

## Potential Solutions – Natural Processes

### Overarching Landscape Issues

#### Issue (Impediment) (Remove Actions)

Large areas of Oregon's forestlands need landscape level restoration efforts to improve conditions and restore landscape resiliency. Scientific assessments of current conditions for forested systems in Oregon consistently yield the same broad conclusions: a century or more of road building, logging, grazing, mining, fire suppression, and water withdrawals, in conjunction with the loss of key species and the introduction of exotic species, have degraded watersheds, modified streamflows and water quality, altered ecosystem processes, and decreased biological diversity.

The problems are most extreme in the dry forest types of eastern Oregon where unprecedented landscape scale forest health problems threaten key ecological components. Hydrologic regimes have been altered and conditions threaten beneficial uses like water quantity and quality. There is an urgent need to address landscape resiliency based upon the best available science and principles of large scale ecosystem dynamics. Even though predicting the climate of the future is difficult, climate change has been and will continue to test the resiliency of federal forestlands.

Federal forestlands are governed and influenced by a host of legal, economic, and administrative frameworks. These frameworks have incorporated principles of large scale disturbance processes into land management while also providing certainty to stakeholders (i.e., numeric water quality standards, fixed reserves, etc.). Federal and state agencies have had a very difficult time working with all stakeholders to build trust and agreement to implement strategic plans that assess conditions, set goals, and prioritize treatments over large areas of the forested landscape. Managers have been unable to fulfill their mandates and restore dynamic natural processes.

#### **Solution -1**

Develop a system of large scale ecoregional assessments to establish strategic goals and prioritize ecosystem restoration treatments across the landscape. Assessments should be collaborative, science-based and provide a framework for ecological, economic and social sustainability.

#### **Actions:**

- Assessment should develop a comprehensive framework to maintain and restore ecosystem processes, identify large-scale treatment opportunities, and prioritize action that provide the greatest gains in increasing landscape resiliency.

- Provide quantifiable and long-term stable, sustainable supply of ecosystem benefits such as water filtration, carbon sequestration, wilderness, wildlife, fish habitat and economic and fiber (i.e., timber, biomass/fuel) from public lands.
- Develop outcome-based (e.g., reduced fire hazard, improved water quality) performance measures to track accomplishments instead of simply numeric measures (acres treated as opposed to quality of work)
- Refine the scope of categorical exclusions to focus on restoration efforts for priority needs.
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***Description (Rationale)***

*The goal is to encourage collaborative, science-based ecosystem restoration of priority forest landscapes that:*

- *Promotes ecological, economic, and social sustainability,*
- *Leverages resources (local, national, and private),*
- *Reduces wildfire management costs by redirecting those funds into restoration,*
- *Minimizes static strategies while providing certainty and building trust*

*The goal is to promote ecological restoration strategies that achieve ecological health, affect wildfire activity and management costs, and legitimately produce forest restoration byproducts to contribute to project costs.*

**Solution -2**

Expand and fund successful research and pilot projects to guide future management strategies. By engaging private and public partners Oregon can expand its knowledge of long-term restorative benefits, hydrologic dynamics and cause & effect relationships among physical and biological parameters.

**Actions:**

Federal land management agencies should:

- Invest in creating and then expanding successful landscape-scale pilot projects that address the scientific uncertainties of dual-purpose management practices.
- Partner with the Watershed Research Cooperative in watershed studies to establish cause and affect relationships among physical and biological parameters.
- Increase cooperate and collaboration with federal, state, tribal and local regulatory agencies in assessing current water quality standards to ensure that the standards reflect knowledge of dynamic ecosystem processes and ensure landscape resiliency
- Integrate innovative forest management approaches that look beyond land uses and ownerships by participating in innovative collaborative processes, developing IMAP methodologies, and integrating OWEB watershed assessment protocols that support the *Oregon Plan for Salmon and Watersheds*.

***Description (Rationale)***

*Landscape variability is broad in Oregon. In the past, managers and policymakers employed an eastside- westside frame as an easy way to define landscapes. In the recent past, knowledge regarding ecosystems has increased resulting in a better understanding of the differences and dynamics of plant associations between regions (i.e., Coast Range; southwestern Oregon; west Cascades; eastside forests; and the expansion of juniper woodlands as a result of fire suppression, grazing and other factors). For example, scientists have identified a need to address the spread of juniper by restoring natural processes (fire) and removing the impediments to healthy aquatic and range landscape conditions.*

## Operational Management and Stewardship Issues

### Issue (Impediment)

Federal forestlands in Oregon are not receiving sufficient levels of active restoration to increase landscape resiliency in the face of increasing climate variability. These forests are at risk of losing key ecological components from uncharacteristic wildfire, forest insect pest and disease epidemics and persistent negative impacts on the hydrologic cycles and watershed functions from the extensive road network and range utilization.

### **Solution – 1**

Develop a system of place-based, collaborative processes to identify action-oriented projects to implement the restoration recommendations from landscape-scale assessments. As much as possible, managers should focus their resources on collaborative processes to coordinate actions among state and local governments and build trust with all stakeholders.

#### **Actions**

- Develop local collaborative processes to:
  - Help design and implement projects,
  - Identify forest types and areas where work is needed;
  - Recommend map-based assessments and sideboards;
  - Prioritize treatments for restoring forest health and protecting key ecological features (i.e., endangered species, older forests, road maintenance/removal, water quality, etc.);
- Expand the use of Oregon Solutions Projects to help fund local collaborative processes.
- Evaluate past work to increase success of high-value projects and prioritize the scientifically accepted solutions to address known harms that are taxing the resiliency of the landscape.
- Increase project size (e.g., 100,000+ acres) and duration (10-20 year) to reduce overall planning costs.
- Efforts should be directed to meet the goals of the “Oregon Plan for Salmon and Watersheds” and support the continued implementation of basin and watershed-scale assessments.
- Use local contracting authorities to create a broad suite of restoration “jobs in the woods” to address forest and hydrologic health in the face of increasing climate variability.
- Congress should create a restoration budget line item for agencies to provide long-term funding for the most effective solutions.

#### ***Description (Rationale)***

*Projects through a collaborative such as Oregon Solutions are excellent tools for bringing competing interests to work together. Addressing issues by prioritizing those areas with known ecological risks and the best known and most effective solutions in advance of others should be a start. For example, the efficacy of thinning*

*treatments should be evaluated and compared to other opportunities to increase resiliency. Increasing temperature fluctuations or severe insect outbreaks could lead to greater than historic levels of tree mortality that could fundamentally alter a forest ecosystem and make the forest more susceptible to loss of ecosystem components from large wildfires.*

### **Solution -2**

Identify and implement alternative dispute resolution strategies and focus the work on areas of broadest agreement to build trust and reduce issues that may lead to conflict and litigation.

#### **Actions:**

Federal agencies should:

- consider “avoidance and alternative” dispute resolution strategies agencies to minimize conflict. Avoidance strategies could include greater use of Options Forestry, a method that expands the range of management options and actions. (For example: The Siuslaw National Forest’s Five Rivers Project provided multiple strategies, proposed by different constituent groups to address controversial EIS).
- Include an upfront assessment of scientific uncertainties in their analysis and consider a range of management options designed to reach the same goal.
- Structure monitoring in a rigorous statistical design to test the effectiveness of each option in meeting project goals.

#### **Description (Rationale)**

*Projects that incorporate principles of large ecosystem scale dynamics are difficult to implement because of legal, economic, and administrative frameworks that provide for short-term certainty at the expense of long-term or large scale improvements. Disagreements often lead to conflict and litigation.*

### **Solution - 3**

Clearly define the interface of public/private land ownerships to develop and implement “good” neighbor policies and incentives for effective, efficient landscape-scale management and stewardship.

#### **Actions**

- Public land management should identify, implement and model policies that encourage private land-owners to apply state fire safety policies, especially in rural residential areas.
- Assess and enhance management strategies that prohibit or reduce non-native plants, insects and disease.
- Provide action-oriented projects to increase the effectiveness of the recommendations and reduce overall planning costs.

#### **Description (Rationale)**

*Management practices could lead to unintended consequences. For example, the creation of a road (temporary or not) could contribute to the spread of non-native plants, disease, and insects. Planning should recognize the risks.*

### **Operational/Stewardship Issues**

#### **Issue (Impediment): Road Systems**

Funding, incentives and structural support are not adequate to prepare and execute a strategic effort to comprehensively address the negative environmental impacts from the extensive transportation system and rangeland uses on federal forests. The legacy road network, including a lack of culverts, stream crossings and associated development, are aging and in need of attention. Oregon's aquatic systems are fragmented and not in a condition that can support healthy populations of inland and anadromous fish at levels close to their historic range. Local, State and Tribal governments are not being leveraged as much as they could be to help undertake the needed efforts, nor is there sufficient investment and incentives being providing to drive a restoration industry that can address these critical issues in an efficient and timely manner.

#### **Solution -1**

Fund a permanent, all-weather road system for needed uses.

#### **Actions**

- Reduce the overall road network by limiting the construction of temporary or permanent new roads, while decommissioning and removing legacy roads (i.e. mid-slope roads) identified by Forest Service and BLM planning efforts.
- Invest in improved fish passage and stream crossings to eliminate and minimize negative hydrologic effects of above ground travel.
- Urge investments and incentives in the forest road network. These investments and incentives should be based on strategic assessments of the systems followed by restoration efforts to improve fish passage and stream crossings, curtailment of practices that slow or retard the attainment of riparian recovery and action to improve road location and reduce road density issues in watersheds.
- Federal agencies should consider incentives, structural adjustments and receipts from resource products for road maintenance and abandonment. Include in budgets (i.e., fire suppression, recreation and other non-timber projects) resources to support maintenance of key road systems.
- Fees charged on road use should be directed locally for maintenance.
- Federal agencies should be directed to work with state, local and tribal governments to address the legacy road system through contracting with these local staff to accomplish the priority objectives.

#### ***Description (Rationale)***

*Investments and incentives are must be made in the forest road network and hydrologic condition on the forest. Congressionally directed restoration efforts should direct strategic assessment of the road system to improve fish passage and stream crossings, road location and density issues in the overall watershed. Incentives, structural adjustments and receipts from goods are needed for road maintenance and abandonment.*

*Additional funding is needed to complete and go beyond work started under the 2005 Travel Management rules. There is a need for investments and incentives for: 1) a key road system that is permanent and all weather to serve all needs, 2) targeting the removal of the legacy road system that results in an overall decrease in the density of the system and the impacts of both the use and ongoing effects of the roads on the ecosystem.*

*The overall density of roads and the creation of roads in higher-elevations and steep slopes are strongly discouraged. Temporary roads are not temporary if just their use is temporary, but only if they are temporary as to their effects. Moreover, active management and restoration investments are needed to decommission roads that limit watershed and wildlife health and curtail range practices that are retard or limiting the attainment of aquatic conditions necessary to recover fish and wildlife.*

*Collaboration with State, County and Tribal governments is essential because roads cross jurisdictional boundaries and these governments have systems and crews in place to undertake this work. Restoration efforts must include separate funding and a mandate to assess conditions and planning for a permanent road system that decreases fragmentation in the transport system and removes the effects of legacy roads through permanent rededication to the landscape.*