DEPARTMENT OF THE INTERIOR PILOT PROJECTS
FOR
FOREST MANAGEMENT PRACTICES ON BLM WESTERN OREGON LANDS

The Coos Bay Wagon Road Forest Management Pilot (CBWRP)

BLM Coos Bay District – Coos Bay Wagon Road Lands

Introduction

The Secretary of the Interior, in a seminal meeting in Washington DC on December 8, 2010, called for the establishment of pilot forestry projects in Southern Oregon. These pilot studies were in response to controversy limiting the kinds of management occurring on BLM O&C lands. It has been recognized that the universal application of thinning in young plantations is not sustainable and does not to address the full suite of ecological values important to sustain healthy forest systems for fish, wildlife and communities. These pilots are to demonstrate that intermediate and regeneration harvests on federal forests managed by the Bureau of Land Management can both protect the environment and increase timber harvest from the current low level. Three pilot projects were established at the meeting; the Coos Bay Wagon Road Forest Management Pilot (CBWRP) covers the revested Coos Bay Wagon Road lands in southwestern Oregon,

The Coos County Coos Bay Wagon Road Lands (CBWR) represent a portion of the Coquille Indian Tribe's aboriginal homeland. These lands continue to define the Tribe's identity and the Tribe retains strong Tribal interests in them.

The CBWR not only have a unique history with the Coquille Indian Tribe, they also have a unique development history as lands conveyed by the United States to the Southern Oregon Company to aid in the construction of a military wagon road. While the Coos Bay Wagon Road was built, the other conditions within the Coos Bay Wagon Road Grant were not fulfilled. The United States subsequently revested these lands to the United States as a result of the Coos Bay Wagon Road Company's failure to fulfill the conditions of the Coos Bay Wagon Road Grant. Under the revestment, these lands are to be managed for permanent forest production and the timber sold, cut and removed in conformity with principals of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities. Receipts from these lands are to be paid to the counties in which the lands are situated.

The CBWR lands are within the ancestral homelands of the Coquille Indian Tribe, and Tribal members continue to live, pray, work and recreate within these lands. The Coquille people's historical and cultural ties to these lands extend back through time immemorial. Tribal members strongly wish to participate in the appreciation, protection, use and management of these lands, along with other community members.

The CBWRP area has been identified as one of the pilots in recognition of the strong community and tribal interests in the study area as well the lands being ideal in terms of stand age, site class and condition to test advanced regeneration harvest methods in a moist forest situated in a checkerboard format.

Collaboration and Consultation

Consistent with its sovereign tribal status, the Tribe has a long history of local community collaboration over natural resources projects within its ancestral lands. Management of its own resources honors Tribal culture and serves as an economic driving force for both the Tribe and local community. The Tribe has recently submitted its forests and forestry operations for certification under the Forest Stewardship Council guidelines and anticipates receiving certification from that body in the near future.

The Tribe is well qualified, and endorsed, as a premier forest management organization. As a people endemic to the CBWR lands the Tribe has a vital interest in the long term health of this region. The Tribe intends to continue to inhabit these coastal forests for decades, centuries and millennia, as they have in the past. This dedication to a long term view, to some degree insulated from the whims and currents of the moment, is one of the guiding cultural principals of the Tribe. This cultural and community role have motivated the Tribe to undertake a leadership role in the CBWRP.

While the decision making under the CBWRP will be consistent with the Tribal forest management program, the CBWRP will be founded on advice and collaboration from a wide variety of science-based sources including especially, the CBWRP Technical Team (see Appendix 1) and the insights gained through consultation with other stakeholders.

Forest Management Expertise

The Coquille Indian Tribe is a sovereign entity that now manages its Tribal trust forests under the standards and guides of the Northwest Forest Plan ("NWFP") and the policy structure of the National Indian Forest Resource Management Act ("NIFRMA"). The Tribe has managed its trust forests both to meet these standards and guides and to produce a sustainable timber harvest

benefiting surrounding non-Tribal and Tribal communities.

Given this successful management of the Coquille Tribal Forest consistent with the NWFP and NIFRMA, it is logical to expand this management philosophy to the larger area of the Coos Bay Wagon Road Lands. The CBWRP is an opportunity to "scale up" this ability to examine whether the environmental standards and the production of economic and social benefits can be similarly achieved on a wet site forest on a larger scale. The CBWRP is a premier opportunity to test and demonstrate the advanced silvicultural concepts developed by Drs. Franklin and Johnson (see Appendix 2) in high precipitation, high productivity coastal forests within a checkerboard format that is similar to the majority of the BLM-managed Federal Forestlands in Oregon.

Goals of the CBWRP

This project is intended to complement and share information with the other pilot projects now being launched by the BLM.

The goals of the CBWRP are to:

1. Test new silvicultural approaches to regeneration and intermediate harvests on a landscape scale in the very moist and productive forests of the Oregon Coast Range that will enhance the opportunities to meet both the environmental protection goal and the community, jobs and economic goals of the NWFP.

2. Provide a long-term and enduring demonstration of long-rotation, environmentally friendly forest management adapted to this particular environment and set of biodiversity opportunities and challenges, including the conservation and enhancement, of threatened and endangered species of wildlife and fish;

3. Test new riparian management approaches that demonstrate management aimed at sustaining the long-term productivity of dynamic aquatic ecosystems.

4. Provide an opportunity to demonstrate the National Indian Forest Resource Management Act on federal forest lands that are part of the Tribe's homeland;

5. Support Green Energy production by utilizing a portion of the forest products harvested for bio-fuels and/or bio-energy production;

6. Provide opportunity for Tribal cultural restoration on ancestral homelands; and,

7. Promote the Interior Department's goals of the America's Great Outdoors Initiative by using science-based management practices to restore and protect our lands and waters for future generations and advancing other priorities of the initiative.

The Tribe, with the advice of the CBWRP Technical Team will develop detailed quantitative monitoring protocols to track goal achievement over the immediate and long term future.

Rationale for the CBWRP

Most of the federal forests west of the Cascades are properly viewed as "moist" forests. Management under the NWFP, has, with few exceptions, not met the goals and targets of the plan and does not reflect the more recent scientific knowledge and trends in forest management. Because the timber targets under the NWFP are not being met, counties with a high percentage of their land area in federal forests suffer from a catastrophic but unnecessary loss of revenue. Similarly, the ecosystem services that these forests are able to provide (habitat, watershed protection, carbon sequestration) are growing in importance at the local, state, national and international levels.

The CBWRP presents a scientifically-based alternative by demonstrating the effective fusion of intermediate and regeneration timber harvest and retention and enhancement of ecosystem services from these lands. The CBWRP aims to show that new approaches to science-based forest management can be implemented in a manner that allows both timber and ecosystem service targets for the NWFP to be met. The CBWRP also aims to show that improved financial benefits to the counties and protection of the ecosystem service benefits are not mutually exclusive. The CBWRP approach will provide for protection of existing old growth, the creation of essential habitat features for old growth species in areas where they do not now exist, and for regeneration and intermediate harvests compatible with critical ecosystem service goals.

The new approaches also will be consistent with Federal law and the overall policy intent of the relevant Federal departments and agencies.

The CBWRP is based upon adaptive management approaches applied at landscape scale (50-100K acres) that can be effectively monitored and yield information relevant not only at the landscape scale but also at the larger Federal land management scale. While the CBWRP will be at a landscape scale it is not "too big to fail" nor is it too small to provide meaningful results. A key guiding objective of the pilot is to learn and to be able to compare to the socio-cultural-economic-environmental environments being examined in the other two pilot projects.

The CBWRP Strategy

The CBWRP strategy is to implement and test long rotation management, ecosystem service and long term stewardship that achieve the goals of the CBWR – namely permanent forest production under the principal of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities. The plan provides opportunities for renewable energy production and furtherance of Tribal cultural restoration goals on ancestral homelands. The CBWRP will be implemented in support of the goals of the America's Great Outdoors Initiative.

The CBWR forest age class structure is particularly amenable to the approach suggested by Franklin and Johnson for silviculture in moist forests – such as regeneration harvests that employ partial retention. The CBWRP will allow a comparison between the other "dry" site pilots with the CBWRP "moist" site and yield an array of information not available if only one or the other is implemented. The CBWRP will provide an opportunity for the Coquille Tribe, under the National Indian Forest Resource Management Act, to demonstrate forest management under the relatively new outcome based forest policy.

Under the Coquille plan for the CBWR, the study area remains in the federal estate and provides a template that can be applied in the management of other federal forests in modern ways, while at the same time providing increased revenue for the county and a job-based stimulus to the languishing Oregon south coast economy. Finally, the long term strategies of the Coquille Tribe are to address revenue sharing to Coos County and the Tribe (as the forest manager) (see Appendix 3) and bring much of the private land interspersed with the federal land in a "checkerboard" pattern (see maps in Appendix 4) under a similar management regime through a "willing seller/willing buyer" approach, thus pioneering a way to reduce the difficulty and improve the aggregate outcomes of managing "checkerboard" (alternate section ownership) lands.

Appendix 1: CBWRP Technical Team, and Charge

The CBWRP Technical Team will be comprised of scientists and managers familiar with the forestry concepts to be applied; the forests and species included in the CBWRP; and, with the pilot purposes and process. They will advise the Tribe and its partners on pilot forest management activities.

Appendix 2: Franklin/Johnson summary of dry and moist pilots

Applying Restoration Principles on the BLM O&C Forests in Southwest Oregon
FINAL

Dr. Jerry F. Franklin, Professor of Ecosystem Science
School of Forest Resources, University of Washington

Dr. K. Norman Johnson, Professor of Forestry Resources
College of Forestry, Oregon State University

Nov. 30, 2010
For any policy to be sustainable, it must be socially acceptable.

Preface

When we initially developed our proposals for a restoration strategy for the forests of the Pacific Northwest we considered it important to take certain intractable issues, such as old growth forests and road-less areas, "off of the table." This was necessary so that -- rather than continuing policy debates over these contentious topics -- society could move forward on important activities for which there was general support, such as restoration of forests and waters, which would achieve both environmental and economic good. While some critical societal decisions were still required, such as selecting an age at which forests and trees on federal lands would be reserved, the Northwest Forest Plan provided a basic starting point for our policy proposals.

The emergence of the draft Recovery Plan for the Northern Spotted Owl (NSO) has created a major new element that must be addressed in any restoration proposals and additional uncertainty about what can be accomplished in the near term; resolving the uncertainty about critical habitat as quickly as possible is an important need. However, the re-emergence of NSO conservation issues has not changed the fundamental premise of our original analysis, which is the need to focus on activities that achieve environmental, economic and social benefits by improving ecosystem diversity and functionality and increasing societal options on federal forest lands as well as improving ecosystem resilience and sustainability in the face of environmental change. We do find it ironic that – 20 years after Judge Dwyer's injunction on the harvest of NSO habitat that led to the Northwest Forest Plan – society finds itself once again engaged in a process of balancing concerns about a single species with concerns about entire ecosystems and the communities that depend on them.

Introduction

An active management program is needed on federal lands in the Pacific Northwest to restore ecological values and contribute to sustainable local communities. We believe that there is broad societal support for such a program. New policies are needed that focus on:

- Restoring more functional and sustainable ecological conditions in federal forests;
- Conserving old-growth forests and trees;
- Recovering threatened species, such as the NSO;
- Sustaining local communities; and.
- Maintaining a highly skilled workforce and milling infrastructure needed for restoration activities.

We propose to assist the Department of Interior in applying the restoration strategy described in Johnson and Franklin (2009) to landscapes managed by the Bureau of Land Management in southwest Oregon. This work has two purposes:

1) To provide a landscape demonstration of an approach that integrates ecosystem restoration and conservation of NSO habitat. We believe that this demonstration will provide useful concepts and strategies for upcoming planning for the O&C lands.

2) To provide examples of ecosystem restoration approaches that can be tracked over time to enrich our understanding of the short-term and long-term implications of implementing such an approach.

Thus, we believe the pilots can serve two purposes: 1) enable us to think through useful approaches for the long-term plan for BLM lands that will be developed in the next few years; 2) serve as a continuing source of information to help modify management strategies in the future.

Elements of a Restoration Strategy
Focusing on Ecosystem Restoration

The focus of the proposed program is restoring forest ecosystems to more functional and sustainable conditions in contrast to management programs that focus on singular objectives, such as fuel treatment, fire suppression, wood production, or provision of habitat for NSOs. Programs that seek to optimize singular goals invariably marginalize other aspects of ecosystem composition, structure, and function – aspects important to stakeholders and to the long-term sustainability and functionality of these ecosystems.

Forest restoration has many facets. While we concentrate on the conifer forests of the Northwest, we recognize the importance of the forest to watershed restoration and functioning of riparian and aquatic systems. Further, we recognize that there are tensions among the elements of a comprehensive restoration program on the federal forests, such as between providing suitable habitat in Dry Forest landscapes for NSOs (e.g., denser forests) and the significant risk of losing such habitat to stand-replacement wildfires or insect outbreaks**.**

Restoration activities will yield a variety of outputs, outcomes, and effects. Developing credible estimates of them will be an important part of the analysis.

Necessity to Recognize Moist and Dry Forests

Division of federal forests into Moist and Dry is the initial step in the development of our proposed forest restoration strategy. Plant associations provide the basis for assigning sites into these categories; these plant associations reflect their contrasting composition, growth conditions, and historic disturbance regimes. We recognize that there is a broad gradient in fire behavior in Pacific Northwest forests considering variability both in site and landscape conditions. "Dry Forests" often grow on sites that have predominantly low- and mixed-severity fire regimes while "Moist Forests" often grow on sites that have fire regimes that include high-severity fire behavior. We included plant associations often subject to mixed-severity disturbance regimes (such as moist Grand Fir and moist White Fir plant associations) in the Dry Forest category because they are expected to shift toward more frequent and severe wildfires on these sites with climate change. While shifts will occur in plant associations with climate change, we expect that they will continue to be valuable ecological reference points. Identification of plant associations at the project level is done by on-the-ground evaluation and not from maps.

Dry Forests are defined here as forests that belong to the Oregon White Oak, Ponderosa Pine, Jeffrey Pine, Douglas-Fir, and dry White Fir and Grand Fir plant series as have been described and defined by plant ecologists. Dry Forest landscapes are dominated by one or more of these plant series. In southwest Oregon, they are concentrated in the interior valleys between Roseburg and Medford. Moist Forests are defined as Western Hemlock, Tanoak, Red Fir, Mountain Hemlock, and moist White Fir and Grand Fir plant series.

Characteristics of Moist and Dry Forests

Moist Forest ecosystems evolved with infrequent but severe, stand-replacement disturbance events, such as intense wildfires and windstorms. The composition and structure of intact existing older forests in Moist Forests have not been significantly affected by human activities. Generally, silvicultural treatments are not needed to maintain existing older forests on Moist Forest sites and can actually contribute to degradation of such forests. Silviculture can, however, be used on Moist Forest sites to accelerate development of ecological diversity in plantations and other young stands. Silviculture – in the form of variable retention regeneration harvesting – can also be used on Moist Forest sites to create early successional communities.

Dry Forest ecosystems have evolved primarily with low- and mixed-severity disturbances, including wildfire and localized insect outbreaks. On Dry Forest sites, the composition and structure of existing old-growth forests typically have been significantly altered by modern human activities, resulting in increases in stand density and compositional shifts toward less fire- and drought-tolerant tree species. Due to fire exclusion, the ecological processes that

create openings allowing the development and retention of large fire resilient trees are no longer present. Dense forests with extremely slow tree growth will likely be delayed in developing into structurally complex older forest. In addition, the abundance of dense forest has led to a significant reduction in the amount and diversity of hardwoods, shrubs and herbaceous species. Active management of older forests on Dry Forest sites is often needed to reduce the potential for uncharacteristic and ecologically damaging wildfire and insect outbreaks. Many – but not all -- of these forests that require restoration have existing populations of older trees.

Utilizing Ecological Forestry to Guide Actions

We base our silvicultural proposals on an approach known as "ecological forestry" (Seymour and Hunter 1999, Franklin, Mitchell and Palik 2007, North and Keeton 2008, Bunnell and Dunsworth 2009). Ecological forestry utilizes principles of natural forest stand development, including the role of natural disturbances in the initiation, development, and maintenance of forest stands and landscapes, and operates on temporal scales consistent with recovery of desired structures and processes. Key elements of this approach include:

Planning management activities at landscape scales so as to insure that the appropriate mix of conditions are present. The planning incorporates knowledge developed from the study of pattern and ecological function in natural landscapes, and gives special consideration to landscape components that have special ecological roles, such as essentially all aquatic and semi-aquatic features and specialized habitats (Lindenmayer and Franklin 2002);

Restoring spatial heterogeneity at multiple spatial scales, including forest stands. Non-uniform or heterogeneous distribution of forest structural elements, such as trees, snags, and canopy density is characteristic of older forest stands and landscapes on both Moist and Dry Forest sites; and

As noted above, on Moist Forest sites subject to regeneration harvests, retaining significant structural elements (biological legacies) from the harvested stand and recognizing and nurturing the diverse early successional communities that follow harvest.

According to Seymour and Hunter (1999), a ". . . central axiom of ecological forestry is that the manipulation of a forest ecosystem should work within the limits established by natural disturbance patterns prior to extensive human alteration of the landscape."

Conserving Older Stands and Trees

Conservation of older stands and trees anchors our proposed restoration strategy because of their ecological and cultural significance. Such forests and trees are currently present at levels far below historical levels, despite their importance for many biota and ecological processes. Societal interest in retaining older forests and trees is obvious based upon the continual legal battles over these stands and trees. These legal battles have preoccupied stakeholders and

managers, perpetuating distrust and diverting attention from restoration activities on which there is significant social consensus (Thomas, et al. 2007, Spies and Duncan 2009).

On Moist Forest sites, our restoration strategy provides for *retention of older stands.* In calculating potential timber harvests we analyzed consequences of using three different ages proposed and discussed by stakeholders to define "older stands": 80 years, 120 years and 160 years. This range goes from including essentially all mature and old growth forests (at threshold age 80 years) to including most mature and all old growth forests (at threshold age 120) to including the most structurally advanced mature and all of the old growth forests (at threshold age 160 years). We have also applied the same any age threshold to individual or small clusters of older trees (greater than 80, 120, or 160 years of age) that occur within younger stands.

On Dry Forest sites, we focus on *retention of older trees*, defining them as trees greater than 150 years of age. We recognize that many forests can be found on Dry Forest sites that include significant numbers of old trees; however, conserving the older trees will typically require active management of the stands to reduce the risk that these trees will be subject to intense wildfire or competition, the latter ultimately resulting in accelerated loss of these trees to insect attack. The 150-year age was chosen because: 1) trees in Dry Forests begin to exhibit characteristics of old trees at these ages; and 2) fire exclusion--through suppression of natural and aboriginal fires and introduction of large herds of domestic livestock into these forests began about 150 years ago. We realize that this is a societal decision but find 150 years a good point of demarcation for our work.

Concern has often expressed about our ability to identify these "older stands" and "older trees." While we have been successful this year in identifying older ponderosa pine and older Douglas-fir using the keys of Van Pelt (2007), additional calibration and review will undoubtedly be needed during implementation.

Integrating the Restoration Strategy within Spotted Owl Recovery Planning

The recent release by the US Fish and Wildlife Service (USFWS) of a draft recovery plan for the Northern Spotted Owl (NSO) has re-established a major focus on the owl and its habitat as a key element of restoration activities creating both opportunities and difficulties. The draft recovery plan does not identify a habitat conservation (reserve) system or critical habitat for the NSO; rather the USFWS is intending to identify critical habitat following additional model development and utilization. Much creative work has been and is continuing as USFWS develops new methods for assessing NSO habitat quality across the landscape. In the interim between the adoption of the plan and definition of critical habitat, the USFWS has advised that all high-quality NSO habitat and occupied habitat should be maintained.

Consequently, there is great uncertainty about activities that can be undertaken during the interim. The uncertainty created by the draft NSO recovery plan affects what might potentially be accomplished as a part of any pilot projects given the abundance of owls in the Roseburg and Medford Districts, as will be noted below. In the Medford District where O&C forestlands

are contiguous there may be some good opportunities for BLM and USFWS to collaborate in developing integrated approaches to restoration and protection of NSO habitat, using some of the new owl habitat assessment tools. On other hand, in the Roseburg District, much of the Dry Forest is in alternate sections of a checkerboard ownership pattern. Since the federal sections provide essentially all secure NSO habitat in these landscapes, implementing restoration activities that alter NSO habitat in the short term may be difficult. *In our judgment the fact that many of these sections are designated as Matrix under the NWFP, the designated source of regularly scheduled timber harvest, has little relevance under the interim guidance of the draft NSO recovery plan.*

We propose to work with BLM and USFWS to develop the pilot projects. The landscape and stand models developed by USFWS as part of the recovery plan and critical habitat identification can be merged with information of the BLM to help explore how possible restoration strategies can be integrated with improving and sustaining critical habitat for NSO. The insights learned here could assist in shaping the role for active management and ecological restoration that has been recognized in the NSO Recovery Plan. Pursuing a restoration strategy, such as we have proposed, independently of the NSO recovery plan could lead to serious conflict. Thus, there is reciprocal importance in integrating principles of ecological restoration and NSO habitat conservation.

Restoration of Riparian and Aquatic Ecosystems

While we have focused primarily on terrestrial elements of the federal forest estate, equal attention needs to be given to restoration of the aquatic and semi-aquatic ecosystems. This will come about partially in the context of restoring forested riparian habitats such as thinning to increase structural diversity and accelerating the development of large trees. Also major attention needs to be given to components of aquatic networks that are significant habitat for biological diversity, such as hardwood/meadow complexes. Modification of existing road systems as they interact with the stream networks is also critical.

Our guide here is the Aquatic Conservation Strategy (ACS) for the Northwest Forest Plan--- a comprehensive conservation and restoration strategy for aquatic systems with four components: riparian reserves, key watersheds, watershed analysis, and watershed restoration (Reeves, et al. 2006). Our proposals will conform to its goals and requirements while using the latest information and modeling processes available. The forest restoration strategy suggested here does intersect with and compliment the ACS. It intersects the ACS in that some of the restoration thinning occurs within riparian reserves and the watershed analysis helps direct and limit activities. It complements the ACS in being a comprehensive restoration strategy for terrestrial systems.

The Pilot Areas and Their Characteristics

We have been asked to apply the restoration strategy to two landscapes: 1) Middle Applegate Watershed, which occurs as two largely contiguous blocks of Dry Forest on either side of the

Applegate River (Medford District); and 2) Myrtle Creek Watershed (Roseburg District) which has Dry Forest in the classic checkerboard pattern in the lower watershed and a large contiguous area of Moist Forest in the upper watershed. We have spent a few days in each proposed pilot area and our observations come from that effort.

The Medford Pilot area is generally under the "Adaptive Management Area" allocation of the Northwest Forest Plan, where innovative management strategies were to be tested, while the Roseburg Pilot area is generally under the "Matrix" or "Connectivity" allocations. These three allocations were expected to produce a regularly scheduled timber harvest under the NWFP, excepting the Riparian Reserves on streams that run through areas.

An Ecosystem Restoration Strategy for the Medford District Pilot

The Medford District pilot in the Middle Applegate Watershed contains mostly Dry Forest by our definition. Our approach calls for:

- An active management program to restore more ecologically desirable and sustainable conditions in forests and landscapes. Existing Dry Forest landscapes in the Middle Applegate Watershed are characterized by dense maturing forests with relatively simple structure and low tree species diversity; landscape heterogeneity is low and critical Northern Spotted Owl habitat is at significant risk. Functionality, diversity, and sustainability of these forests and landscapes can be improved with management that structurally and compositionally enriches these forests and reduces their vulnerability to wildfire, insects, and other disturbances. Ecosystem restoration -- planned and implemented at the landscape scale -- is needed rather than actions focused primarily upon fire or any other singular objective.

- Landscape-level planning to insure that desirable and sustainable mixtures of forest and non-forest conditions are maintained on the landscape. These efforts can guide restoration of landscapes to desired and heterogeneous conditions, from their current largely homogeneous and high risk state. The desired condition includes retention of denser forest patches needed to provide critical habitat for many organisms, such as the NSO and some of its prey species; these dense, multi-layer patches are best maintained by embedding them in a forest matrix that resists, rather than facilitates, the spread of insect epidemics and stand-replacement wildfire.

- Stand-level ecological restoration including:

  1) Retention of older (>150-year-old) trees and other ecologically important features, such as large hardwood trees, and eliminating competing younger trees and ground and ladder fuels from their vicinity;
  2) Provision of "skips" where no thinning is done so as to protect important features (e.g., riparian habitats) and provide hiding cover and

heavily shaded habitat niches;
3) Thinning the remaining stand to a) reduce overall stand densities to a more sustainable level (based upon the plant association), b) shift stand composition toward greater diversity, including a greater proportion of more fire- and drought-tolerant species, and c) increase average stand diameter; and
4) Creating "gaps" of small to moderate size (e.g., ¼ to 2 acres) to provide opportunities for regeneration of sun-loving trees, such as ponderosa pine and Jeffrey pine.

An Ecosystem Restoration Strategy for the Roseburg District Pilot

The Roseburg BLM has proposed the Myrtle Creek Watershed as the pilot area for this effort. The upper reaches of the watershed contain Moist Forest in largely contiguous BLM ownership. A Late-Successional Reserve sits just south of the watershed.

While the general approach to forest restoration in the Dry Forests of the lower Myrtle Creek Watershed would presumably be similar to that described above for the Dry Forests of the Applegate, the situation here is complicated by its occurrence in an ownership checkerboard, with the BLM owning a relatively small portion of the lower watershed. Sections of federal land are often mixtures of mature and immature forest surrounded by privately owned sections.

Many privately owned sections are intensely managed for wood production by the forest industry, make minimal contributions to owl habitat, and have significant potential impacts on conditions and fire risk on the federal lands. Restoration activities on these federal lands have to recognize their important role as providers of terrestrial and aquatic habitat values in these landscapes. Here, especially, the uncertainties surrounding the recovery strategy for the Northern Spotted Owl make near-term activities difficult. The checkerboard Dry Forests of lower Myrtle Creek represent the greatest learning challenge of the proposed pilot projects.

Our approach for the Moist Forests in the upper Myrtle Watershed calls for:

- Reserving existing older forests and individual old trees found in younger stands using a threshold age;
- Continued ecologically-based thinning and other activities in plantations to accelerate the development of compositional and structural diversity. Variable density thinning is expected to be one of the most important tools along with creation of coarse woody debris and wildlife habitat features.
- Initiating regeneration harvests in plantations and other younger forest stands utilizing variable retention silvicultural prescriptions to provide for structurally, functionally, and compositionally diverse early successional communities on forested habitats. The early successional communities, which exist between a stand-replacement disturbance and re-establishment of closed forest canopies, are important for plant

and animal early successional habitat specialists. Such communities cannot be fully developed as small openings in existing forests or the larger openings provided by clearcutting and intensive reforestation practices.

Elements of a silvicultural prescription for regeneration harvests in Moist Forests to provide diverse early successional habitat and regeneration of shade-intolerant tree species:

- Retention of significant "biological legacies" (structural and compositional) from the harvested stand for incorporation into the post-harvest stand, e.g.:
    - Old-growth trees and other trees of interest (e.g., hardwoods);
    - Snags and downed wood;
    - Representative patches of the harvested forest -- thereby providing areas with undisturbed understories and forest floors;
    - Examples of other distinctive conditions, such as hardwood groves, or physical conditions, such as seeps or rock outcrops.
    - Retention should include scattered individual structural features as well as habitat islands or patches – i.e., both ***dispersed*** and ***aggregated*** retention;
- The target level of retention would approximate that used in the demonstration (20% of the harvest area as aggregated retention and 10% of the remaining trees as dispersed retention for a total of ~ 30% retention);
- Regeneration of trees will be primarily by natural regeneration.

An Adaptive Management Approach

"Trust, but verify." President Ronald Reagan

All proposed strategies for management of the O&C Forests, whether forest restoration or Spotted Owl recovery, contain hypotheses that need testing. Also, across public agencies, we sense that confidence and trust in forest managers is not high among some members of the public. We have experienced it ourselves.

Given the uncertainties that we face in forest restoration, keeping track of the state of the forests and the effects of actions is a first principle of forest management. Monitoring is necessary but not sufficient; people are increasingly skeptical of agencies keeping score on the effectiveness of their own actions.

Consequently, to learn quickly whether restoration actions need modification and to gain the trust needed for management discretion, we recommend paneling an independent review team to (1) assess whether the projects undertaken reflect the goals stated for them and (2) assess the results of the monitoring program, which would be undertaken to determine whether the management program is moving the forests and landscapes toward stated restoration goals.

We view third-party review as essential to gain and retain broad public acceptance. We need mechanisms that provide trusted evaluations of the linkage between actions and goals along with the ability to suggest change as needed. Creation of third-party oversight as a regular part of forest restoration would go a long way toward this goal.

Our Participation in the Pilot Effort

We envision four parts to our participation in the pilot effort in addition to helping plan and participating in the Secretary of Interior's meeting on December 8, 2010:

1) Assist in evaluating proposed pilot areas that will provide a landscape-level demonstration of ecological restoration in southwest Oregon within the context of NSO recovery and other relevant issues. At least one of these areas should also provide the opportunity to explore activities in Moist Forest;
2) Assist in the landscape design of restoration treatments to apply to the pilot areas, working cooperatively to develop criteria for determining which stands to treat and which to leave untreated, including considerations related to NSOs; and using the criteria to help develop alternative landscape designs for treated and untreated stands within each pilot landscape;
3) Assist in identifying high priority stands for restoration treatments in each pilot area in the context of the landscape designs, suggesting marking guidelines for representative plant associations and stand structures, including trees for retention and removal, and describing the effects of treatments; and
4) Assist in developing an adaptive management plan for the pilot areas, including monitoring parameters and a review process for determining the success of treatments.

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Appendix 3: Goals of the America's Great Outdoors Initiative

The objectives of the Initiative are:

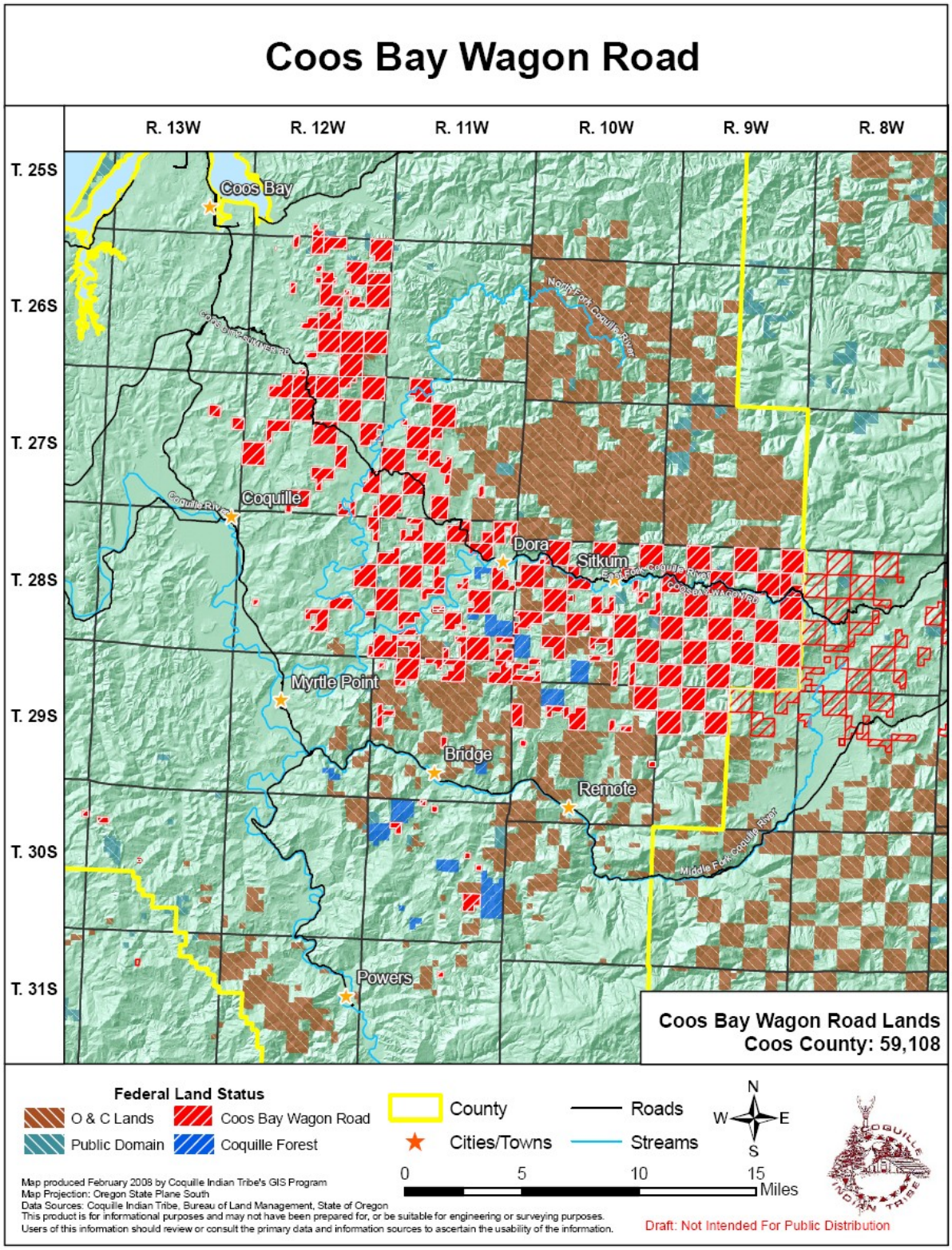
a. Reconnecting Americans, especially children, to America's rivers and waterways, landscapes of national significance and forests, by exploring a variety of efforts, including: (1) promoting community-based recreation and conservation, including local parks, greenways, beaches, and waterways (2) advancing job and volunteer opportunities related to conservation and outdoor recreation; and (C) supporting existing programs and projects that educate and engage Americans in our history, culture, and natural bounty.

b. Building upon State, local, private, and tribal priorities for the conservation of land, water, wildlife, historic, and cultural resources, creating corridors and connectivity across these outdoor spaces, and for enhancing neighborhood parks; and determine how the Federal Government can best advance those priorities through public private partnerships and locally supported conservation strategies.

c. Use science-based management practices to restore and protect our lands and waters for future generations.

Appendix 4: CBWRP Implementation Strategy and Maps

The Tribe in cooperation with the BLM and members of the CBWRP Technical Team will develop an implementation strategy that will guide the development and eventual implementation of the pilot.


Coos Bay Wagon Road
R. 13W
R. 12W
R. 11W
R. 10W
R. 9W
R. 8W
T. 25S
T. 26S
T. 27S
T. 28S
T. 29S
T. 30S
T. 31S
Coos Bay
Coquille
Dora
Sitkum
Myrtle Point
Bridge
Remote
Powers
Coos Bay Wagon Road Lands
Coos County: 59,108
Federal Land Status
O & C Lands
Coos Bay Wagon Road
Public Domain
Coquille Forest
County
Cities/Towns
Roads
Streams
N
W
E
S
0
5
10
15
Miles
Map produced February 2008 by Coquille Indian Tribe's GIS Program
Map Projection: Oregon State Plane South
Data Sources: Coquille Indian Tribe, Bureau of Land Management, State of Oregon
This product is for informational purposes and may not have been prepared for, or be suitable for engineering or surveying purposes.
Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.
Draft: Not Intended For Public Distribution

Appendix 5: CBWRP Legislative Strategy

Appendix 5

Proposal for Coquille Tribal / Coos County Coos Bay Wagon Road Lands Legislation

The Tribe has proposed a long-term legislative strategy that could address the goals of the pilot and the funding crisis of the county. Whereas the implementation of the CBWRP pilot should be implemented administratively, some of the local funding solutions described below will require legislative action.

a. **Establishment.** Enact legislation establishing a Coos County and Coquille Indian Tribe Cooperative Management Area (the "Cooperative Management Area") as provided below.

b. **Goals of the Cooperative Management Area:**

- Promote the goals of the America's Great Outdoors Initiative
- Test new silvicultural approaches to regeneration and intermediate harvests on a landscape scale
- Test new riparian management approaches that demonstrate management aimed at sustaining the long-term productivity of dynamic aquatic ecosystems.
- Demonstrate nature-based adaptive strategies for climate change mitigation and to provide ecosystem services
- Aid carbon sequestration through longer rotations
- Support green energy production
- Increase community self-sufficiency, including county government funding.
- Restore forest ecosystems and watershed health
- Achieve of tribal cultural restoration goals
- Demonstrate economical and socially sustainable timber production

c. **Management.** Management will rely on strong adaptation strategies based on science and nature. Management will aid carbon sequestration through longer rotations. Longer rotations will also increase the yield of high value wood products and ultimately will provide more old forest habitat, better distributed across the landscape, as well as producing newly regenerated stands that are intended to get old. Unless otherwise provided in this legislation, the Cooperative Management Area will integrate adaptive strategies consistent with applicable plans for federal forestlands.

d. **Green Energy Production.** A portion of the forest products harvested from the Cooperative Management Area will be devoted to support bio-fuels and/or bio-energy development or otherwise to help fulfill Federal and state renewable energy standards.

e. **Community Self Sufficiency.** The proposal would catalyze the development of green,

natural resource based jobs in the area. All forest production receipts or other payments derived from a full suite of ecosystem services will be distributed equally between the Tribe and Coos County. Tribal revenue shall be used to pay for forestry management, watershed restoration, renewable energy development, salmon recovery and to fund the operation of Coquille Tribal government programs. Notwithstanding any other provision of law, payments to Coos County may be used for general government purposes.

f. **Designated Lands -** Lands designated as the Cooperative Management Area are the Coos Bay Wagon Road (CBWR) Lands located in Coos County in the State of Oregon. These CBWR lands comprise approximately 59,000 acres of forest lands depicted on the attached maps and currently managed by the Bureau of Land Management.

g. **Scientific Advisory Team.** The expertise of a Scientific Advisory Team (SAT) will be utilized in the development and implementation of management direction and prescriptions for the Cooperative Management Area and to monitor outcomes of management actions. The SAT will be comprised of prominent forest scientists knowledgeable about conditions and issues relating to management of Northwest forests and global climate change.

h. **Environmental Compliance**

- The planning, development and implementation of resource management projects/actions will be subject to applicable Federal environmental laws.

- To the extent practicable, all proposed resource management projects/actions for a 10-year management period may be described and analyzed in a single landscape management document. Applicable environmental law compliance will be for the combined projects/actions contained in a landscape management document.

i. **Review Every Ten Years.** Ten years after execution of a Cooperative Management Agreement described below, the Secretary of the Interior, after consulting with the Tribe, shall contract with a non-Federal entity knowledgeable in forest management practices on Federal, Indian and private lands to conduct an independent assessment analyzing
   - Achievement of timber production and forest revenue goals,
   - Forest health and total site productivity levels,
   - Satisfaction of legal mandates applicable to the lands,
   - Overall enhancement to the lands, and
   - Achievement of cultural restoration objectives

Assessment information will be used in an adaptive management process to implement appropriate changes in management direction and prescriptions which will result in improved achievement of desired management outcomes. The pilot will continue for a minimum of 20 years to ensure adequate security for renewable energy investment.

The CBWR lands must not be transferred to the Tribe without Coos County's consent. The CBWR lands must not be transferred to Coos County without the Tribe's consent.

j. **USFS / Bureau of Land Management Annual Sale Quantity (ASQ).** To the extent practicable, forest production from the Cooperative Management Area may count toward federal agency ASQ targets.

k. **Forest Health.** The Cooperative Management Area will be managed to support Tribal Government and Federal Forest Health Goals.

l. **Cooperative Management Agreements.** The Coquille Indian Tribe and the Secretary of the Interior, acting through the Director, Bureau of Indian Affairs and Director, Bureau of Land Management, will enter a Cooperative Management Agreement within two years of enactment of this legislation, to include:

- Development and maintenance of inventory and database information for resources in the Cooperative Management Area.
- A list of proposed resource management projects/actions for a ten year period.
- Provisions for protection and/or enhancement of tribal cultural or historical sites and resources and achievement of other tribal objectives related to management of the Cooperative Management Area.
- Subject to the provisions of Section g, above, retention by the Tribe of timber receipts and other revenue generated from utilization of natural resources with provisions for revenue sharing with Coos County.
- The joint development and approval by the Tribe and the BLM of annual funding agreements describing costs to be shared in planning, developing and performing resource management projects/actions in the Cooperative Management Area;
- Monitoring to ensure that resource management projects /actions are properly implemented and are effective to accomplish desired outcomes.

l. **Forest Production**

- The commercial sale of timber harvested from the Cooperative Management Area must use a competitive bidding process open to the general public.
- Forest product extraction shall be under the supervision of the Secretary of the Interior through the Assistant Secretary of Indian Affairs utilizing the Bureau of Indian Affairs timber administration regulations located at Title 25 CFR parts 2 and 163, except that no forest management deduction shall be required.

- The Tribe must not construct, operate, or have a financial interest in a sawmill or other manufacturing facility for primary processing of timber or wood products harvested within the Cooperative Management Area.

m. Public Involvement and Recourse

- Any affected citizen may sue for violation of this statute

- Interested parties who have submitted NEPA comments to an EA or EIS may pursue mediation and/or non-binding arbitration directly with the Tribe.