



ECOLOGY

ECONOMY

Klamath Tribal  
Ecosystem Restoration  
Partnership Initiative

Report 2011 - 2019

COMMUNITY



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## THE KLAMATH TRIBES

KLAMATH-MODOC-YAHOOSKIN

The Klamath Tribes are a federally recognized Indian Tribe comprised of three separate Tribes (Klamath, Modoc and Yahooskin), bound together as a single legal entity with the negotiation (1864), ratification (1866) and proclamation (1870) of the Treaty at Council Grove, located between present day Chiloquin and Fort Klamath, Oregon. The Tribes ceded approximately twenty million acres of their aboriginal lands to the United States during the negotiation process, while reserving for their exclusive use 2.2 million acres—referred to as the Klamath Indian

Reservation and commonly recognized by the tribal membership as the Peak-to-Peak boundary. Subsequent boundary disputes and erroneous land surveys shrank the reservation to its present day boundary encompassing 1.1 million acres—this boundary is the legally recognized boundary of the Klamath Tribes.

The Klamath Tribes have lived in, and outside, the Upper Klamath Basin for hundreds of generations. The Tribal people are inextricably tied to these lands and have served as “stewards” of their lands and natural resources for thousands of years.





# KLAMATH TRIBAL ECOSYSTEM RESTORATION PARTNERSHIP INITIATIVE

The Klamath Tribal Ecosystem Restoration Partnership Initiative is a strategic collaboration spearheaded by The Klamath Tribes' Natural Resources Department (NRD). The Initiative is aimed at increasing the tribes' capacity to actively manage their ancestral lands. Through established strategic partnerships with Lomakatsi Restoration Project (Lomakatsi) and The Nature Conservancy (TNC), this initiative is building additional capacity within the Natural Resources Department, creating sustainable job opportunities with a focus on tribal members, and engaging in ecological forestry and ecosystem restoration on the Klamath Reservation Forest and ancestral lands.

The Initiative has emerged through years of collaboration that built a mutually respectful relationship between the partners through active engagement on the land, planning processes, workforce development and training.

Under the auspices of a **Memorandum of Understanding** (MOU), executed in March 2011, The Klamath Tribes engaged Lomakatsi Restoration Project as a partner to supplement tribal capacity to:

- Train and employ tribal restoration workers, technicians and NRD staff in all aspects of ecological restoration,
- Collaborate with other entities to select, develop and implement restoration projects on federal and private lands, and
- Raise funds for the successful implementation of the MOU.

**Master Stewardship Agreement** – Building upon years of collaboration, The Klamath Tribes and its partners' Lomakatsi and TNC entered into a formal Master Stewardship Agreement with the U.S. Forest Service, Fremont-Winema National Forest. The Master Stewardship Agreement, executed in September of 2011, put into place a ten-year framework for landscape restoration activities through the planning and development of Supplemental Project Agreements (SPAs). The area of focus is the approximate 1.7 million acres of the Fremont-Winema National Forest (excluding the Lakeview Sustained Yield Unit) which includes the 1.1 million acres of former reservation land and ancestral lands.

The purpose and need of this momentous Master Stewardship Agreement are to treat unhealthy forest conditions and habitats in an effort to restore diversity, resiliency, sustainability and overall landscape health.

- Restore forest structure and diversity to enhance wildlife habitat, enhance aquatic systems, and reduce the risk of un-naturally severe fire,
- Produce sustainable jobs that support a tribal restoration workforce,
- Conduct scientific monitoring of restoration projects,
- Generally, build tribal capacity to engage in long-term ecological restoration, and economic development, and
- Build strategic partnerships and support with other tribes, agencies, organizations and industry.

# EXTENDING THE PARTNERSHIP ACROSS ALL-LANDS

The Klamath Tribal Ecosystem Restoration Partnership Initiative has developed strategic relationships with federal and state agencies, municipalities and non-profit organizations to leverage additional agreements, resources and funds to accomplish forest and aquatic restoration working in an all lands context.



## KEY PARTNERS

**U.S. Forest Service – Fremont-Winema National Forest (F-WNF):** The F-WNF manages 2.3 million acre of forest, shaped by its volcanic legacy with ecosystems ranging from towering snow-capped peaks to wide open sage basins. The F-WNF has a strong commitment to manage this Forest and its natural resources in the public interest, balancing the often competing needs of protecting and enhancing the natural environment and serving the multiple uses of its constituents.

**U.S. Fish and Wildlife Service (FWS):** Working to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. This statement acknowledges that working cooperatively with partner organizations, private landowners, and local communities is the best way to approach long-term conservation of native ecosystems.



Wauseka Brown, Lead Forestry Technician, Klamath Tribes Natural Resources Department, Conducting a Stand Exam, Big Coyote SPA.

## OTHER IMPORTANT PARTNERS, PROGRAMS AND FUNDERS

- Bureau of Indian Affairs
- Bureau of Reclamation
- City of Klamath Falls Parks and Recreation Department
- Klamath Lake Land Trust
- Klamath Basin Rangeland Trust
- Medford, Bureau of Land Management
- National Forest Foundation – Community Capacity and Land Stewardship Program
- Natural Resources Conservation Service – Regional Conservation Partnership Program
- Oregon Department of Forestry
- Oregon Watershed Enhancement Board
- Penney Family Fund
- U.S. Fish and Wildlife Service – Partners for Fish and Wildlife Program
- U.S. Fish and Wildlife Service – Tribal Wildlife Grant Program

# WHO WE ARE



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protect, preserve and enhance the spiritual, cultural and physical values and resources of the Klamath, Modoc and Yahooskin Peoples by maintaining the customs and heritage of our ancestors.

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The Natural Resources Department (NRD) – A Department of the Klamath Tribes that brings reserved Treaty Rights and traditional ecological and social knowledge of the land. The Department has a skilled staff, a robust workforce, and knowledge with expertise and enthusiasm to expand engagement in the active management and restoration of their ancestral homelands. The NRD has well-established institutional capabilities to successfully conduct sound forest, resource, and watershed management. Additionally, the Tribes bring a science-based Forest Restoration Management Plan *A plan for the Klamath Tribes' management of the Klamath Reservation Forest*, 2008.

NRD staff have an extensive and long history of managing natural resources with respect for the cultural and ecological capacity of the land. In addition, they conduct their work in a collaborative manner with agencies and partners to accomplish watershed and forestlands restoration.

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Lomakatsi Restoration Project – A non-profit organization that develops and implements forest and watershed restoration programs and projects throughout Oregon and northern California. Lomakatsi's mission is to “restore ecosystems and the sustainability of communities, cultures and economies”. For over twenty years, Lomakatsi has implemented ecological restoration projects across thousands of acres of forests and miles of streams. They have pioneered precedent setting collaborative strategies that are nationally recognized, involving federal, state, county and city agencies, Native American Tribes, industry, as well as private landowners, other NGO's and local communities. They have expertise in designing and implementing Master Stewardship Agreements and Supplemental Project Agreements and are committed to generating more of these agreements, to assist federal land managers in ecologically-based forest planning and the implementation of ecosystem restoration across watersheds. Lomakatsi is simultaneously committed to workforce training and development to ensure people in rural communities have the skills and employment opportunities to secure forest jobs.



**LOMAKATSI**  
RESTORATION PROJECT

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restore ecosystems and the sustainability of communities, cultures and economies.

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Lomakatsi brings:

- Over twenty years of ecosystem restoration planning and implementation experience
- Demonstrated expertise in project development, implementation and management
- Workforce training and technical capacity development
- Stewardship contracting and agreement development, administration and management
- Fundraising and grant writing expertise.

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**T**he Nature Conservancy (TNC) – with the mission of Protecting nature and Preserving life, TNC has over sixty years of experience providing essential expertise and resources to efforts designed to preserve this county’s natural environment that is under public agency management and private ownership and management. TNC is also an owner and steward of forest land and natural resources in the Klamath Basin. TNC personnel in Klamath County have a long history working with and working for the Klamath Tribes and engage alongside the Tribes in major efforts to protect and restore resources under public management and private ownership in the Klamath Basin.



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Protecting nature and  
Preserving life.

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TNC brings:

- Over 60 years of experience in Conservation Science
- Extensive scientific expertise in forest restoration, and effectiveness monitoring
- Capacity in planning, design, and administration
- Stewardship contract and agreement development, administration and management
- Tangible and lasting results restoring natural processes to the extent possible
- Over 40 years of land restoration and management within the Klamath Basin



# BUILDING TRIBAL CAPACITY

**B**uilding Tribal capacity to conduct landscape scale ecological restoration within the tribes' ancestral lands meets three critical goals for the tribes and the Initiative:

**Ecological** – Restoring the land through hands-on work provides valuable and sustainable resources to the community in the form of clean water, timber, jobs and increased opportunity for hunting, fishing and traditional cultural activities.

**Economic** – Providing long-term livable, family wage jobs and enterprise opportunities to the community provides domestic and social stability.

**Social** – Reconnecting people to their ancestral lands through stewardship and employment strengthens cultural identity and community.

This comprehensive and integrated initiative seeks to restore the ecosystems that have sustained the Klamath people for millennia through continued

active management that increases stability and resiliency to those ecosystems. Restoring the land will provide direct benefits to the people and the community.

In 2012, the Klamath Tribes entered into a **Master Participating Agreement** (MPA), with the Fremont-Winema National Forest with goals similar to the MSA. However, the MPA provides a mechanism for creating restoration projects specifically for developing and training the emerging tribal workforce. Under the MPA five project agreements (SPA) have been developed covering 6,000 acres of ecological forest restoration, and the training of ten tribal members in forestry related careers. The projects include restoration design and unit layout, tree marking, and ecological thinning.

These projects are located across the Forest on the Bly, Chiloquin, Chemult, Klamath and Winter Rim Ranger Districts.

Under the MOU between the Tribes and Lomakatsi, Lomakatsi administered the implementation of these SPAs using their capacity to train tribal members in ecological forest restoration, and employing the developing tribal workforce.



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45 tribal personnel trained  
in forestry operations and  
ecological restoration

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# TRAINING AND EMPLOYMENT

The Initiative is designed to enhance the skillsets of the NRDs' restoration technical staff and workforce through mentorship and job shadowing. By engaging the partnership in SPA development and implementation, partners are able to actively mentor Tribal staff and their emerging workforce in all aspects of stewardship agreements, project planning, workforce training, implementation and monitoring. The role of Lomakatsi, TNC and the Forest Service is to mentor, train and share knowledge with the NRD and workforce. The training program consists of classroom and on-the-job training in the forest in a variety of settings.

**Technical Forestry Training** – Mentoring has increased the knowledge of tribal staff to develop, implement and administer stewardship agreements.

- Project preparation: boundary layout, tree marking, vegetation inventory.
- Implementation: tree falling, controlled burning.

**Tribal Workforce Training and Employment** – Over twenty-nine workers have been employed and received training to be the boots on the ground workforce. The workers have received extensive training with chainsaws and tools that implement the restoration projects. Under the terms of the MOU Lomakatsi has employed and trained these workers deploying and training them on projects developed under the partnership. A major challenge in providing continued job growth and learning experiences is keeping the tribal workforce employed within Klamath County throughout the year. As a solution, Lomakatsi has integrated the tribal workforce into their larger program deploying the workforce on other projects across the region ensuring job stability and learning opportunities.

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Building a vibrant, skilled tribal workforce is a primary goal of the Initiative

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# RESTORATION ACROSS THE REGION

Since the spring of 2011 through the summer of 2018, 45 Klamath tribal members and tribal affiliates have been involved in a variety of ecological restoration training and employment opportunities working across private and federal lands. Employed by Lomakatsi, they have worked on over 15,000 acres within their ancestral homeland, and another 2,500 acres across eight Oregon and four California counties. Tribal personnel have also conducted restoration activities on two stewardship agreements in the Rogue-Siskiyou National Forest and one on Medford BLM lands. Over the past eight years, tribal workers have engaged in peer and mentor training, learning the skills to conduct a variety of ecological restoration prescriptions – forest thinning, prescribed fire application, native grass seeding, tree and shrub planting, riparian restoration,



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Over 15,000 acres  
of ancestral lands

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cultural monitoring, and project layout, marking and design. The partnership has leveraged over 2.7 million dollars to support restoration, training and employment program across private, municipal and federal lands.

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Another 2,500 acres  
across 12 counties

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# MENTORING THE NEXT GENERATION

Engaging tribal youth and inspiring the next generation of ecological foresters and natural resource professionals is a key component of the Klamath Partnership. Training adults and building the current capacity of the Klamath Tribes' NRD to implement restoration projects is vitally important, but it is the youth (16 - 24 years old) that represent the future of the region and tribal community. Inspiring these youth, training them in restoration practices and providing opportunities for them to build relationships with the Forest Service, Klamath tribal staff, The Nature Conservancy, Lomakatsi specialists and other leaders in the field of ecosystem restoration not only serves the future needs of the forest, but also provides young people with career pathways that can benefit communities throughout the Klamath Basin.

Youth programs in the Klamath Basin launched in 2014, with ten youth working side-by-side with restoration experts, under the mentorship of Lomakatsi and Klamath Tribe Natural Resource Department staff in a hands-on, on-the-ground learning environment. In 2018, seven young adults completed a six-week technical ecological forestry program where they acquired foundational skills for careers in natural resources. The group learned to read ecological prescriptions, identify species, mark timber, and prepare timber sales. This group also worked regionally to gain experience in other climate types outside the Klamath Basin. These programs provide youth the skills to become part of forest restoration crews, work further with tribal Natural Resource Department staff or pursue a college education. The program, developed by Lomakatsi and partners, is quickly becoming a national model.

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Tribal youth working  
side-by-side with  
restoration professionals

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Tribal Ecological Forestry Training Program  
in 2018 mentored seven young adult.



Klamath Tribal Youth Program launched in 2014  
building future natural resource professionals.



# PROJECTS DEVELOPED UNDER THE MASTER STEWARDSHIP AGREEMENT



Black Hills SPA Development,  
Layout and Marking.

Partners of the MSA have developed four Supplemental Project Agreements (SPAs). These project agreements are the mechanism by which the partnership develops and implements ecological restoration objectives of the MSA on the Fremont-Winema National Forest. These SPAs are a major step forward in added capacity both to the Klamath Tribes and the US Forest Service for the development and implementation of restoration projects.

The four SPAs placed 40,837 acres into stewardship. Within that footprint, 16,648 acres have been designed and laid out for implementation. These projects are estimated to yield 47.35 MMBF of merchantable timber. So far, four timber contracts have been awarded covering 3,453 of the planned acres. The estimated net value of these projects is over \$3.63 million and are expected to bring \$1.1 million in retained receipts back to the partnership for additional project development and implementation.

The financial plans for the four SPAs required a match by the partners (excluding the USFS) of \$212,000. However, the partners actually matched \$698,603 to the four projects. These funds covered programmatic expenses for management, design and layout of the projects, as well as trainers and mentors for the workforce and technicians. In addition, the Partners secured \$331,000 in federal funds to support SPA development and setup.

Four Supplemental  
Project Agreements -  
across 40,837 acres

SPA	SPA Acres	Prepared Acres	Estimated log volume (MMBF)	Total estimated net value	Estimated Service cost	Retained Receipts	Contracted
Big Coyote	3,462	1,025	1.9	\$ 147,400	\$ 157,952	\$ 0	Quicksilver Inc.
Black Hills	9,181	3,489	11.11	\$ 902,961	\$ 630,764	\$ 272,197	Wampler Inc.
Red Knight	23,841	8,012	24.84	\$ 2,168,007	\$ 1,373,700	\$ 794,307	Murphy Co.
Kirk	4,353	4,122	9.5	\$ 413,564	\$ 348,419	\$ 65,145	TBD
Total	40,837	16,648	47.35	\$ 3,631,933	\$ 2,510,835	\$ 1,131,650	




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Big Coyote Stewardship Project - Tribal restoration worker implements aspen and meadow restoration, removing encroaching lodgepole pine.

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TNC Sycan Marsh Habitat Restoration Project - Restorative thinning conducted to create forest heterogeneity and improve habitat for white-headed woodpecker and other species across 800 acres. Project demonstrates an all lands approach and is directly adjacent to the USFS Big Coyote SPA.

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# SCIENCE AND ECOLOGICAL MONITORING

Cutting-edge science and effectiveness monitoring is the cornerstone of the Klamath Partnership. The internationally known conservation organization, The Nature Conservancy (TNC), leads the science and monitoring aspects of the project, supported by Lomakatsi and tribal staff. The resulting work has led to an increase in the body of scientific knowledge informing the management of western US conifer forests.

The value of this scientific information can be seen in the forest treatments, developing monitoring metrics, and quantifying ecosystem services. Forest treatments have been designed to retain trees that are resilient to frequent fire, drought, insects and pathogens, and follow the Dry Forest Restoration Guide. The residual stands will express a complex spatial pattern following historic conditions and designed to incorporate adaptations to climate change with summers being longer and available moisture being reduced. Retaining clumps of residual trees was designed using the Individuals, Clumps, and Openings APP. Restoring the structural mosaic of widely spaced individual trees, tree clumps, and openings is ecologically important in these forest types.

Monitoring tree responses to forest restoration includes ecological functions, and the necessity to restore complex stand structure. One new tool that we have developed allows quantitative monitoring of individual, clumps and forest openings (ICO). Integral to the monitoring strategy was the development of an initial reference conditions study. The goal of the study was to reconstruct the historic (pre-1860) tree species composition, and spatial patterns across a range of water and temperature gradations, and ecological conditions on the Fremont-Winema National Forest, and to quantify the natural range of variability in the distribution of individual trees, clumps and openings. Subsequent monitoring is examining the effectiveness of the treatments on tree health and growth, fire behavior, wildlife habitats composition, soil moisture and ponderosa pine or sugar pine regeneration, understory species composition, and other ecological values.

In November 2015, The Nature Conservancy sponsored a workshop to train forestry professionals in the application and use of the Individual, Clump and Opening APP developed through the project.



top: MULE DEER  
middle: WHITE-HEADED WOODPECKER  
bottom: SPA Development Strategy



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On-going monitoring continues to inform the prescriptions and treatments of sites.

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The ICO APP will increase accountability with variable species prescriptions and decrease costs for sale layout.

***Effectiveness Monitoring*** – Many factors increase susceptibility of forests to wildfire. Among them are forest management, changes in land use, fire suppression, and frequent droughts. To evaluate the effectiveness of forest treatments to increase tree health we have been monitoring water balance that enhance individual tree susceptibility

to drought, bark beetle attack, and disease, and when combined, contribute to whole ecosystem susceptibility to wildfire.

***Wildlife Monitoring*** – This is particularly focused on species most important to the subsistence and culture of the Klamath Tribes. Mule deer are essential to the tribe's culture and subsistence. In addition, we have been monitoring populations and habitat conditions of cavity nesting birds like the Pileated and white-headed Woodpeckers. Both species are important indicator species and



After treatment the future forest would have a composition of mature trees, which are fire

# INTO THE FUTURE

The Klamath Tribal Ecosystem Restoration Partnership Initiative goes far beyond restoring forests. The focus of the Initiative is to collaboratively build the Klamath Tribes' capacity to develop and implement landscape scale restoration across the tribes' ancestral lands, improving the economies of local and tribal communities through workforce training, providing jobs for local contractors and tribal members and supplying industry with restoration by-products (logs and biomass).

The Initiative, established after years of working collaboratively with a variety of partners on a range of projects, has been a tremendous success. In the last five years, the partners have succeeded in building the workforce capacity to design, monitor and treat thousands of acres. We have created protocols and processes to improve efficiency and

effectiveness, and provided training programs that have not only increased the experience and knowledge of adult ecological forest workers, but have also laid the foundation for expanding the capacity of the workforce in the future through training tribal youth.

The future of the initiative is aimed at further developing and expanding the emerging ecological workforce and the capacity of the Klamath Tribes' Natural Resource Department to implement landscape-scale restoration projects.

Success into the future rests on the ability to provide continued employment, training and capacity building opportunities, treat more acres, attract private and government funding, and the strengthening of Initiative partnerships.



***Building Bridges for Collaboration*** - The Klamath Tribal Ecosystem Restoration Partnership has brought together a diverse group of governmental bodies, non-profit conservation groups and industry partners with a commitment to achieving shared goals of reducing the risk from high severity wildfire, and sustaining forests that provide for wildlife and future livelihoods for people.