types for cover, denning, and hunting opportunities. Cougars are known for their ability to not be seen and they hunt in steep canyons, using rock outcrops and dense brush for cover. They also use covered spaces in rock outcrops for day beds and resting spots. An important consideration for both cougars and wolves is providing areas without disturbance for denning. Additional consultation with WDFW will be needed if denning sites are detected on the property.

Protection of Special Resources

DNR's Natural Heritage program has identified rare plant occurrences on or near the KCCF. Those include:

- Barrett's beardtongue
- Long-bearded sego lily
- Lowland toothcup

Barrett's beardtongue (also called Barrett's penstemon, *Penstemon barettiae*) is designated as a Washington State Sensitive, and Federal Species of Concern. It is found mostly on the cliffs and rocky areas in the Klickitat canyon. There are some good examples of this plant along the river road near the Klickitat River. While grazing could affect this plant, the likelihood of widespread grazing to occur on steep, rocky sites is minimal due to the inability of the livestock to reach the sites.

Long Bearded Sego Lily (or long-bearded mariposa lily, *Calochortus longebarbatus var. longebarbatus*) is a State Sensitive and Federal Species of Concern. These plants are scattered throughout seasonally wet meadows and in openings in the ponderosa pine forest stands. A healthy, open ponderosa forest is beneficial to this species. Avoiding changes to the hydrology of the seasonally wet meadows is also important.

Lowland Toothcup (*Rotala ramosior*) is a State Threatened species. There are no known detections within the Klickitat Canyon Community Forest, but the plant could be found in riparian areas or small wetlands. Avoiding changes to the hydrology of the seasonally wet soils may allow other forbs and grasses to outcompete and displace this species if it were to occur in the community forest.

Water sources separated from riparian areas and sensitive wetland areas can greatly reduce the negative impact of livestock on streams, wetlands and adjacent biological communities. Springs are a natural occurrence across the area as well, with equal benefits for wildlife and livestock.

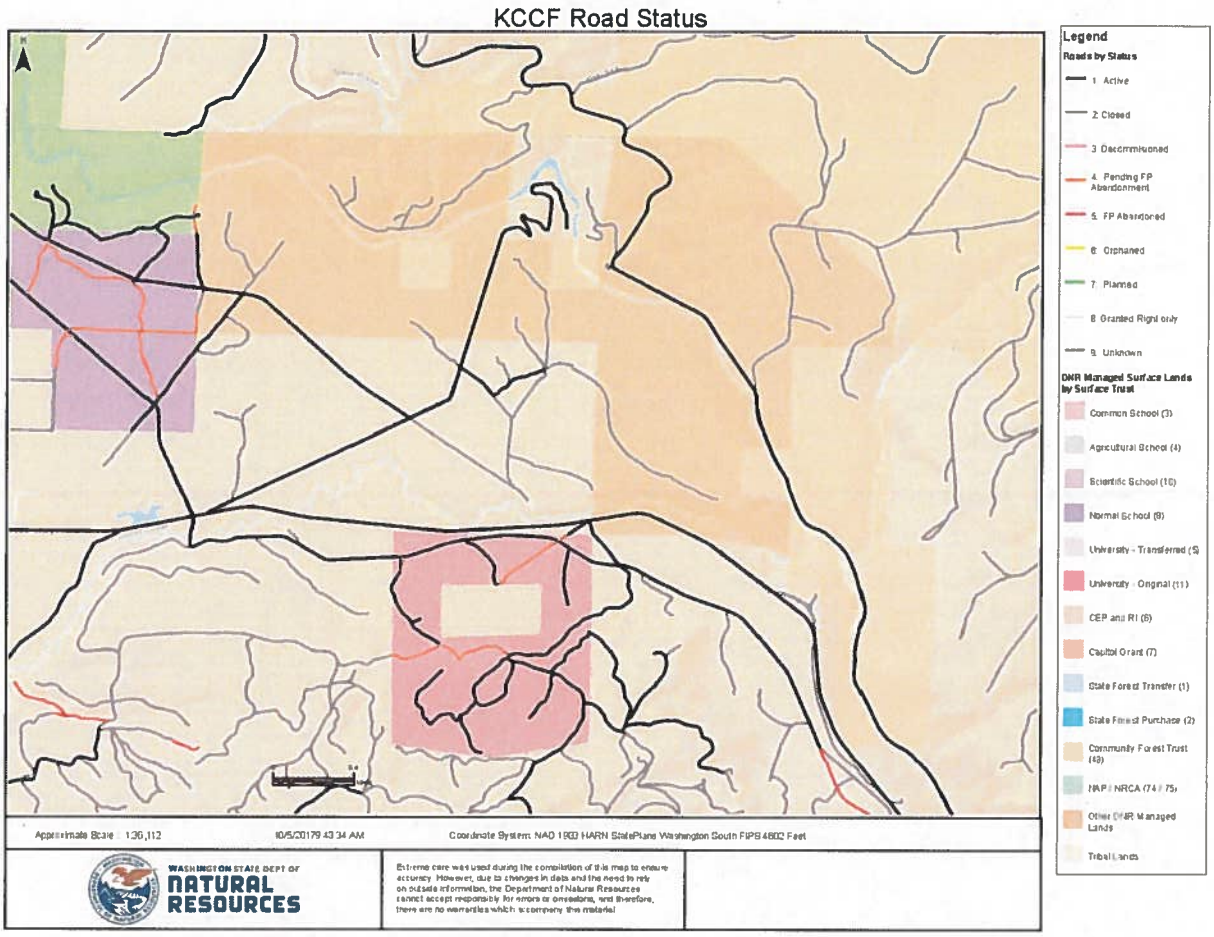
Wonder Springs is one of four springs that supplies water to support up to 1,000,000 fall Chinook at the Klickitat Salmon Hatchery. It is the only one of the four located on the property, and the hatchery has a water right to collect and pipe water to the rearing pond. Protection of the watersheds surrounding the critical spring water sources that supply the KSH include; Indian Ford A Upper, Indian Ford A Lower, Indian Ford B, and Wonder Springs. Special care and consultation with YKFP staff will be needed when removing hazard trees that threaten the hatchery infrastructure.

The advisory committee felt that the large areas of talus added to the habitat and aesthetic value of the property. Therefore, protection strategies for natural talus field ecosystems will be applied when management activities are conducted adjacent to or around talus fields. Talus fields provide essential habitat for some wildlife species, such as pika, and are preferentially used by other species of vertebrate and invertebrate wildlife. While protecting these ecosystems is important, it is also important to recognize that some management activities, such as road building, might have relatively less impact (as

compared to other ecosystem types) when located on the more stable slopes of talus fields. Therefore, careful thought must be given to the overall long-term benefits of alternative road or management activity location options.

Wonder Falls is a unique feature on the landscape. Here, water is released from lava tubes fed by glaciers on Mount Adams. This spectacular falls is visible from the River Road and is tributary to the Klickitat River. Much like the many springs upstream, this cool water contribution into the Klickitat River is important for spawning fish in the late summer/fall seasons.

Property Access /Roads and Trails



Currently there are no road barriers (gates) preventing the public from driving roads within the property. However, there is no permanent public easement accessing the property. For forest management, the necessary easements to remove valuable forest products are in place. As surrounding ownership changes, there could be impacts to the public's ability to access the property. Efforts will be made to secure public access whenever possible. It is likely that the River Road will continue to remain open even as ownership changes. The opportunities to ensure long-term public access should continually be monitored and adjoining landowners should be actively engaged in conversations about public easement by managers of the forest.

The Forest Practices requirement of a Road Maintenance and Abandonment Plan has been met, and projects have been completed. However, continual road maintenance will be necessary following harvest/management activities and also periodically as weather events and public use impacts dictate. Road densities may be monitored if additional roads are considered in the future to maintain the needed access while balancing the impact to the environment. The use of temporary management roads may be a way to mitigate the density of the road system on the property.

The area around the springs feeding the Klickitat Fish hatchery may need additional access control. Grant funds or other means to control access to these highly sensitive areas should be pursued.

Recreation

Access Management

The goal for access management of community forests is to provide public access while protecting resources including timber, water, wildlife, and capital improvements (i.e. roads, culverts, and bridges). Road damage, increased sedimentation to streams, vandalism, timber theft, arson and illegal dumping can occur on lands without access control. Except during times of extreme fire danger, the community forests will be opened to the public. The community forest managers will jointly participate with adjacent landowners in gating programs and fire closures.

The following non-commercial resource removal activities will be allowed within the community during periods of low fire danger:

- Mushroom and berry picking
- Fishing & hunting (regulated by the Washington Department of Fish & Wildlife)
- Firewood cutting (only within approved harvest units determined annually)

A myriad of recreational activities are popular including camping, hiking, hunting, bicycle riding, ATVs, snowmobiling, cross-country skiing, fishing, driving for pleasure, birding, photography, wildflower identification, and other activities. Much use comes from people initially attracted to the Columbia River Gorge for windsurfing, kayaking, climbing and hiking on Mt. Adams, and other activities. The Advisory Committee identified the importance to monitor user conflicts, trail densities, camp site development, and resource degradation caused by recreation when and if it occurs. Currently there are no identified areas of significant concern where this is occurring. If areas are identified in the future, managers of the community forest will need to use adaptive management approaches and gather input from the community on solutions.

While maintaining working lands as the priority and putting local interests in recreation first, the committee advised that multiple-use recreation should be part of this forest. The community has an interest in keeping the KCCF open to the public for primitive, dispersed camping with little development of recreation opportunities. The committee hopes to find partner groups to take on recreation stewardship. Since the property is small in relation to other public forest ownerships in the area, it is felt that current undeveloped uses for recreation would be the extent of opportunities. The costs of proposals for further development will be weighed against the community benefits, monetary and non-monetary. For example, an opportunity for development may be a public access overlook at Outlet Falls.

With a potential increase in dispersed camping, the allowance of campfires must be considered. Dispersed campfires will be allowed in the community forest during times of low fire danger, without designated fire rings. When county burn bans are in effect, all fires within the community forest will be prohibited. These campfire rules will be used on a trial basis, and if there are problems with unattended fires, or escaped fires, the DNR will seek advice from the community on reassessing the rules for campfires.

Cultural Resources

Cultural resources include prehistoric and historic archaeological sites, historic structures and features, and traditional cultural properties (places or resources that may or may not have human alterations but are important to the cultural identity of a community or Indian tribe). When federal money or permits are involved in an activity, the National Historic Preservation Act of 1966, as amended, requires that these resources be inventoried and evaluated for eligibility for listing in the National Register of Historic Places and requires agencies to evaluate and consider effects. The Forest Practices Act and Rules as well as the State Environmental Policy Act (SEPA) also provide for protection of cultural resources.

The project area setting is typical of the Columbia Plateau, characterized by geological features, plant and animal communities, and waterways that are important to traditional Native American use. According to the archaeological record, people have occupied this region for approximately the last 11,500 years. The Klickitat Community Forest project area is adjacent to the Closed Area (Reservation Restriction Area) of the Yakama Reservation. The Yakama Reservation was established by the Treaty of 1855 (12 stat., 951) between the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation) and the United States government. The reservation encompasses an area of approximately 2,151 square miles with its boundaries defined by the Cascade Mountains to the west, Yakama River to the east, Ahtanum Creek to the north, and Simcoe Mountains to the south.

The Klickitat Community Forest project area is located within the homeland of the Eastern Klickitat band, *xwał'xwaypam* , which is now part of the Yakama Nation. There are 14 bands and tribes in the Yakama confederation, including the Kah-milt-pah, Klickitat, Klinquit, Kow-was-say-ee, Li-ay-was, Oche-chotes, Palouse, Pisquose, Se-ap-cat, Shyiks, Skinpah, Wenatshapam, Wishram, and Yakama. Traditionally, Eastern Klickitat territory reached as far west as Mount St. Helens, and as far south as the Columbia near White Salmon to The Dalles. Bound by a common language, *Ichi Skiin Sinwit-nan*, the *xwał'xwaypam* made their home, hunted, fished, gathered, and practiced their way of life in this area for generations. Present within the Klickitat drainage are hunting areas, burials/cemeteries, petroglyphs, fishing sites, and gathering sites.

Traditionally, people living in this area obtained resources through a practice of a seasonal round of subsistence activities that began when the snows melted in the early spring. The first salmon usually reached the interior Plateau in late February or early March. Salmon feasts were held in mid-spring, then people left their winter villages to gather edible roots and grasses in the uplands, or down to the Columbia River, Yakima River and its tributaries, or along the Klickitat, White Salmon, and Cowlitz rivers to fish.

In July, as the summer heat increased, families moved to higher elevations to continue to hunt and gather wild plant foods, including camas and huckleberries. In the fall, people returned to the river valleys for the fish runs and trading along the Columbia River. Around mid-November, families returned to winter villages bringing with them supplies of roots, salmon, berries, venison, and other food accumulated and preserved.

Cultural Resource Management is highly dependent on the specific resources that occur on a particular property. As part of the Washington State Forest Practices Permit process, cultural resources have been identified and mapped by Washington State Department of Archaeology and Historic Preservation Department (DAHP). The DAHP is the office of record, and manages known cultural resources within

Washington State. When cultural resources are identified, the community forest managers will work with DAHP, Yakama Nation, and external archeologists to develop a protection or mitigation plan. Community forest managers will be trained in identification of cultural resources in order to be aware of any cultural resources within the community forest that may not have been identified by DAHP.

In the event that archaeological resources are encountered, ground disturbing activities would be halted and an archaeologist will be contacted to survey the site and update the Site Protection Plan.

There is a Klickitat Canyon Community Forest Inadvertent Discovery Plan that has been developed by YN and DAHP. The committee has chosen to incorporate that document by reference--attached.

Adaptive Management

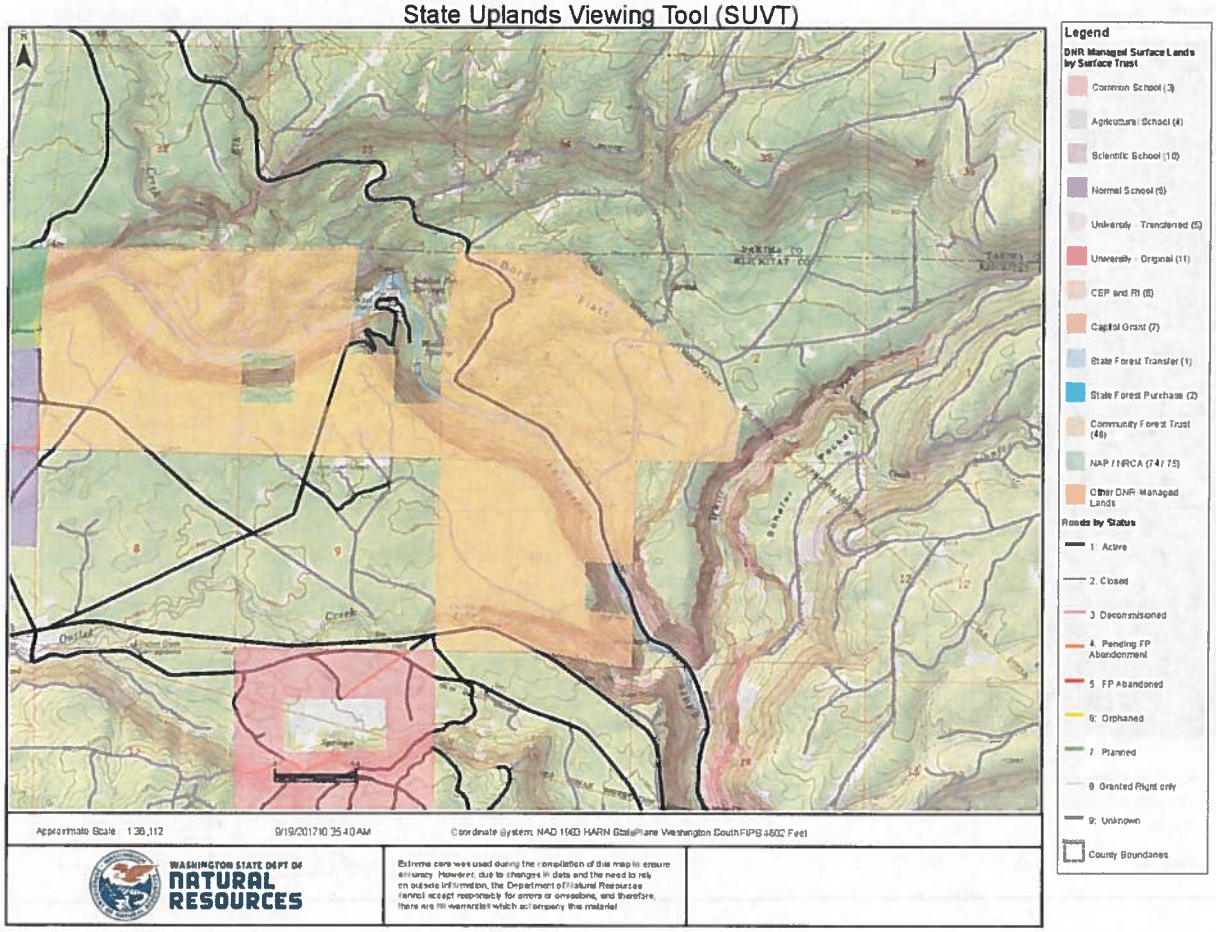
This management plan has a planning horizon of 15 years, and should be reviewed by the DNR and the community at that time to ensure the community's values are still expressed in the document.

The intention of this plan is to allow for learning and adaptation throughout its planning horizon. The Department of Natural Resources and partners will take actions, and use feedback mechanisms, to learn and adapt to new opportunities and changing conditions.

Using the cycle of *Plan-Implement-Monitor-Analyze-Learn-Modify*; managers of this forest will be able to evaluate the effectiveness of management actions and then feedback from the community on alterations to be made.

AERIAL PHOTO(S)/PROPERTY MAP(S)

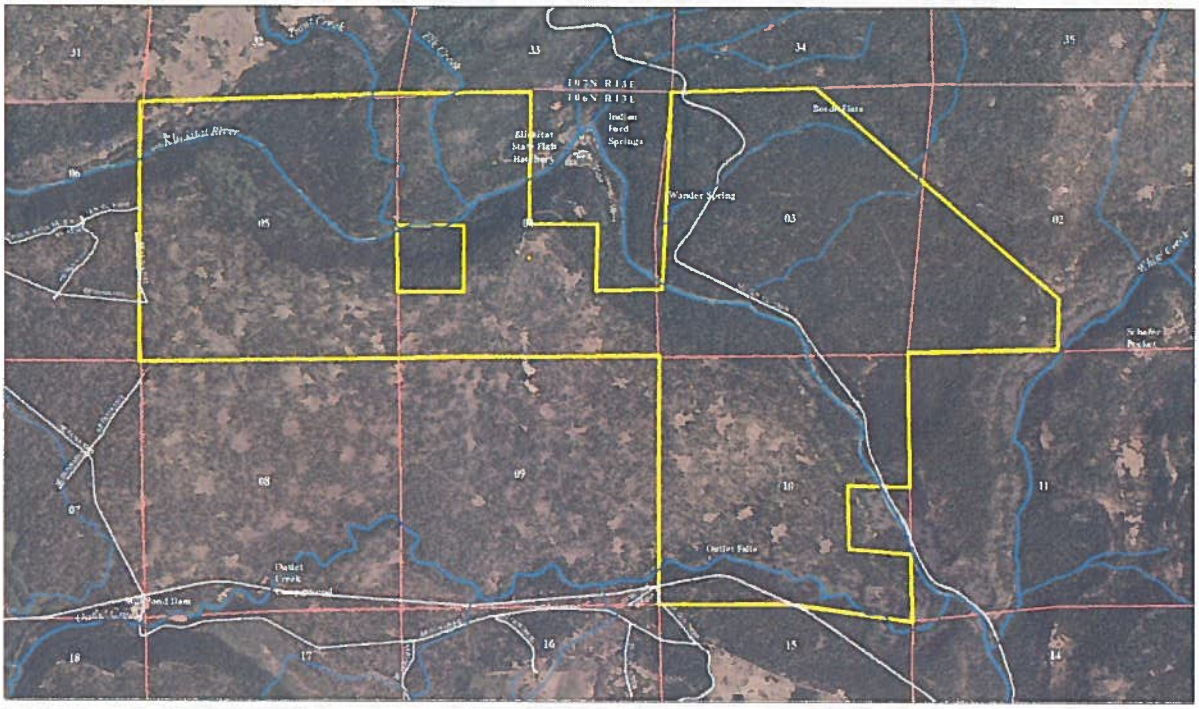
State Uplands Viewing Tool (SUVT)



Columbia Land Trust

Klickitat Canyon Community Forest

Overview Map

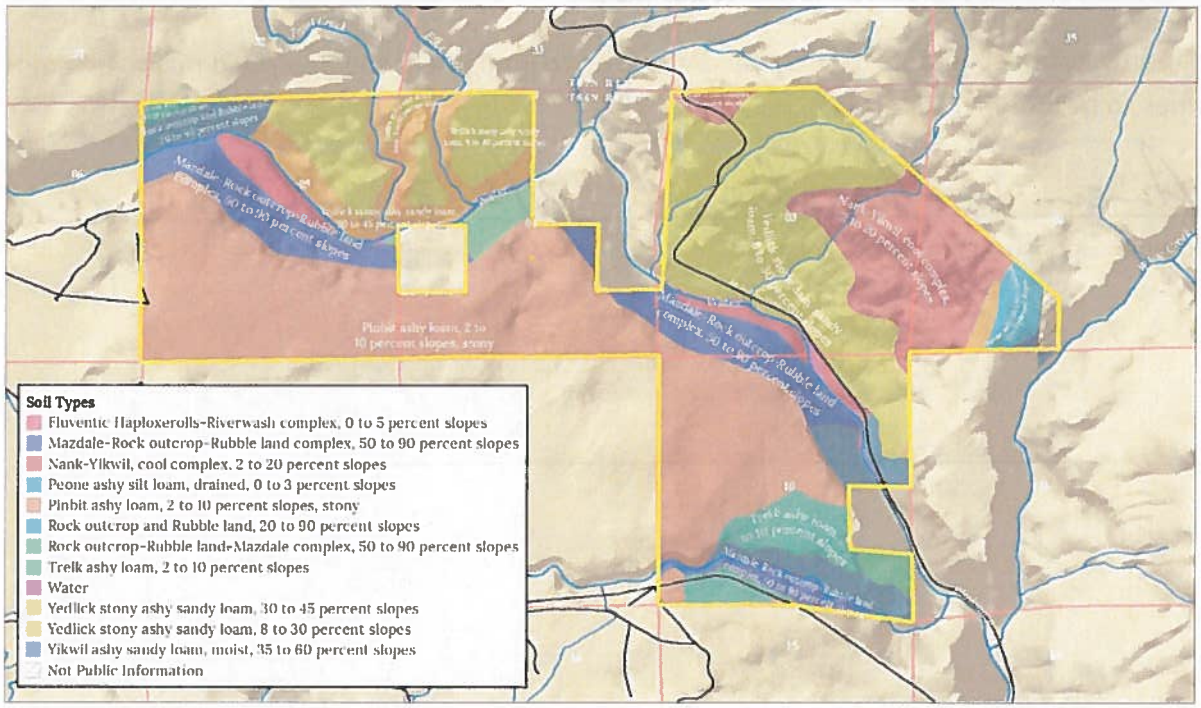


Map Date: 9/27/2017

Columbia Land Trust

Klickitat Canyon Community Forest

Soils Map



Map Date: 9/27/2017

LANDOWNER SIGNATURE(S)

LANDOWNER APPROVAL SIGNATURE (REQUIRED)

I/we approve of the contents of this plan and intend to implement the described management activities to best of my/our ability.

Angus W. Barclee 12/6/17

Landowner Signature(s) and Date Signed

Attachments

Cultural Resources
Inadvertent Discovery Plan for Klickitat Community Forest
Washington Department of Natural Resources

A Cultural Resources Inadvertent Discovery Plan (IDP) has been developed for the Klickitat Community Forest to inform employees and contractors of the procedures to follow in the event that archaeological and/or historic artifacts or features are discovered during forest management activities in the Forest Lands. The objective of the IDP is to insure that archaeological and historic resources as well as human remains are appropriately treated until responsible officials can investigate the discovery and determine protection measures. Archaeological and historic resources and burials are protected under state laws, RCW 27.44, 27.53 and 68.60.

Archaeological resources include the artifacts and features left in the landscape of early American Indian activities and the historic activities of early settlers. Artifacts are human manufactured items and the waste material from manufacture. Features are the human alterations in the landscape. Artifacts include arrowheads and the stone waste flakes from making them and historic cans, bottles, ceramics and wooden and metal objects left in dumps or scattered in the landscape. Features include human made pits in talus slopes, stacked rocks, rock walls, blazed and scarred trees, ditches, railroad grades, wagon roads, cabin foundations and other human modifications of the natural landscape.

The Forest Practices Rules, WAC 222-16-050 (1)(f)(iv), provide for exemptions from class IV-special designation when there is a known site within a forest practices application (FPA) and a protection plan is agreed to by the Department of Archaeology and Historic Preservation (DAHP) and the affected tribe(s) prior to submitting the FPA. The IDP is for archaeological and historic resources that are unknown at the time a FPA is submitted to the Department of Natural Resources (DNR). The Cultural Resources Protection and Management Plan (CRPMP) was produced as partial fulfillment of commitments made in the 1987 Timber, Fish and Wildlife Agreement (TFW) and the 1999 Forests and Fish Report (FFR). It provides a framework for landowners and land managers to communicate and cooperate with Indian tribes whose traditional lands include their managed timberlands. The CRPMP encourages mutual respect for the goals and objectives of both land managers and tribes.

(A) Procedures for Archaeological or Historic Resources Discovery

1. If a member of the Klickitat Community Forest work force or contractor believes they have discovered an archaeological or historic resource they are authorized and directed under the IDP to halt work in the immediate vicinity of the discovery and to promptly report the find to the Operations Supervisor.

2. The Operations Supervisor is responsible for insuring the work in the vicinity of the find remains halted and is responsible for establishing a protective buffer around the site prohibiting machinery, vehicles and unauthorized individuals from coming within at least ten meters (35 feet) of the discovery.
3. The Operations Supervisor will notify the Klickitat Community Forest Area Manager of the discovery and the Yakama Nation Tribal Historic Preservation Officer (THPO) and/or the TFW Archaeologist. If neither the Yakama Nation THPO nor the TFW Archaeologist is available to visit the site to assess the discovery, the services of another professional archaeologist will be secured. The professional archaeologist shall meet the qualifications defined in RCW 27.53.030(11).
4. The Operations Supervisor or other Klickitat Community Forest representative will accompany the THPO and/or the TFW Archaeologist or other qualified professional archaeologist to the discovery. If the discovery is determined to be a protected archaeological site or historic archaeological resource as defined in RCW 27.53.030 it will be professionally documented and protection measures will be developed in consultation with DAHP and the Yakama Nation (if Yakama Nation personnel are not participating in the documentation).
5. The Operations Supervisor will notify DNR Forest Practices of the discovery if it is a protected resource when there is a protection plan agreed to by Klickitat Community Forest personnel, DAHP and the Yakama Nation.

(B) Procedures for Discovery of Human Remains (see RCW 68.60.050 and 055)

1. If a member of the Klickitat Community Forest work force or contractor believes they have encountered human remains they are authorized and directed under the IDP to halt work in the immediate vicinity of the discovery and to promptly report the find to the Operations Supervisor.
2. The Operations Supervisor is responsible for insuring the work in the vicinity of the discovery remains halted and is responsible for establishing a protective buffer and securing the area around the human remains prohibiting machinery, vehicles and unauthorized individuals from coming within at least ten meters (35 feet) of the discovery.
3. The Operations Supervisor will immediately notify the appropriate Coroner and Sheriff's offices and report the location of the human remains. The Operations Supervisor will notify the Klickitat Community Forest Area Manager, the Yakama Nation Tribal Historic Preservation Officer (THPO) and the Washington State Physical Anthropologist.
4. The Coroner's office will assume jurisdiction over the human remains and must make a determination whether they are forensic or non-forensic. The Coroner will retain jurisdiction over forensic remains.
5. Upon determination that the remains are non-forensic, the Coroner must notify DAHP within two business days. DAHP will have jurisdiction over the remains until the source of the remains is determined. DAHP will notify local cemeteries and the Yakama Nation via certified mail.
6. The State Physical Anthropologist must make a determination of whether the human remains are Indian or non-Indian within two business days. If the remains are determined to be Indian, DAHP must notify the Yakama Nation via certified mail within two business days.

7. If the remains are determined to be Indian, the Operations Supervisor or other Klickitat Community Forest representative will assist the THPO and/or other Yakama Nation representatives to the discovery. The THPO or other Yakama Nation representatives will work with Klickitat Community Forest personnel to determine appropriate buffers and treatment of the human remains.

Contacts

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Forest Legacy Program in Washington State

Program Purpose

In 1990, Congress created the Forest Legacy Program to protect environmentally important forestlands threatened by conversion to non-forest uses – mostly commercial or residential development. This national program protects private forest lands primarily by paying for conservation easements that buy up development rights. This assures that the traditional uses of private forestlands and the natural resource values embraced by the public are protected for future generations.

Lands acquired through the Forest Legacy Program are "working forests," properties managed to produce forest products and to provide non-commodity values such as healthy riparian (streamside) areas for fish and wildlife, and scenic, cultural, and recreation resources.

The USDA Forest Service administers the national Forest Legacy Program, promoting the long-term integrity of forestlands using cooperative efforts of willing landowners, state lead agencies, and a State Forest Coordinating Committee. Through the program, the federal government funds up to 75 percent of the project costs, with the remaining 25 percent provided by the state or other conservation partners.

Forest Legacy Program Goals

- Provide present and future timber management opportunities
- Protect water quality
- Provide habitat for native fish, wildlife or plants
- Protect existing landscapes to discourage further fragmentation
- Incorporate federal program goals to ensure Washington projects meet the intent of the authorizing legislation

Washington State's priority is to focus resources where conservation planning and partnering with other organizations provides the best benefits for protecting forest lands and their associated uses.