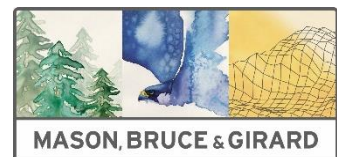


SPENCE MOUNTAIN FOREST MANAGEMENT PLAN



MB&G



MASON, BRUCE & GIRARD

Insights. Ideas. Integrity.

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SPENCE MOUNTAIN FOREST MANAGEMENT PLAN

Prepared for Trust For Public Land

Prepared by Mason, Bruce and Girard, Inc.
Steven Ziegler, Senior Forester

October 2020

Mason, Bruce & Girard Inc. (MB&G) has been commissioned by the Trust for Public Land (TPL) to develop a forest management plan for the Spence Mountain property adjacent to Upper Klamath Lake in Klamath County, Oregon. TPL is presently in negotiations with the current landowner to purchase the property, with the ultimate objective of having the property conveyed to ownership of Klamath County to be maintained as a public community forest. The property is roughly bounded on the southeast by State Highway 140, on the west by private ranch lands, the northwest by Shoalwater Bay of Upper Klamath Lake, on the north by the continued peninsula that is Eagle Ridge County Park, and on the east by Upper Klamath Lake. The property has two north/south trending ridges, the one to the west capped by Spence Mountain at an elevation of 5846 feet and Eagle Ridge along the east that roughly parallels the lake shore and reaches an elevation of 5200 feet. The central portion of the property is a generally wide flat basin between the two ridgelines. The east side of the eastern ridge slopes steeply to the lake shore and the west side of the west ridge line has moderate to steep slopes to Highway 140, the ranch land, and the western lake shore.

The property has a long history of ownership by various industrial timberland owners tracing back to the 1920's. Weyerhaeuser Company was the major owner for a long period during that time frame and was the party responsible for most of the initial road system development and harvesting. Subsequent ownerships resulted in some additional timber harvest and land management up to the most recent ownership by the current owners JWTR LLC of Klamath Falls. As a part of the early harvest and management of the tract in approximately the early 1980's, a large area (approximately 400 acres) was clearcut in the central basin and replanted in Ponderosa pine, resulting in a stand of nearly pure even-age Ponderosa pine. Other areas were mixed conifer stands which were harvested using partial cut or overstory removal prescriptions, leaving stands of smaller trees of mixed age, density, and species. There are a few remnant stands of older timber that remain because they are located in areas such as the ridge slopes and slopes to the shoreline that would require difficult and expensive access development and expensive logging systems to harvest. Those stands at present are not economically feasible to harvest and likely will remain undisturbed for the foreseeable future. They provide other values to the property and would be desirable to retain anyway, as will be discussed in detail in subsequent sections of this Plan. Other areas of the property are in a primarily brush cover vegetative condition, some small areas as a natural condition and others as a result of previous harvests with no or unsuccessful attempt at reforestation.

Weyerhaeuser developed an extensive road system, which remains largely intact today. One main road, named the Ponderosa Flat Road remains open to the public at this time and will likely remain as an open public road for the future in accordance with proposed management and uses. Most of the other roads are gated, closed to public access, and still other secondary and spur roads have been allowed to grow in with brush and small trees and are not easily passable by vehicle travel.

There are no perennial surface watercourses within the property. There are some draws that likely run some surface water for short periods during intense summer thunderstorm events and during spring in snowmelt, but none are year-round watercourses. There are also some locations where ground water is evident based on the vegetation present, but there are no lakes, ponds, or other surface water within the boundaries of the property.

The Klamath Trails Alliance (KTA) has been working with the cooperation of the current landowner has constructed and maintains an extensive system of mountain biking and hiking trails on the property and has plans to expand that use. As a part of that system, they have also constructed two parking/staging/trailhead facilities, one near the southeast corner of the property accessed from Highway 140, the other near the northwest corner of the property along Eagle Ridge County Park road at the south end of Shoalwater Bay. This trail system has proved to be extremely popular in the region and is well-used. It is likely one of the main drivers in this plan of purchasing the property and converting it to a publicly-owned community forest. Other than that trail use, public use though evident in some limited locations has not been encouraged to this point.

Forest Stewardship Management Plan Standards:



This plan has been prepared by Steven Ziegler, Senior Forester with MB&G. Mr. Ziegler has been a professional forester practicing forest management in this region for approximately 40 years. Mr. Ziegler is a Registered Professional Forester in the state of California (RPF #2450, presently on a voluntary inactive status) and has extensive experience in forest land management. The plan meets or exceeds the standards of a Forest Stewardship Management Plan as described by the USDA Forest Service, the same standards and templates utilized by the American Tree Farm System and other sustainable forest management systems.

This Forest Stewardship Management Plan: Includes the following elements:

1. Soil and Water
2. Biological Diversity
3. Range
4. Agroforestry
5. Aesthetic quality and desired timber species
6. Recreation
7. Wood and fiber production
8. Fish and Wildlife
9. Threatened and Endangered Species
10. Forest health and invasive species
11. Conservation-based estate/legacy planning information
12. Archaeological, culture and historic sites
13. Wetlands
14. Fire
15. Carbon sequestration and Climate Resilience
16. Forests of Recognized Importance

Landowner information:

JWTR LLC
2636 Biehn Street
Klamath Falls, Oregon 97601

Location and plan maps:

General property location and Management Plan maps are contained in this document in Appendix A.

Landowner objective:

This property is currently privately owned. The present owner desires to sell the property and the Trust for Public Land desires to purchase the property. The eventual goal of this transaction is to transfer ownership of the property to Klamath County for use as a community forest to provide recreational opportunities and a working forest for the County and Region. These objectives have been reviewed and endorsed by a number of local stakeholder organizations, and the Plan has been prepared with input from those groups and incorporation of the stated issues, concerns and opportunities information provided by a number of those stakeholders. That information was gained from one-on-one interviews with representatives of those stakeholder organizations and public outreach from TPL and the Plan Preparer. A list of the Stakeholders contacted, and the feedback provided is included in Appendix B of this document.

The long-term objective is to develop a working Community Forest. This forest would provide public recreational activities to contribute to the physical and mental health and well-being of the community and the region. A second, but perhaps equally important objective is to develop healthy and productive forest stands that will provide forest management job opportunities and forest product raw materials to enhance the local economy and provide periodic revenue to Klamath County. The forest stands are presently in somewhat poor condition due to harvest and management practices from some of the past ownerships. The objectives will be to develop and implement a program of forest improvement projects to reforest bare and brush covered areas and improve the condition and productivity of the present timber stands.

Recreation opportunities: Recreational opportunities for the community and region are a significant driver of the planned purchase and transfer of ownership of the property and the long-term management planning and land use objectives. This opportunity was begun with the development of the extensive system of mountain bike and hiking trails by the Klamath Trails Alliance. The long-term goals of Klamath County when they assume ownership will be to continue and expand that recreational use in conjunction and cooperation with a working forest. Recreational opportunities have been encouraged, requested, and recommended by most if not all of the stakeholders that provided input to this planning process.

Eventual production of wood and fiber to local economy: The forest cover on the property contains little or no economical and merchantable timber at the present time. As the planned forest management activities begin to take place, and the forest is restored to healthy and productive conditions, there will be opportunities for periodic timber harvest which will provide raw forest product materials (sawlogs, veneer logs, chips, biomass, and firewood) to the local area market. This will provide direct benefits to the local economy.

Local jobs: The management planning described in this document will provide for many local jobs as the planning activities develop. Jobs such as property maintenance, recreational facilities management, forest restoration and timber harvesting, local supplies and services to recreational uses and others will naturally develop as the plan is implemented.

Planned forest management activities and projects will improve the overall forest health and productivity. One of the objectives is to develop and enhance protection from/resiliency to wildfire. Wildfire is a significant risk to this property and other similar areas in the region as demonstrated by an active wildfire in the summer of 2020. This fire was apparently human-caused as there was no lightning recorded in the area at the time of the fire. The fire appears to have started near or at the lakeshore area or along a trail just uphill of the lakeshore. The fire burned through brush and hardwood stands on the steep rocky slopes above the lake and got slightly into the timber on the flatter slopes above the slope break where it was quickly stopped by the Oregon Department of Forestry prompt and direct attack. Summer thunderstorms with lightning are a common occurrence across the region and regularly result in fire starts. In general, with good access and with Oregon Department of Forestry fire suppression objectives, most of these fires stay small and do little damage. Improved stand conditions and good access will provide the tools ODF needs to meet their suppression objectives. The proximity to state highway 140 also presents areas of potential ignition from a variety of causes linked to public transportation along that corridor. The present recreational use, plus planned expansion of recreational use may present additional fire risk.

The objectives of improved forest management are to provide multiple opportunities for public recreational use while at the same time increasing fire protection and fire suppression success by providing a managed fire-resistant forest. The existing road system will be maintained to provide for fire suppression and patrol access. The main Ponderosa Flat Road through the center of the main basin will be an open road for public access in keeping with the recreational objectives. Secondary roads will be maintained for limited use and gated to limit public vehicle travel but will be readily available to fire suppression and patrol vehicles when the need arises, and low maintenance spur roads will remain in place but unmaintained. If the need arises, these roads can be quickly and easily opened for use with dozers that would be called in for fire suppression.

Current forest condition.

The forest stands present on the property at the time of preparation of this plan are presently in somewhat poor condition. Past harvests, particularly from two previous large industrial landowners heavily harvested the natural stands. In many cases, reforestation or regeneration of the stand areas was unsuccessful or neglected. There is little merchantable timber volume on the property, that, mostly in stands that were and remain not economically feasible to harvest due to expensive harvest systems and access development. The forest covers presently found on the property can be divided into six main vegetation types:

- **Ponderosa pine plantations.** One area of approximately 400 acres near the east central portion of the property is occupied by nearly pure even-age ponderosa pine. This area was harvested in a couple of harvest operations in the early 1980's and re-planted with Ponderosa pine. The plantation was planted with far more trees per acre than would normally be desired later in the stand life. This is a common practice in anticipation of some percentage of seedling mortality. The seedlings had better than anticipated survival and the stands remained in a somewhat overstocked condition for a number of years. These stands were recently thinned to more desirable stocking standards and the removed material was chipped to produce biomass fuel to local markets. Additional areas as shown on the included vegetation type map were harvested later and planted with ponderosa pine but

are now in a younger age class and include other conifer species that have naturally seeded into the plantation areas. These other areas more closely resemble the mixed conifer understocked vegetation description below and will be treated more like those stand areas. These additional pine areas have not been thinned at this time like the large area along the Ponderosa Flat road.



- Uneven-age, mixed species areas. Much of the property has been subject to repeated harvests utilizing individual tree selection or overstory removal prescriptions over the various ownerships since the 1970's to the present time. These stand areas are now variable in stocking and with a more native mix of species present, including Ponderosa pine, white fir, Douglas-fir, sugar pine and incense-cedar. These stands are in a mosaic pattern, with large, understocked areas of scattered conifer, as well as some overstocked patches with high tree counts per acre. Some recent harvests, particularly in a strip along highway 140 utilized a sanitation and thin harvest prescription to attempt to re-habilitate the stands. These stand areas are now largely understocked and underperforming their growth potential. In many or most areas, the trees that now remain are not the best phenotype potentially available for the site and species mix.





- Brush fields. Some stand areas of the property are presently in brush field vegetation cover. These areas from all appearances were formerly timber stands that were harvested and had unsuccessful regeneration practices and reverted to native brush species cover. They are capable of growing conifer species if rehabilitated.



- Remnant older stands. Some areas of the property remain in remnant conifer stands, relatively undisturbed and in a “natural” state although the absence of natural fire has allowed some understory brush and conifer regeneration to develop into overstocked conditions. These stands remain as they are largely because they are in locations where harvest would have necessitated expensive access development and expensive logging systems to harvest. Due to these conditions, the stands were and remain not economically feasible to harvest and will likely remain in their present condition for the foreseeable future. These stands provide values to the property other than commercial timber management and will likely be left as they are.



- Native oak and hardwood. Native oak and hardwood stands occupy small, scattered sites across the property. These stands generally do not cover significant areas, but typically are more small patches within the other vegetation types. These stand types are not of a size that generally would be typed out and mapped but are mixed into the other vegetation types in a variable distribution. These areas are in rocky shallow soils and not capable of supporting commercial type conifer stands.
- Volcanic talus rock slopes. These areas are largely devoid of vegetation and are composed of large talus material developed from the volcanic ridges Spence Mountain and Eagle Ridge, most commonly on the east sides of those ridges, but there are some examples on the west sides as well.



- As a part of the original and subsequent harvest activities, an extensive system of roads and landings was developed. That included a large number of cleared landing locations that remain largely vacant to the present time. More modern harvest practices, and those planned for the long-term for this property will not need that extensive of a landing network and it would be desirable to restore those acres to productive and aesthetically pleasing forested areas. An assessment will be made to identify and retain a landing and road network that will

be needed for long term planned management, and the remainder of the landing areas will be available for rehabilitation.



Desired forest condition

- The desired future condition is to have mixed conifer stands containing a native species mix of Ponderosa pine, Douglas-fir, white fir, incense-cedar, and sugar pine, similar to what existed prior to large industrial harvests and post-harvest treatments of some of the previous ownerships. These stands will be aesthetically pleasing, healthy and fire resistant and will provide opportunity for periodic commercial harvests. These harvests will facilitate long-term stand health and maintenance and will provide forest product raw materials for the local economy and periodic revenue to Klamath County. This forest management regime will also provide local employment, a benefit to the local economy. The stands to be developed into the desired future condition will be the ponderosa pine plantation area, the mixed conifer stands remaining following past harvests and some of the brush fields. The native hardwood and brush stands, the remnant conifer stands and the volcanic talus slopes will be maintained as they are for economic and environmental reasons and will provide biodiversity and additional benefits to the project. Much of the acreage that is now vacant from previous use as log landings will be rehabilitated into healthy and productive forest cover.
- The long-term overall condition of the property will be to have a mosaic of conifer tree sizes, ages and stand densities with occasional openings. The stand composition will be fluid over time as the openings regenerate to conifer forest and others are created, and young stands evolve into older stands, and uneven-age harvests are conducted that remove trees from across the span of tree sizes, ages, and species. The species composition will be the Klamath Mixed Conifer forest type, with a distribution of native species of conifer. Periodic harvests will be generally uneven-age, utilizing single tree selection and sanitation/salvage harvest prescriptions. Small areas may be harvested under even-age prescriptions (small patch cuts) if disease, stand damage or stagnant growth patterns develop. Small, cleared patches will provide a diversity of wildlife habitat and will attract more wildlife use. As these patches grow, others will be similarly treated to maintain a well-distributed stand diversity across the landscape.

Practices and activities aimed at reaching the desired forest condition or condition class.

Projects undertaken to reach the desired future forest condition will include, but not necessarily be limited to:

- Ripping and replanting of old landing locations. Extensive ground areas were used for log landings in past harvests. In the Plan Preparer's opinion far too many and too large of landings were developed and used for harvest. This much land committed to a permanent landing and transportation system is not needed for modern harvest techniques and the planned timber management. A permanent road system will be retained. It may be useful to retain some of the landing locations for future use, but modern and developing harvesting systems combined with the long period of time that will pass before any planned harvests mean that the location and use of future landings may be quite different. For those reasons, it is not critical to save any particular landing locations so most will be restored to forest stands. That objective will primarily be realized by ripping and replanting the unneeded landing areas.
- Conversion of brush fields to natural forest stands. Many previously harvested acres were left un-reforested or had unsuccessful reforestation attempts and reverted to brush lands. Some native volunteer conifer trees have begun to grow back in, but in far too few of numbers and far too slowly. Brush will be systematically removed by a combination of mechanical, chemical, and burning methods to clear the land and a natural mix of conifer trees will be re-planted on those sites.
- Understocked stands will be enhanced. Many areas that were harvested with selective partial cut or overstory removal prescriptions have conifer stocking, but that stocking is far below the optimal levels of stocking mixed with brush understory. In many cases the trees present are not the best phenotype or the healthiest trees that potentially could occupy the sites. In those areas, the best trees present will be maintained to encourage their continued growth. Understory brush will be reduced by a variety of methods appropriate for the site including mechanical, chemical and under burning and the openings within the stand will be re-planted with native conifer species in a species mix that will mimic the species composition of the pre-harvest stands.
- Overstocked patches are present in many areas. These overstocked stands are the result of some natural regeneration following past harvests, some reforestation activities following past harvests and some natural residual clumps of conifer trees in some locations. With the exception of a large area of even-age Ponderosa pine planted stands near the center of the property, the overstocked clumps general are numerous dispersed patches generally ranging in size from one-half acre to two acres. Some of these stands will be selectively thinned to provide optimal stocking and spacing and retain the best trees for future growth. Thinning will most likely be of a pre-commercial type, not producing any marketable product, though in some cases some firewood or pulpwood and maybe an occasional sawlog may be produced. For the most part though, this will not be considered a commercial operation. Small dense patches such as these are also valuable to wildlife for cover and resting areas. Because some large areas will be cleared and re-planted and others have scattered conifer overstory present, some dense cover patches distributed across the landscape are desirable from a wildlife, stand diversity and aesthetic standpoint. Many of these patches will be retained as-is for those purposes and not thinned. The total area left in these dense patches should be approximately two to five percent of the total area in well-distributed clumps of approximately ½ acre average size.
- The large Ponderosa pine plantation near the center of the property was developed from past clearcut harvest and re-planting to pure Ponderosa pine stands. This harvest and reforestation were done in approximately the early 1980's and has developed into 40± year-old stands. Past reforestation practices planted higher than optimal numbers of trees per-acre to account for planned seedling mortality and future thinning. Planting success of these trees was high, and far too many trees per acre resulted. This was not addressed or treated until the present ownership took possession. A recent project of thinning for biomass products was undertaken and completed in the summer of 2020. Trees were mechanically thinned to more optimal spacing and preferred tree retention, and the whole trees were skidded to landings and chipped for biomass fuel. Those stand areas are now in a "let grow" condition, not mature enough for any commercial harvest, but needing to continue to grow into that age and size class in the future. Other native species such as Douglas-fir, incense-cedar and white fir have begun to show up in limited amounts distributed through the stands. This is a positive development as it will increase stand species diversity which will enhance the aesthetic and forest health qualities of the stands.
- All planned reforestation projects will plant a variety of native species including Ponderosa pine, Douglas-fir, white fir, sugar pine and incense-cedar. This will provide better overall forest health, fire resiliency and will provide a future forest product mix that will be more beneficial to local markets. Single-species management is not desirable or recommended for this region and for this planned forest use.
- There also remain a few relatively intact remnant stands that have not had any or have had very limited harvest in the past. These stands are scattered across the property, most or all-in locations that have previously proved to be inaccessible or uneconomical to harvest. These stands will be retained and managed as reserve areas to

contribute to the long-term plans and objectives for this property. Due to poor access that would require expensive access development, or would require expensive and complex harvesting systems, or in most cases both conditions, these stands continue to not be economically feasible for timber harvest and long-term active management. They provide aesthetic values and are important for wildlife use and thus have greater value intact than for timber production and will remain largely in their present condition for the foreseeable future. If there is some natural catastrophic damage to any of these stands, the use and value may be re-evaluated at that time.

- Prescribed burning is a valuable tool that can be used for elimination of brush fields, and also in the established stands to reduce understory crowding to reduce fire danger and enhance stand health. Prescribed fire comes with many inherent risks and requires careful planning and implementation. That may be beyond the expertise or capabilities of the County and Forest Manager. Assistance may be provided by the Oregon Department of Forestry, the US Forest Service, or some qualified contractors in the region. Prescribed fire, if implemented successfully and correctly can economically and quickly treat significant areas with great success. Risks on this property are somewhat mitigated by the absence of many improved properties (residences, industrial developments, agricultural activities, or other high valued improvements), and also by natural barriers such as lake shore and State Highway 140.

Strategy and timeline for practice and activity implementation.

The ultimate ownership and management of this property depends on funding and arrangements for purchase by TPL, then eventual transfer to ownership by Klamath County. It is not intended that this property become an economic burden to the Klamath. Forest management and restoration projects, as well as further development of recreational facilities will be a cost, and at the present time there is little or no ability for the property to produce any revenue. As such conditions exist, funding for the desired restoration and recreation projects will likely need to be provided from grants, donations, and volunteer work by outside organizations. The purchase and transfer of the property is scheduled to be completed by December 2022.

At present, Klamath County does not have a large, dedicated parks department or forest management department capable of undertaking this sort of long-term open space and forest management. It is recommended that the County consider hiring a forest manager or retaining the services of a forest management consulting firm to oversee this project. That forest manager will then begin to prepare and implement detailed plans on a stand or per-acre basis to begin forest restoration and recreation development projects.

The areas with understocked conifer stands, areas that have reverted to brush and some of the dense residual clumps are distributed across large areas in a mixed mosaic. Due to the mixed and patchy nature of these stand areas, it is difficult and cumbersome to attempt to break these into individual stands and map and locate them. Since the treatments are similar using the same equipment for the most part, they will be treated as a whole with the Forest Manager and Contractor working together to conduct the treatment activities.

Priority of Project Actions:

The initial treatment areas will be those most accessible, those with the highest potential for success and those where public access is available to provide a demonstration to the owners, the public and stakeholders of what the long-term management and property improvement process will look like. The initial treatments will take place along the Ponderosa Flat road in the central basin of the property near the north end. This would treat the area roughly between the northern trailhead parking area, working east toward the large pine plantation area in a band mainly on the south side of the Ponderosa Flat Road.

1. The first priority will be to begin scarification of old landing areas in conjunction with mechanical treatment of brush fields and the open brushy understory areas of the mixed conifer harvested areas. Mechanical treatment of the slash will be a combination of brush piling with excavators equipped with brush grapples or dozers with brush rakes and/or mastication. Brush rakes or grapples will also effectively scarify the old landing areas and prepare them for planting. In most cases, this work can be accomplished by the same contractor with the same equipment in the same operation. Brush will be piled for burning or masticated, or a combination of both. During the clearing process, if any established trees present show signs of disease, damage, or poor form, those can be

removed with the same equipment in the same operation to improve the overall stand conditions. Following clearing and scarification, new conifer seedlings will be planted on the site to re-establish native forest stands. Seedlings will be a mix of the native species common to the site, Ponderosa pine, Douglas-fir, white fir, incense-cedar, and sugar pine. Planting will be at approximately 11 foot spacing, resulting in a total planting of approximately 360 trees per acre. There will be some expected seedling mortality so this planting will result in a desired goal of approximately 300 to 325 trees per acre. Areas that already contain some conifer stocking will be underplanted at the approximate tree spacing to result in the desired tree count per acre, counting both new seedlings and established trees. Seedlings can be grown at a number of forest seedling nurseries in the region. There is currently an established and well-known industrial tree nursery in Klamath Falls. Buying or having seedlings custom grown from this nursery will contribute to the local economy, one of the goals of this project.

2. Second priority will be thinning of the overstocked patches that are distributed in the mosaic of the previously harvested areas (not including the large pine plantation area). That work would be done with hand crews with chainsaws, or with mechanical feller/bunchers and masticators depending on funding and suitable contractor availability. The Forest Manager will select appropriate patches to be retained for wildlife and aesthetic considerations, and remaining areas can be thinned. These patches are distributed across the landscape but represent at present approximately 10 to 15% of the total forest area. Cost estimates for this operation will be based on that amount with the cost distributed across the whole acreage area for cost estimation purposes.

The large pine plantation area has been thinned with the removed material chipped and hauled off site for biomass fuel. The stand is in a “let-grow” status at this time and will be allowed to grow and develop into more mature stands.

A band along Highway 140 was one of the most recently treated areas along with the large pine plantation. The band was mechanically thinned, and some understory brush treated but with no inter-planting. This stand area will be left as-is to grow for the time being and priority will be placed on other locations for initial treatment projects.

3. Maintenance of the existing road system will be an ongoing project, beginning as needed to coincide with development of recreation activities as will be determined by the County in the future.

Management Actions Timeline

This plan will implement the first treatment projects in early 2023. The area generally has snow in winter and wet spring conditions that are not optimal for ground-based equipment operations, so it is anticipated that planning, contracting and project development will begin in January 2023 with on-ground operations to start approximately April to May 2023. Normal fire season restrictions for equipment and chainsaw operation begin in late summer so it will be desirable to have operations completed by approximately late July/early August to avoid fire restriction shut-downs. Brush piles will be covered to provide dry ignition points and will be burned after sufficient snow and rainfall have taken place to ensure fire safety, normally in December or January. Seedlings will be planted as soon as the area is open to planting access. Depending on the snow conditions, that would be anticipated to be March to April, the earlier the better. If snow conditions are favorable, planting can be done even earlier, but that would be a realistic time frame. Seedlings must be planted prior to the end of April in general to ensure adequate soil moisture for the seedlings to get established. Seedling growth will be monitored for the first year to determine seedling survival rates, and to monitor brush re-growth. If brush re-sprouts and begins to impair the seedling growth, an evaluation will be made whether or not it would be appropriate to follow-up with a chemical release using ground crews with backpack sprayers to spot treat areas around seedlings for release. Chemical application for brush control can be controversial, especially in areas where other users commonly are present so the Forest Manager and County will need to carefully evaluate the gains vs. the potential opposition (if there is any from the local community) to the treatment. As an alternative to chemical treatment, if needed, hand treatment (cutting and pull-back of competing vegetation) is an option, though much more costly.

Treatment Costs:

Since there is no immediate revenue to be generated from this property, and so the property does not become a financial burden to the County, funding for treatment projects will need to be provided from grants. The grant application and proposal process can be time consuming and uncertain. Potential funding sources are included in Appendix C. For the purposes of this process, we will assume that \$100,000 of funding can be obtained per year for project work. Estimated costs per acre for treatment activities are:

TREATMENT	COST PER ACRE
Mechanical brush piling and scarification	\$150.00
Pile burning	50.00
Patch thinning ¹	15.00
Reforestation ²	450.00
Total	\$665.00

¹Assume patches to be thinned represent 10% of the total acreage. Thinning rate is \$150.00 per acre at 10% for a pro-rated cost per acre of \$15.00.

²Reforestation costs:

Seedlings, planting, shipping, storage, and handling of seedlings and overhead.

If follow up release treatments are indicated, chemical release with ground crews and backpack sprayers cost is \$100.00 per acre. Mechanical release, manual cutting and pull-back of brush alternative cost is \$150.00 per acre.

Assuming an annual funding of \$100,000.00 would be available; approximately 10% of that would be allocated to administration costs such as arranging and supervising contracts and contractor work, order of seedlings, unit designation and layout and other supervisory and planning work, leaving \$90,000 for on-ground application of the project work. At \$665.00 treatment per acre, that allows for treatment of 135 acres per year. An ongoing treatment plan of 135 acres per year for the first five years of ownership would be the desirable schedule.

Coordination will need to be made with the KTA and other public users through meetings to schedule timing, combined with signage and public notification so there are no safety issues or user conflicts.

Assuming the initial treatments are successful and accepted by the public and recreational users as a valid and desirable land management treatment process, subsequent similar treatments in the following 5-year period would focus on areas north of the Ponderosa Flat Road, as well as treatment areas continuing south in the main basin with the eventual goal of treating most or all of the forested or potential forested area to restore to natural stand conditions.

Monitoring activities to be done by the forester or landowner.

As projects are implemented, the designated Forest Manager will conduct periodic monitoring of the project areas to determine the success of the effort, or if not as successful as desired, to determine ways to improve the success.

For the brush conversion projects, monitoring is recommended approximately one year after an initial treatment, and then a follow-up in three to five years to verify successful stand establishment. Any ground disturbing activities on slopes that lead directly to the lake shore will be monitored every year at least two times (fall and spring) to ensure that there is no surface soil movement to the water, and if any is discovered to implement additional stabilization measures to mitigate that sediment transport.

For the thinning projects on the scattered overstocked patches, a re-inspection one to two years following the project will determine if the retained trees remain healthy and are growing well. Monitoring from growth improvement, determined by increase annual ring increment should be first done approximately five years following thinning. Trees in stands like this generally take two to five years to demonstrate release and improved growth. If after five years, no improved growth is noted in the residual trees, a decision will need to be made to either leave the patches as they are or consider harvesting those trees and starting the stand over.

For the pine plantation, periodic monitoring of the stand to ensure that the stands are continuing to grow will be done on an unspecified schedule, as the Forest Manager is on the property for other routine maintenance visits. Stand conditions should improve as the trees grow larger, and other conifer species will be encouraged to grow in. If conditions such as disease, wind damage, fire damage, insect infestations or other stressors develop, the Forest Manager may designate harvest or other treatments to mitigate those adverse conditions.

Specified management period that adequately allows for progress with the landowner's long-term stewardship objectives.

The initial management period covered by this Plan will be the first decade from the time of acceptance of this Plan and the purchase of the property is completed (estimated to be completed by December 2022). This will provide adequate time for some initial projects to be implemented and monitored for a reasonable time. That also will allow time for transfer of the property to the County and for those final management responsibilities to be established.

Once the final transfer of ownership to the County is completed, a Forest Manager or designated person is in place and forest improvement and recreational projects are started, this initial plan can be reviewed and revised to ensure that the needs and objectives of the County are being met as planned. This is a fluid project, with two transfers of ownership to take place, establishment of a designated management entity and some initial project implementation to take place before the effectiveness and implementation of the planning effort can be evaluated. This necessarily is a broad-based plan at this time, and more detail will naturally develop as the ownership and management process begins to evolve.

Future refinement or revision of the plan will be accomplished by involving the landowners (Klamath County) and the designated Forest Management entity directly in the planning process. The landowners and managers will develop clear objectives, timetables, and targets, and will clearly understand the plan's details and desired outcomes. If outside assistance is desired or needed in this process, many sources are available. These include forest management consulting entities.

Plan Elements

- Soil and water
Soil information was obtained from the USDA Web Soil Survey website. There are six soil series found on the subject property:

Series 48B, Lobert loam, 2 to 5 percent slopes; This soil series is found in a small area on the west side of the property where the developed recreational parking area is located, at the south end of Shoalwater Bay. The soil is a deep well-drained loam developed from alluvium. This soil series is a minor component of the property.

Series 81E, Woodcock association – north; This series is located on two of the forested areas near the northern portion of the property on the moderate to flat slopes of the forested area. The series is a deep (up to 80 inches to restrictive layers) gravelly clay loam and classified as well-drained. The soil is formed from mud flows and alluvium. It is listed as a forest soil with white fir as the dominant species supported, with *ceanothus prostratus* as an understory species. Common trees found on the soil series are Douglas-fir, Ponderosa pine and white fir, along with minor amounts of associated species Incense-cedar and sugar pine. The soil is recommended for management of Ponderosa pine and Douglas-fir and is also well-suited for growth of white fir in the mixed stands.

Series 82E, Woodcock association – south; This series is virtually the same as series 81E. These two-soil series comprise most of the forested area of the property and nearly all of the area that would be under forest management.

Series 83F, Woodcock – Rock outcrop complex, 15 to 70 percent north slopes; This series is found on the steep east and northeast facing slopes of the Spence Mountain Ridge and Eagle Ridge. The soil series is comprised of cobbles, stones, and boulders on the surface. It is generally suited to growth of Douglas-fir, Ponderosa pine and white fir. The soils series occupies generally steep slopes from the ridgetop down. Due to the location and rocky nature of the series, forest productivity is lower, and access for harvest and management is limited by the topography and location on the slopes. Residual stands remain in these areas because harvest in the past has been deemed as uneconomical. It would not be desirable in light of the need to develop an expensive road system to reach these areas for harvest to attempt to provide active management for these slopes. They have more value for aesthetic quality and the recreational component with the location of existing and planned trails and other uses and are best left as-is.

Series 50E, Lorella very stony loam 2 to 35 percent south slopes; This series occupies a small rocky ridge on a small peninsula at the very southeast point of the property on the lakeshore. This is a minor portion of the property as a whole. It is not well-suited to timber production and management and has greater value for aesthetics to the project overall.

Series 30, Histosols, ponded; This series is found on the south facing slope along the lakeshore at the southeast boundary of the property and on the northwest end at the south end of Shoalwater Bay. The soil is described as mucky peat, very poorly drained. The area is flat and low-lying along the lakeshore and is somewhat swampy and carrying riparian grass and reed vegetation along with some riparian hardwood and brush. The soil is not productive for timber management and not well-suited for trail construction. The main value is for aesthetic qualities along the lakeshore and for wildlife, mostly in the form of migratory waterfowl use.

There are no surface water features on the property such as watercourses, ponds or other surface water except the boggy areas discussed in the soil series listed above. The only water resources are the lakeshore areas which have aesthetic and recreational value.

- **Biological diversity**

One of the objectives of this plan is to maintain and enhance biological diversity within the plan area. Biological diversity will include a diversity of plant and animal species. Biologically diverse sites are not only healthier, but also provide improved aesthetic and recreational experience.

Planned vegetation treatments will provide more forest stand diversity in species, as well as vertical and horizontal vegetation diversity. This provides for a more dynamic and natural forest condition. A variety of benefits are gained from such conditions.

- Diverse forest stands are more beneficial to wildlife. Vertical and horizontal diversity provide feeding opportunities, edge effect, and cover and resting areas.
- Diverse forest stands provide a variety of age classes, species mixes and densities. Such stands are more resilient to fire and more resistant to disease, insect, and pathogen attacks.
- Diverse vegetation types provide improved aesthetics, an important feature desired by many of the various stakeholders who are interested in public recreational use.

- **Range**

The subject property has been used for some cattle grazing in the past (and currently), but range/grazing are not planned for future management and objectives because of conflicts with other more desirable uses. The returns from grazing leases are small and other planned public uses will provide much higher and better uses than grazing. Following the planned forest restoration projects, this site would not provide an optimum level of feed for high quality grazing.

- **Agroforestry**

No agroforestry use planned. Although this site is rated at moderate to low for timber productivity, that is the best use to maintain in conjunction with the other planned public recreational activities. There are few opportunities for any type of quality agroforestry. Available water and climate conditions of this region limit the opportunities for this type of land use, and it is not common in the Northwest.

- **Aesthetic quality and desired timber species**

Past harvests and treatments have negatively impacted the desired timber species mix and forest stand quality. Harvested areas are understocked or have been planted in a single species (ponderosa pine plantation) and need improvement. Planned silvicultural treatments will restore the stands to more natural conditions with horizontal, vertical and species diversity. The aesthetic quality of most of the property is not currently what it could potentially be with improved forest stands. With recreational use as a major desired present and future use, improved aesthetic quality of the forested areas is a significant goal of the planned forest management.

Objectives in Plan are to improve the timber stands through a combination of planned treatments to develop a natural species mix and grow fiber for the local forest products market. The desired future forest stands will contain a mix of Douglas-fir, white fir, ponderosa pine, incense-cedar, and sugar pine in natural species percentages. Forest products such as logs for veneer and lumber, chips for pulp or biomass energy, firewood, posts and poles and other raw forest product materials will be grown and harvested on a sustainable basis to provide for active forest management and raw materials for the regional forest products industry. The management and harvest of these products will provide periodic revenue to the County and jobs to the local economy. There is a ready market for those forest product raw materials in Klamath Falls, Medford/White City, Gilchrist, and Lakeview, all within economic distance for transportation.

The planned forest management and stand improvement will develop healthier timber stands that will be more resilient in the event of fire, and more resistant to attack by insects, disease, or pathogens.

Aesthetics of the area will be improved with the advent of more natural stands and more continuous forest cover.

- **Recreation**

Recreational use for this property is a significant driver for the transfer of ownership and development of this management plan. This property has begun to be developed for mountain biking and hiking and there are plans for that use to expand, along with the development of additional recreational activities that will benefit the region in a number of ways. Opportunities for outdoor recreation provide revenue to the local economy and service industry, provide mental and physical health benefits, and offer places for people to go to get outdoors and enjoy recreational pursuits. Some of those opportunities are currently lacking in the County, so this planned long-term use will add to those opportunities.

- **Bike and hiking trails:** An extensive system of trails has already been constructed and maintained by the Klamath Trails Alliance along with two developed parking/staging/trailhead locations. There are plans for additional trails. This trail system is well used and appreciated by the public in the community and region. As has been shown by other areas with a similar system of trails (Oakridge, Oregon and Moab, Utah is only two of many examples that readily come to mind), this recreational use can be a significant contributor to the local economy as people come to the area to utilize the trails. There are plans for more trails to be constructed. These trails will provide for individual and group use and may well provide opportunities for larger organized events such as races and biking festivals.

Public camping: Klamath County maintains a small number of primitive camp sites concentrated along the western shoreline of the Eagle Ridge County Park which occupies the narrower peninsula to the north of this property. The County Board of Commissioners has expressly indicated a desire to provide more public camping opportunities in Klamath County. To date, Klamath County has few camping venues and would like to provide more for the local population. The County will need to evaluate what this will look like as the ownership of the property evolves. This may include a couple of developed campgrounds at designated and desirable locations, dispersed primitive camping or a combination of both. Dispersed camping without designated campsites presents some risk in terms of fire, litter and waste and property damage without some control. Designated campgrounds would require some financial investment to develop roads, sites, restroom facilities and possibly water supply, but are easier to maintain and manage use than dispersed primitive camping. There are a few very good quality sites distributed across the property that would provide prime locations for developed camping. This property presents a great opportunity to provide extensive areas to add to camping opportunities for the region. If that is the direction the County chooses to go.

Retreats and Group camping opportunities: Blue Zones/Healthy Klamath Initiative indicated an interest in using this property to provide for activities such as retreats for Veteran's groups and possibly other groups. The property would present ample opportunities for such events. Large open areas or forested areas with open understory could easily be used for this type of event. Any such event would be temporary short-term type events that could be facilitated by moving in temporary facilities such as shelters, restroom facilities, portable cooking facilities and other required accommodations. A venue such as this would be suitable for a number of types of small retreats, festivals, outdoor concerts, and the like. Those activities and locations could be at locations on roads that are generally gated and could be easily separated from other continual recreational activities so as to not develop user conflicts.

Lake access for boating and fishing: The county maintains the Eagle Ridge County Park on the peninsula to the north of the subject property. That park area includes a boat ramp and several primitive camp sites on the shore of Shoalwater Bay. Roads within the property approach or reach the lakeshore in several other locations, and the terminus of those roads could be expanded to provide one or two more boat ramps, most likely on the east shore of the property accessing the main body of the lake. Existing and potential future trails could follow portions of the shoreline allowing fisherman access for dispersed bank fishing. Boat-in camping could be encouraged at any suitable location along the shoreline for dispersed camping opportunities away from roads.

Possible equestrian use on separate trails/existing roads: Some interest has been expressed for equestrian trails on the property. Mountain Bike, Hiking and Equestrian use of the same trails often develops conflicts between the different users, and the KTA has expressed some concern if their trail system were opened to equestrian use. The property is large enough that a separate system of trails, perhaps incorporating some of the gated or low maintenance roads as a part of the system could easily be developed for designated equestrian use.

- **Birding:** The Klamath Lake system is on a major flyway for migratory waterfowl. The lake is also extensively used by other species such as Bald Eagles, Osprey, and other shoreline birds. Still other bird species that use upland habitats are present in the area. Public access on the property from roads and trails would provide ample opportunities for bird watching both for waterfowl along the shoreline and other upland bird species.

- Hunting is not within the planned or desired uses. With the dispersed use by bikers, hikers and soon to be campers, hunting would provide a significant safety concern for those other users and is not a desirable component of the recreational use mix. There are considerably more areas within the region that are well-suited to hunting where other uses are rarer providing a separation and safety factor that would not be present here, were hunting to be allowed or encouraged.
- Wood and fiber production
As discussed in another section above, the long-term management objectives are to develop healthy, well-growing timber stands that will be available for long-term sustainable harvest to stimulate the local economy with jobs and forest product raw materials and generate sustainable periodic revenue to the county.
- Fish and wildlife
Improved forest stand quality and diversity will benefit wildlife (birds and mammals). There is planned retention of some older type of existing stands that will benefit wildlife. Sustained and active management is planned to develop and maintain species and horizontal and vertical stand diversity. That stand diversity is important to wildlife and will likely attract a variety of species of mammals and birds to the area.
There is no surface water within the property. As such, there is not much opportunity to have any significant impact either positive or negative on fisheries from any land management or habitat improvement activity. Land use on the property could impact water quality on the lake from sediment or nutrient introduction, but that is not anticipated with the planned land use. It is not anticipated that any planned land use or land management activities for this property will have any impact, positive or negative on the water quality and fishery of the lake.
- Hunting will not be permitted on the property due to the high potential for safety compromise of the other more highly desirable and encouraged recreational uses.
- Threatened and endangered species
We are not aware of any listed threatened, endangered, or rare species on the subject property.
- Forest health and invasive species
The forest health on the tract is compromised at this time due to past management practices. Forest stands and individual trees are not the healthiest or best examples of their species that can be found in the region. As the objectives of this plan are realized from project implementation, the overall forest health will be expected to improve and be maintained over the long-term.
Two weed species are found on the property that are considered somewhat problematic and invasive to the desired uses and condition of the property. Those species are Common Mullein *Verbascum Thapsus* and Bull Thistle *cirsium vulgare*. Both species are native to Europe, Asia and Northern Africa and both were introduced to north America in the mid 1700's. Both species are prolific seed producers and tend to colonize disturbed areas such as fire scars, logged areas, trails, roads, and cultivated land.
- Mullein was introduced to the original colonies to be used as a known fish poison and is also reported to have some natural medicinal qualities. The plant elements and parts are commonly sold in health food stores and on-line. This plant is a vigorous colonizer of disturbed areas, which is problematic for this project area as the desired uses include trails, staging areas, camping areas and parking areas. The species is widespread in the region and can be difficult to control. One plant is capable of producing up to 200,000 seeds which can remain viable in the soil for up to 100 years. The seed is spread by wind and also by birds, livestock, equipment, and other vectors.
- Bull thistle was also introduced to North America from Europe and Asia, though likely accidentally. There are some reports of some possible medicinal uses, but those are not common. The species is also a prolific seed producer, but the seed is not reported to remain viable as long as mullein seed. This species is commonly transported by cattle as the burr heads containing seed can get caught in cattle fur and transported in that way. It is also transported by wind and birds. This plant is also widespread in the region and colonizes the same kinds of disturbed areas as mullien, though it generally is found in smaller numbers of plants in a given area.
- Construction of trails, staging areas, junctions, and parking areas, along with potential construction of campgrounds or developed campsites creates just the type of disturbed areas that provide habitat for these species. The presence of

these invaders in the recreation areas is problematic in that they restrict free movement on the trails and degrade the scenic qualities of the area.

- Control for both species is similar. There are generally three options, mechanical, manual, and chemical. Mechanical means such as mowing or cutting with string trimmer type machines is not generally recommended as it spreads seed into more areas. Mowing has been proven to be effective for patches of bull thistle if it is mowed two times per year for about two seasons. That disrupts the seed production and reduces the population over time. Mowing is not as practical here as the thistle is generally more scattered and is mixed in with more prevalent mullein which is the more prolific and viable seed producer. Manual treatment for both species consists of pulling, digging, or hoeing. That removes the plant but must also remove at least the top two inches or so of the root system. This treatment is labor intensive and expensive. Also, if seed is present on the plants at the time of treatment the entire plant must be removed from the site and disposed of elsewhere or the seed will remain on the site. This may be problematic as it just may move the problem to a new area. Chemical treatment would consist of hand spraying with backpack sprayers or in areas where motorized vehicles would be appropriate, small spray tanks on the back of ATVs. It may be desirable at certain times to allow ATVs on the trails for short periods to allow a once per year spray treatment. Backpack sprayers or small vehicle mounted sprayers would be cost effective and provide effective treatment along roads and in parking and camping areas.

Mullein responds to glyphosate or triclopyr based herbicides. Mullein leaves are covered on both sides by dense short hairs that repel water, so a surfactant must be added to the mix to be effective. Bull thistle responds to glyphosate or 2,4D based herbicides. A planned annual treatment with a glyphosate herbicide for a couple of seasons would be very effective.

Because these species are both prolific seed producers, with long-lasting seed viability (much longer for mullein), and the species are widespread in the region and seed is commonly re-introduced to the sites, long-term diligence with periodic manual or chemical treatment will be required to control the populations of these species. Because they are so widespread and resilient, complete eradication is likely not possible. The objectives of the treatments are to control and reduce the populations and disrupt the seed cycles to reduce the overall presence of the weeds. Neither species are tolerant to shade or serious competition from other species, so over time as the forest stands fill in and grow, many of the areas invaded by these species will naturally be shaded out and the populations reduced. They still will show their presence in the open and disturbed areas, but the total overall area of infestation will be smaller and easier to periodically treat.

- Conservation-based estate planning / legacy planning information.
Will be a publicly owned property (Klamath County) not a family or estate situation, so estate planning is not applicable.
- Archeological, cultural, and historic sites
Archaeological and/or Cultural sites (Native American) known to exist but not much information available. The area was known to have been originally inhabited by the Klamath People Local tribal entities did not provide any information for the information gathering and preparation phases of this planning process. It is understandable that tribal entities sometimes are reluctant to share specific site information for publication as those sites are then often visited by numerous people and the site quality can be compromised. Additional effort will be made during the planning and implementation processes to engage the local tribal groups to gather information and develop site protection measures. The first recorded European visitation to the area was by members of the Hudson Bay Company in 1826. During the mid-1800's, European settlers began to occupy the area for farming, mining and timber activities all of which have carried on to the present day. There are no known historic settlements or sites within the property such as mines, sawmill sites or homesteads.
- Wetlands
There are no specific wetlands within the main body of the property. The property is bounded on the east, and a portion of the west by shoreline of Upper Klamath Lake. Much of the shoreline does not exhibit classic wetland characteristics but is of a more rocky, volcanic terrain type. Two significant areas within the property boundaries, one on the southeast shore and another on the northeast at the south end of Shoalwater Bay are true wetlands. These areas are normally flooded and are underlain by Histosol-ponded soil series, characterized as mushy peat soils and marshes. These areas are important to waterfowl, both migratory and resident, and to fishery health. Those areas have value for recreational, aesthetic and species diversity purposes and will be left alone to maintain those qualities for the long-term.
- Fire

Current stand conditions leave the property prone to fire damage. An over-abundance of brush species is present on much of the timberland. Though these species are native to the region, they are at a state of over-abundance and imbalance compared to natural and desirable forest conditions. Objectives of this planning and forest management program are to improve the vegetation and timber stand conditions to develop more fire resiliency. Reduction of brush and understory species and a more shaded forest cover will provide vegetative conditions that are more resistant to fire damage. Historic conditions indicate periodic low-intensity fires were common in the region which maintained the type of forest cover described above. Absence of fire and past harvest activities have changed the forest makeup and make the area more fire prone, and if fires do enter the area, they are likely to do more damage. Vegetative treatment methods may mimic the effects of fire, utilizing mechanical methods to reduce brush and understory vegetation. A planned re-introduction of fire via prescribed burns may be useful and economically feasible, but careful planning and implementation are essential to making that work without causing unnecessary damage from over burning or escapes. The proximity of the property to highway 140, plus the current and planned public use for recreation provides increased exposure to human-caused fires. This is presently demonstrated by a small wildfire that occurred in the early summer of 2020. Since there was no recorded lightning in the area at that time it is assumed that the fire was human-caused in some way. The fire appears to have started along the shoreline near the southeast portion of the property or along a nearby trail that parallels the shoreline in that area. The fire burned up a steep rocky slope in native brush and hardwood stands and likely did not do a significant amount of damage as the time of the burn was early in the season when fuels moisture rates were still relatively high. The fire burned onto a flatter, timbered area above the slope break, but was quickly controlled by the efforts of the Oregon Department of Forestry. As a part of the entire recreational use package, the County and other agencies and users are encouraged to maintain a public education campaign to keep the public aware and informed of the risk of fire and the ways to mitigate that risk. Keep Oregon Green would be an excellent partner in an education campaign such as this.

Lightning is a common occurrence for the region. High ridges and peaks present particular lightning targets. The forest management objectives for this property will develop forest conditions more like those historically known for the region. With those conditions, the forest will be more fire resilient and lightning fires should generally be small and slow burning and easy to control.

- Carbon sequestration and climate resilience

At the request of Trust for Public Land an analysis was done by Bluesource LLC to investigate the potential for carbon sequestration for this property. The initial investigation determined that the property is not well-suited to carbon sequestration projects. Interior forest sites such as this property generally do not support the forest growth rates for successful carbon sequestration or offset projects and the present stocking is too low of a baseline for project implementation. Carbon sequestration is important on all forested lands, and obviously, carbon sequestration will improve as stand health and volume increases from forest management and may at some point be sufficient for re-consideration for a carbon offset project.

The native species present which will be further restored and enhanced will provide climate resilience. Those species are common across a wide latitude from the Sierra Nevada mountains to the Cascades and have shown to be very adaptable and resilient over time.

- Forests of Recognized Importance (FORI) (to be considered when aligning forest Stewardship Management Plans or Multi-Resource Management Plans with American Tree Farm Standards)

Forests of Recognized Importance represent globally, regionally, and nationally significant large landscape areas of exceptional ecological, social, cultural, or biological values. 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 single attribute. FORIs may include but are not limited to landscapes with exceptionally high concentrations of one or more of the following:

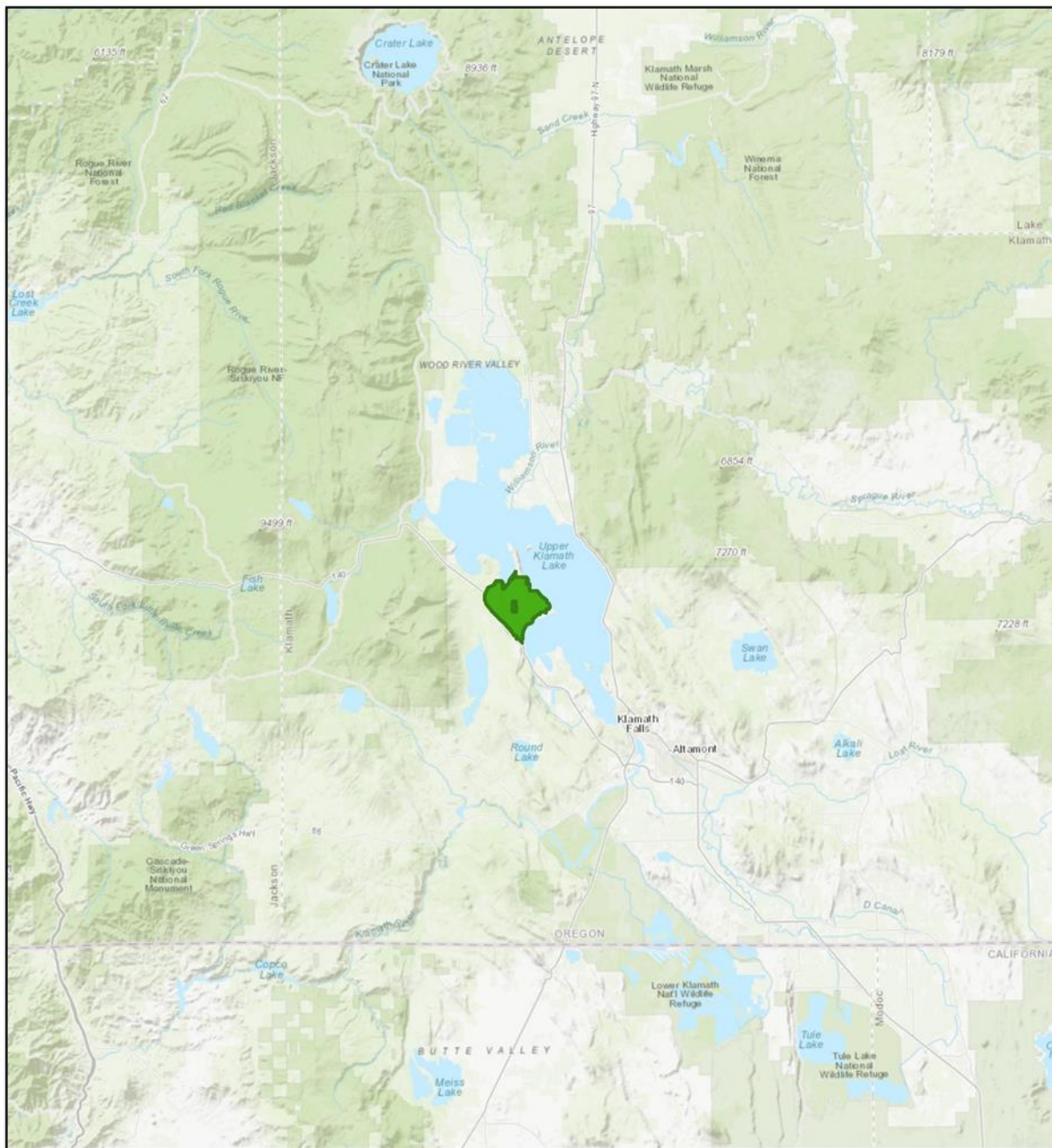
- Protected, rare, sensitive, or representative forest ecosystems such as riparian areas and wetland biotopes.
- Areas containing endemic species and critical habitats of multiple threatened or endangered plant and animal species, as identified under the endangered Species Act (ESA) or other recognized listings.
- Recognized large-scale cultural or archaeological sites including sites of human habitation, cities, burial grounds and in situ artifacts.
- Areas containing identified and protected water resources upon which large metropolitan populations are dependent.
- Areas containing identified unique or geologic features including geysers, waterfalls, lava beds, caves, or craters.

This property does not contain any of the above features or conditions, therefore it would not be recognized as a FORI. The property, while demonstrating the potential for significant recreational use does not contain any significant special landscape features that would indicate some special protection or “set-aside”. Rather, this property exhibits general landscape, forest management and recreational potential that are found elsewhere in the region. Its uniqueness lies in the opportunity for public ownership by the County of a manageable size tract where these features and conditions exist and can be managed and maintained as a non-federal but public property.

APPENDICES

Appendix A: Maps

1. General location/vicinity map
2. Property map
 - Topographic
 - Aerial imagery
3. Trails and road systems
4. Vegetation Types



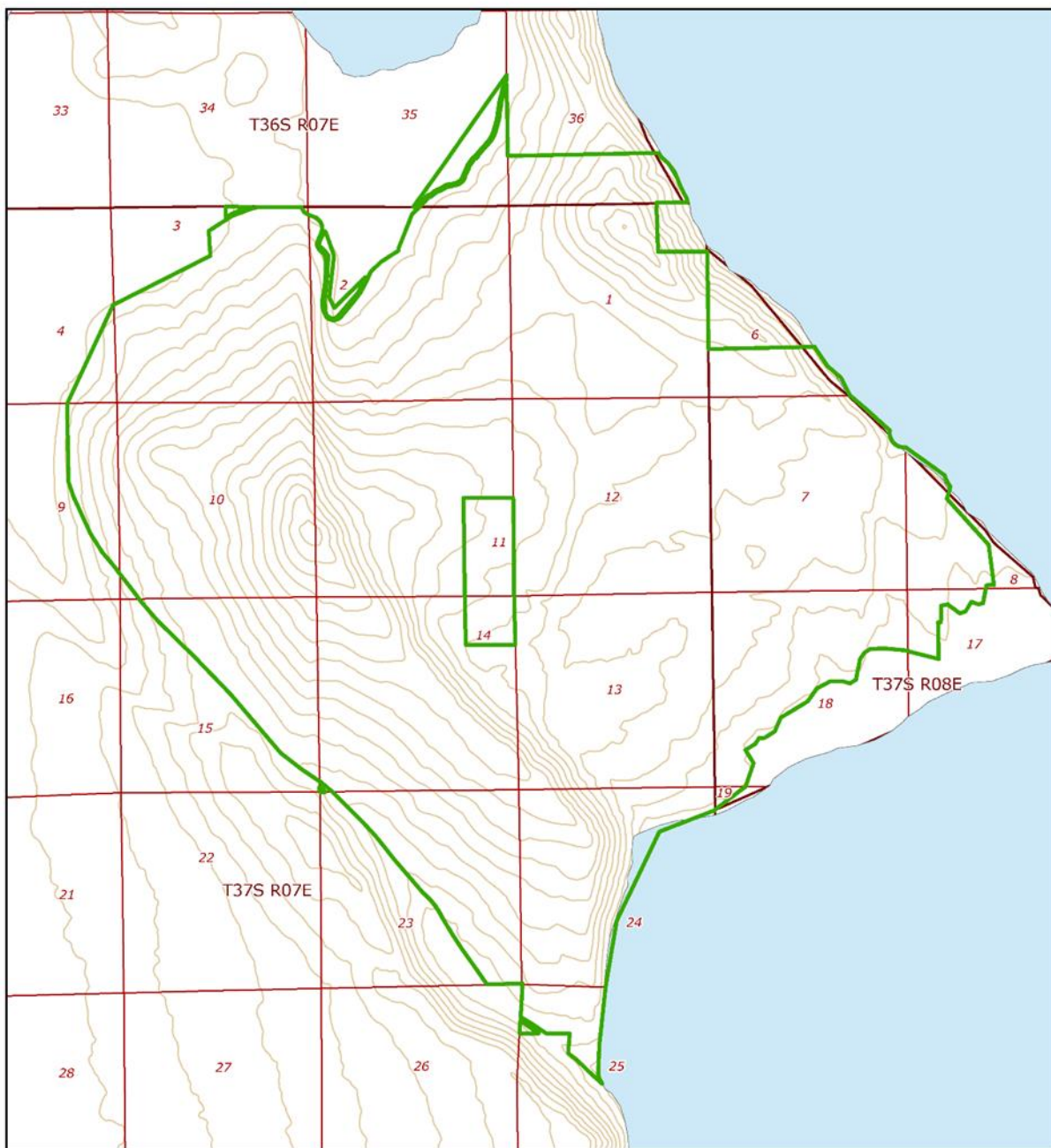
Spence Mountain - Location Map

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Natural Resource Consultants Since 1921

Ownership

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Coordinate System: NAD 1983 UTM Zone 10N



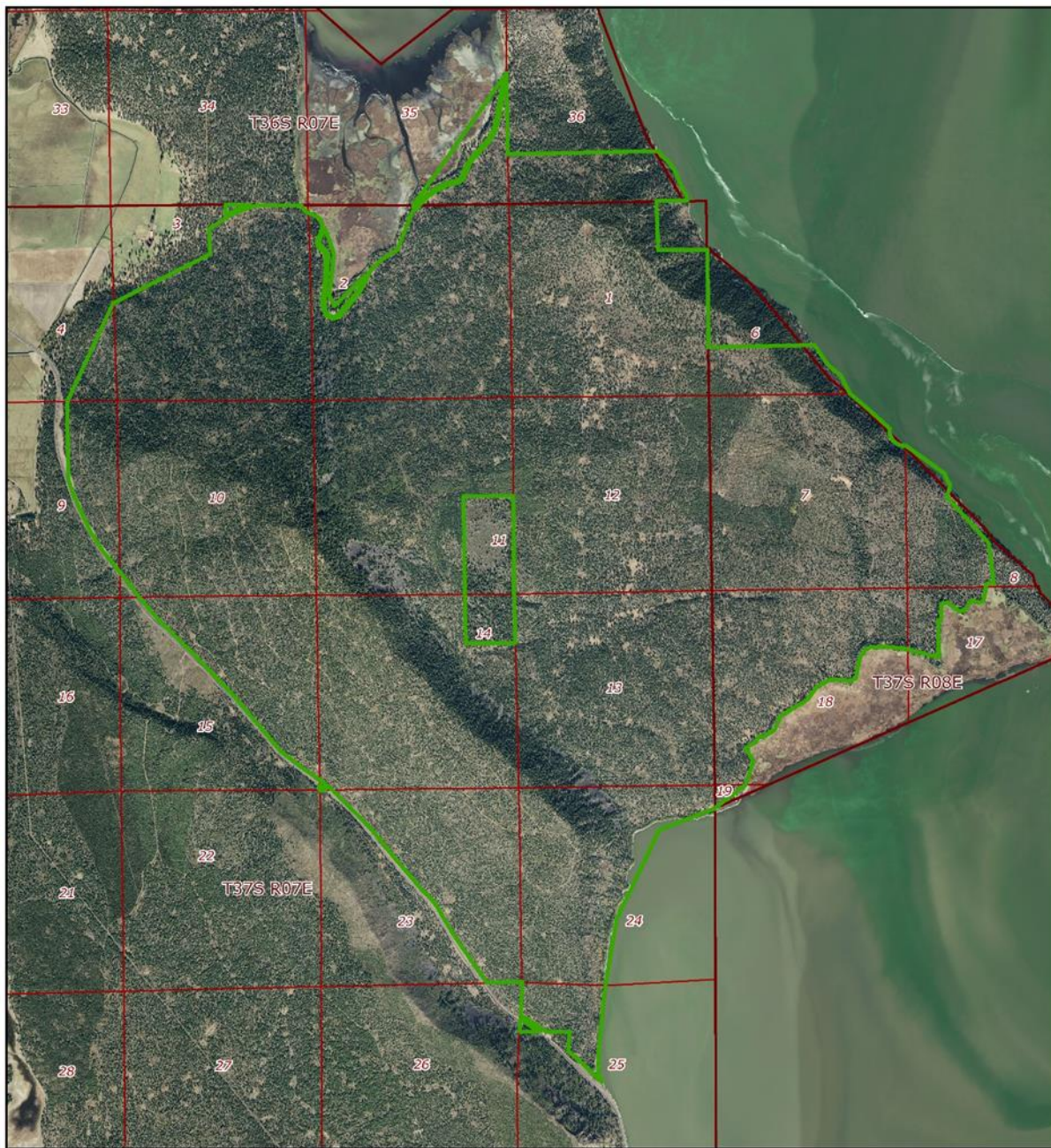
Spence Mountain - Property Boundaries

- Ownership
- Interstate Highway
- Contours
- US Highway
- Road
- State Highway

Miles
0 0.25 0.5 1

This product is for informational purposes and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn are the responsibility of the user.

Coordinate System: NAD 1983 UTM Zone 10C

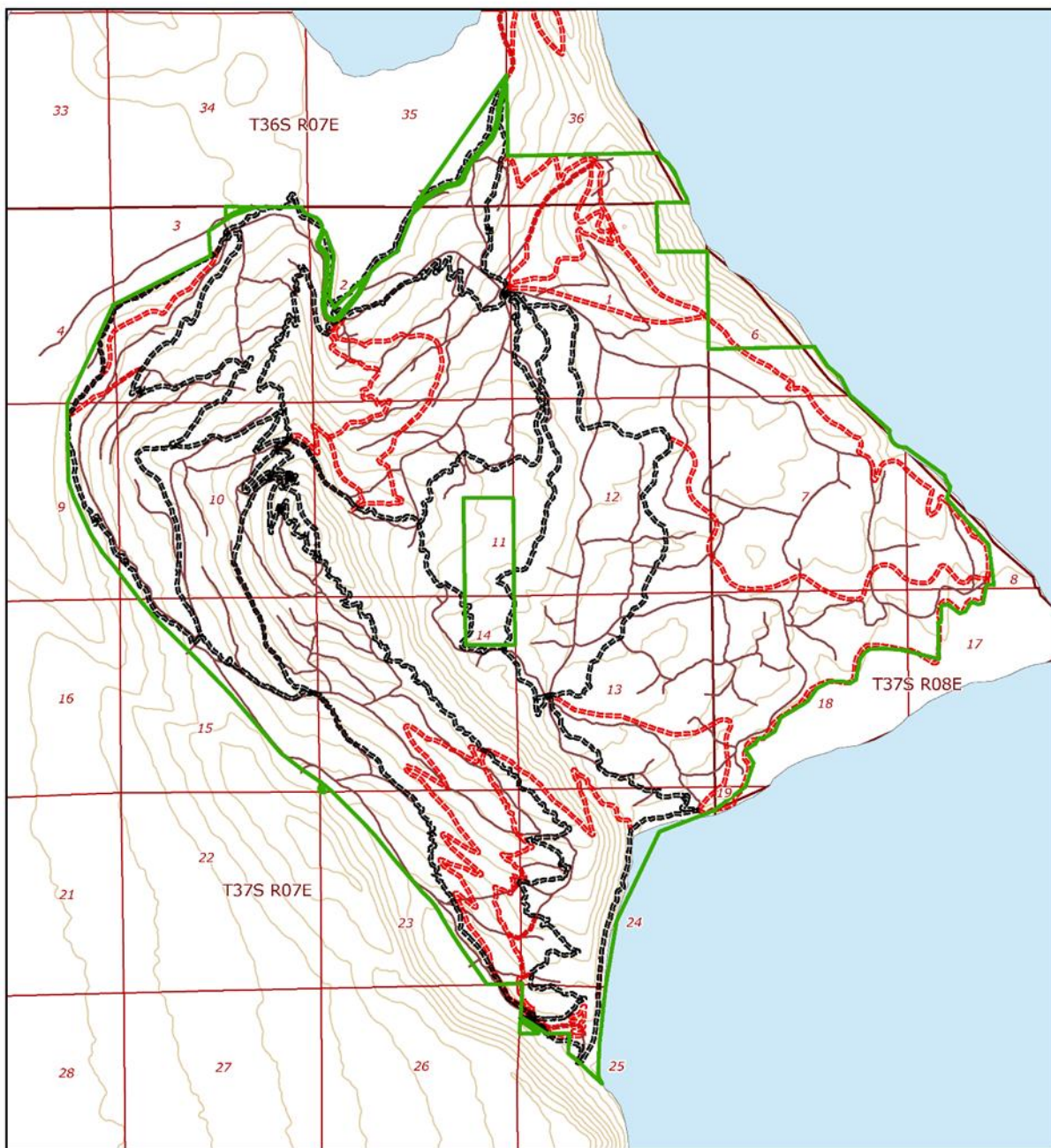


Spence Mountain - Aerial Imagery

Ownership

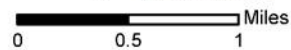
Miles

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Coordinate System: NAD 1983 UTM Zone 10N

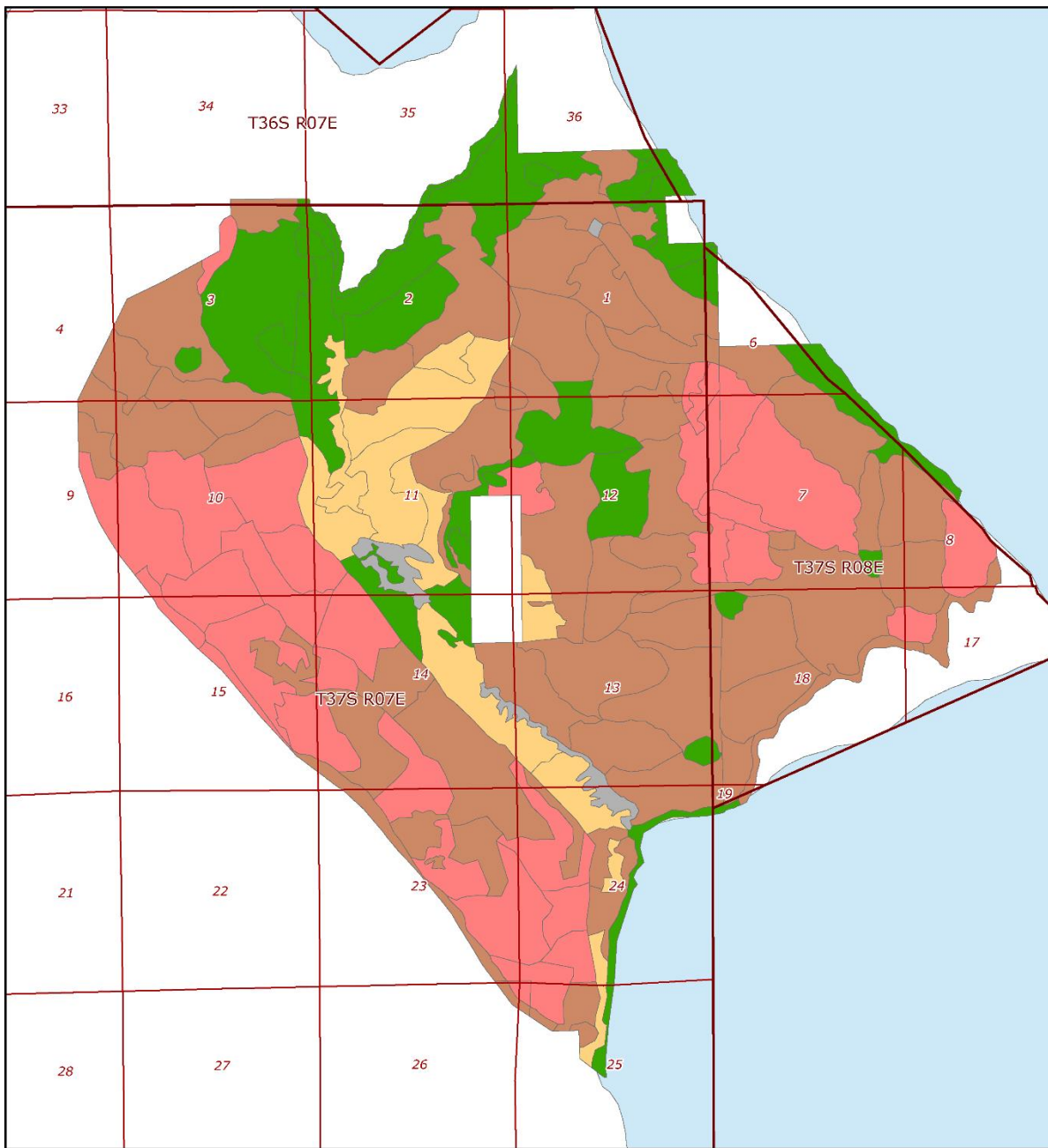


Spence Mountain

- Ownership
- Road
- KTA Existing Recreation Trails
- KTA Proposed Trails
- Contours

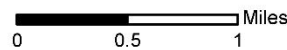


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Coordinate System: NAD 1983 UTM Zone 10C



Spence Mountain - Vegetation Type

- Natural-Ponderosa Pine
- Natural-Douglas-fir
- Natural-White fir
- Plantation-Ponderosa Pine
- Non Forest



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 Coordinate System: NAD 1983 UTM Zone 10N

Appendix B: Stakeholder Participation

A number of local and regional stakeholders have indicated interest in providing input and support for this project. It was initially planned to conduct some stakeholder meetings to receive input and discussion. Due to the COVID 19 situation of 2020 those meetings could not be conducted as planned. The Plan Preparer contacted the various stakeholders via phone and email and conducted one or more one-on-one phone interviews to receive input for issues, concerns and opportunities. Additional information was also received from some by follow-up conversations or emails. In one instance, the local representative of Klamath Trails Alliance (KTA) met the Plan Preparer on site to provide information and input.

Following is a list of agencies or organizations that initially indicated interest in participation and who were contacted to request information and input:

Klamath County Commissioners
 Klamath Trails Alliance
 US Forest Service, Fremont-Winema National Forest
 US Fish and Wildlife Service
 Oregon Dept of Forestry-Klamath District
 Oregon Dept of Fish and Wildlife
 Klamath Tribes
 Klamath Basin Audubon Society
 Blue Zones-Healthy Klamath Initiative
 Trout Unlimited

Stakeholders who responded and provided direct input were:

Klamath Trails Alliance, Drew Honzel

- Approximately 42 miles of trail in place now with long-range plans for a total of approximately 65 miles. Following that, KTA will continue maintenance responsibilities.
- Concerns about multiple uses, hunting, equestrian and other in the area that may cause safety issues and trail use conflicts.
- Fully supportive of a “Working Community Forest” concept where periodic silvicultural treatments and eventually commercial timber harvest are normal and common activities.
- Desire aesthetic qualities and coordinated multiple use as goals of the long-term management.

Klamath County Commissioners, Commissioner DeGroot

- Desire to see the property maintained as has been ongoing now for maintenance and use of trails for biking and hiking.
- Would like for the County to be able to provide for more public camping opportunities and expand camping and recreational activities that the County can provide.
- Would like to see a community Working Forest that could contribute periodic revenue to the County and provide a positive impact to the local economy through jobs and raw materials for forest product producers in the area.

Klamath Basin Audubon Society, Marshal Moser

- Provided a Letter of Support to TPL stating that Klamath Audubon considers this a “very high priority conservation project” and is fully in support of the project going forward.
- In support of multiple use management and have no objections to the concept of a working forest with periodic silvicultural treatment and timber harvest operations and long-term sustainable timber management
- Pro fire management – use of fire for treatments and developing a naturally fire resilient landscape.
- Would like to see retention of some remnant older tree type stands and eventually development of more.
- Supports the concept of variable, diverse stand structure with occasional openings.
- Will be managed for sustained forestry and multiple wildlife and conservation uses in designated areas, not overall, namely considering the next point.
- Will have designated and mapped areas managed as old growth in the "best" or nearest to old growth areas presently, and that the management plan will especially allow surrounding areas to the old growth areas to be sustainably managed to suppress wildfire ignition and growth/transmission.

- Management for fire suppression can be allowed in the designated "old growth" areas using techniques mimicking natural systems, but not timber harvesting.
- That some passable roads (at least by 4-wheel drive) will be continued, extended, and maintained for strategic access by older or handicapped citizens. It is understood that hiking trails are present and more may be developed, but true more wilderness-like experience is available for the young and physically able in the very near Mountain Lakes Wilderness (as well as several other wilderness areas and types in the county).
- Will have legal restrictions such as deed restrictions, retainers, reverters, designated recipients, etc., in case the county or other owners abuse, do not or cannot follow the agreement.

Healthy Klamath/Blue Zones Project, Merritt Driscoll, and Kendra Santiago

- Fully support the project
- Organization can serve as a connector to other groups and projects to utilize the property.
- Partners with Klamath Trails Alliance
- Can provide support and promotion of recreational use of the property through grant writing, signs and finding opportunities for outdoor recreation and projects.
- Support project for the opportunities for outdoor use by the public to enhance mental and physical well-being of the community through improved health outcomes and stress reduction.
- Would encourage use of the property by underserved populations to promote education, health, and outdoor activities.
- Would encourage use by veteran groups including disabled and homeless veterans. This would include outdoor recreation, job creation in forest restoration and property maintenance projects, veterans group retreats and outreach opportunities.
- Would like to see the property available for use by Solid Ground Equine Therapy program of Klamath Falls.

Oregon Department of Forestry, John Pellesier, state lands manager, Klamath District

- ODF supports the project and agrees with active forest management, recreational use, and fire resiliency development.
- ODF has no issues or concerns about the project as planned.