

## **Rogue Basin Landscape Strategy Summary**

The Rogue Basin Forest Collaborative came together to identify priority restoration needs within the Rogue Basin (3.3 million acres). This area of concern provided a broad framework to discuss restoration need and opportunity. In order gain focus and advance landscape planning and implementation, the group relied upon existing data, previous experience, and a preliminary assessment to identify focus area within the Siskiyou Mountain and Wild Rivers Ranger Districts (640,000 acres). (MAP 1)

This focus area allowed the application of a more rigorous landscape strategy to identify a set of 6th field watersheds for restoration planning and implementation. The 6th field scale was deemed appropriate for planning, allowed better consideration of ownership patterns and general conditions, reduced total acreage for in-depth consideration, and coincided with the existing scale of Rogue River-Siskiyou National Forest aquatic assessments and aquatic restoration activity.

A series of identified restoration screens were applied to the focus landscape to more closely identify priority watersheds and potential project areas. These include:

1. Wildland-Urban Interface as identified through Josephine & Jackson Integrated Fire Plans and Community Wildfire Protection Plans;
2. Mapped roads with a 1500' buffer in three distance categories to capture economic efficiency consideration and generally avoid roadless areas;
3. Basal area thinning based on excess of collaboratively established carrying capacity for identified dry forest plant associations;
4. Volume estimates based on removal of 10-20" dbh trees;
5. Volume estimates modified by 4 classes of Northern Spotted Owl habitat consideration;
6. Integrated Fire Plans hazard rating;
7. A focus area comparison of USFS 6th field watershed aquatic priorities based on coho habitat, water quality, habitat/road interaction, riparian vegetation and partnership opportunity; and
8. Application of a NEPA-ready layer to identify current opportunity.

This strategy generated a prioritization of 6th field watersheds within the focus area. Further NEPA-ready consideration identified significant unfunded acre opportunities for implementation

in the Ashland Forest Resilience, Butcherknife-Slate/Waters Creek and Upper Applegate Road project areas. (MAP 2)

For the CFLRP assessment, stand level FRCC information derived at the sixth field watershed scale shows condition class 2 and 3 dominant across over 75% the landscape. (MAP 3) This was consequently recognized as a baseline condition, and not incorporated into the strategy as a tool for additional landscape prioritization.

Ashland Forest Resilience, Butcherknife/Slate and the Upper Applegate Road projects were designed with extensive community collaboration involving members of Rogue Basin Forest Collaborative, and other community and agency partners. This clearly adds to the import of restoration implementation in these project areas, and highlights an opportunity to support these efforts through the application of CFLRP funds to treat unfunded acres in these project areas.

The Ashland Forest Resilience project was designed through significant, long-term community involvement, and was strategically placed in and around the Ashland Creek watershed to help protect the municipal water supply and surrounding forest from uncharacteristically severe fire. The project has drawn a high level of support, engaged the community and stakeholders, and is being implemented under a Master Stewardship Agreement between the Rogue River-Siskiyou National Forest, The City of Ashland, Lomakatsi Restoration, and The Nature Conservancy.

Butcherknife/Slate received significant input through the work of the Josephine County Integrated Fire Plan and associated community partners. Project recommendations focused on the need to address noxious weeds and disease, the need to restore and improve existing fish habitat, opportunities for oak release, large tree, old forest and legacy pine retention, needs for plantation thinning, meadow restoration, and brush treatment, as well as the use of prescribed fire, and further development of fire risk mapping and assessment. The need to engage community contractors to maximize local economic benefit was also addressed.

Upper Applegate Road was designed through community input and multi-agency coordination involving the Applegate Rural Fire District, the Applegate Fire Plan, Jackson County Integrated Fire Plan and the Oregon Department of Forestry, and received general community support.

Community involvement in the design of these initial project areas proposed for CFLRP program funding highlights the opportunity to not only accomplish restoration goals, but to acknowledge and advance community-agency collaboration.

Future NEPA planning related to this CFLRP proposal, and related planning efforts involving the Rogue River-Siskiyou National Forest and Rogue Basin Collaborative partners will proceed from a consideration of focus area prioritized 6th field watersheds.

**Strategy details:**

The approach sought to combine various new and existing analyses to provide an overview of conditions in the Rogue Basin to be used to aid in selection of prioritized restoration treatments across the broad landscape.

The Southern Oregon Small Diameter Collaborative has established and utilized a set of Productive Harmony Guidelines to build support for active management, and these ecological, economic and social indicators were utilized as a baseline consideration in landscape assessment planning.

All Northwest Forest Plan land allocations with the exception of wilderness were considered for possible treatment. It was felt by the collaborative partners that restoration practices that incorporate small diameter removal along with designs to aid in the recovery of the northern spotted owl are compatible with Matrix, AMA and Late Seral Reserve standards and guides. Riparian Reserves were not modeled. Riparian reserve treatment prescriptions would be developed at the site specific project level.

An extensive overview of potential vegetative treatment opportunities was created, based on several important collaboratively identified factors. Potential Natural Vegetation maps created by the Forest Service ecology program were used to describe broad level tree series forest types. Basal Area targets for each series were established, (ie; 110 square feet per acre for Douglas-fir). Oregon State University Gradient Nearest Neighbor (GNN) maps were used to estimate existing basal area. The difference of existing basal area minus target basal area provides insight into the amount of material per acre available in restoration treatments. The volume of ‘excess’ basal area in the 10-20 inch DBH range was considered compatible with restoration opportunities and mapped. In addition, distance from existing road systems was used to help identify economically feasible treatment areas and deemphasize entry into unroaded areas.

During preparation of the Northern Spotted Owl 2010 Draft Recovery Plan, the US Fish and Wildlife Service developed a Relative Habitat Suitability map that incorporated multiple attributes to inform locations on the landscape where spotted owl habitat is likely to persist long term. This model incorporated existing owl habitat along with abiotic features such as slope position, concavity, etc. For the Rogue Basin analysis, an approach was used to incorporate the broad scale relative habitat analysis model with the economic model referenced above to estimate yields and restoration opportunities as influenced by the need to maintain and enhance northern spotted owl habitat. The following table shows the four classes of likelihood of treatment, ranging from low to very high opportunity

STAND LEVEL TREATMENT PRIORITY CONSIDERING IMPACTS TO OWLS			
	Existing Habitat		
	NRF	Dispersal	Non-Habitat
HIGH RHS	Low	High	Very High
LOW RHS	Moderate	Very High	Very High

Both the threat of fire and the ecological consequences of fire exclusion in frequent fire return interval forest were assessed.

FRCC (Fire Regime Condition Class maps) were created using the ARCMAP FRCC tool available through FIRE.org. Biophysical Settings (BPS), Fire Regimes and historic reference conditions were used to create a Stand Level FRCC map at the sixth field watershed level. Afterwards, each sixth field was summarized for condition class rating across all ownerships, and separately for Forest Service, BLM and private ownership. FRCC mapping was coordinated with the Boise Fire Center, creators of this analysis method, to assure all parameters and assumptions were correct.

The Jackson & Josephine County Integrated Fire Plan created a collaborative risk assessment committee which worked over several years to develop a locally calibrated fire behavior vegetation data set based on LANDFIRE data. This effort was well integrated with the Landfire working group from the very start, and the committee identified under-represented fuel models and forest types in the Landfire data set. The counties funded the collection of additional plot data to fill in these under-represented types.

Further review and calibration of the Landfire data was performed in a collaborative environment with Forest Service, BLM and Oregon Department of Forestry fire planners working together with interested publics. Additionally, existing fuel reduction treatments on federal and private lands were used to update Landfire data to provide current conditions. This data set was then used to create maps and data sets to inform restoration treatments. The counties created a hazard map using the Flammap model to predict areas with high levels of stand replacing fire. Local fire weather was incorporated into the model which predicted rate of spread, flame length and crown fire potential. These factors were incorporated into a final map using the matrix shown below. 1 = low and 6 = high.

		Rate of Spread (ch/hr)		
Crown Fire Activity	Flame Length (ft)	0-5	6-20	21+
0	0	1	1	1
Surface	0-4	2	3	3
	5+	3	3	4
Passive	all	4	4	5
Active	all	6	6	6

The Randig (Random Ignition) model was used to predict the probability and consequences of fire. Fire event and weather scenarios were developed for the two counties are using past fires as a guide for weather conditions and burn periods. 100,000 random ignitions were evaluated across the landscape in multiple weather scenarios. Fire foot prints and fire intensities were recorded to develop maps of the relative probability of any acre receiving fire. In addition, this model shows the intensity of fire at each point to help predict the consequences of fire by assessing percent mortality. This consequence mapping is also referred to as ‘susceptibly’ of fire.

Other maps used to strategically identify priority watersheds for restoration included the Wildland Urban Interface Boundary developed by Jackson-Josephine County Hazard and Risk Assessment Committee. Maps of existing collaboratively developed projects with NEPA ready decisions and unfunded treatment acres were consulted. The Aquatic strategy developed by the Rogue River – Siskiyou NF, also at the 6th field watershed scale, provided a unique opportunity to not only add additional considerations for restoration priority, but to also link restoration action.