

The Middle Applegate Pilot Multiparty Monitoring Initiative: Project Overview and Monitoring Framework

Middle Applegate Pilot Background

The Middle Applegate Dry Forest Restoration Pilot Project is a demonstration based on the dry forest restoration principles developed by Drs. Jerry F. Franklin and K. Norman Johnson. In December 2010, Secretary of Interior Ken Salazar designated several landscape-scale pilot projects in southwest Oregon to demonstrate the application of the Franklin and Johnson restoration principles, support regional workforce and milling infrastructure and build public support for the active restoration of federal forests.

The Middle Applegate Pilot emerged from a context of long term community/agency collaboration. It was also consistent with a February 2010 request by the Forest Restoration Collaborative and Applegate Partnership for the Secretary to designate a pilot project in the Middle Applegate (an Adaptive Management Area of the Northwest Forest Plan) focused on expanding integrated forest health treatments to achieve multiple ecological, economic, and social goals.

The Middle Applegate Dry Forest Restoration Project is set within the 80,000-acre Middle Applegate 5th-field watershed, of which approximately 50,000 acres are under federal management. The intent of the project is to implement the Dry Forest Restoration Principles across the entire federal land-base within the watershed. There is no intent to manage or treat every acre, but rather to evaluate proposed restoration management in the context of ecosystem processes at various scales across the watershed.

Because of the enormity of such a task, planning and implementation has been conducted under a phased approach. The first phase focused on a small subset of the Middle Applegate watershed, an approximately 5,000 acre sub-watershed containing Chapman and Keeler creeks. The first phase of the project became recognized as Pilot Joe and generated the Pilot Joe Timber Sale. Implementation began in Fall 2011. The next phase of the project is set in the Thompson Creek sub-watershed and the Environmental Assessment for that phase was released in February 2013.

Multiparty Monitoring Initiative

The Multiparty Monitoring Initiative of the Southern Oregon Forest Restoration Collaborative will generate a community-based framework for project level monitoring of the Middle Applegate Pilot. A June 2011 facilitated public meeting attended by over 40 interested community members invited ideas about how to identify monitoring needs and goals, ensure successful monitoring, and gauge participant interest in involvement in the monitoring process. As an outcome of the meeting, the Forest Restoration Collaborative assembled a diverse team of engaged community and agency members to create and implement a monitoring plan to assess on-the-ground progress toward Pilot Project goals.

Members of the Pilot Joe Multiparty Monitoring Team:

Thomas Atzet - Regional Ecologist (retired)
Max Bennett - OSU Extension Forester
Jena DeJulio - BLM Fire and Fuels
Gary Gnauck - Applegate Partnership
Steve Godwin - BLM Wildlife
Stephanie Kelleher - BLM Planner
Aaron Krikava - Applegate Partnership
Jakob Shockey – Applegate Resident
Edward Reilly - BLM (retired)
Mark Shibley - SOU Sociology
Jaime Stephens - Klamath Bird Observatory
Victoria Sturtevant - SOU (retired)
Joseph Vaile - Klamath-Siskiyou Wildlands
Gwyn Myer - Forest Restoration Collaborative; Monitoring Coordinator
George McKinley - Forest Restoration Collaborative
Armand Rebishke – BLM Botanist
Kerry Metlen – TNC Forest Ecologist

In winter 2012 the Forest Restoration Collaborative received support from the Medford District Resource Advisory Committee to convene, facilitate and advance the work of the Middle Applegate Pilot Multiparty Monitoring Team. To date, the team has created provisional objectives and indicators, established pre-implementation field plots, and begun a series of learning conversations to capture lessons learned to facilitate adaptive management for future phases of the Middle Applegate Dry Forest Demonstration planning and implementation.

Why Multiparty Monitoring?

Collaborative approaches to federal land management planning and implementation are recognized as a means to expand public support for active management. The Multiparty Monitoring Initiative will build from existing community/agency relationships to further enhance cooperation and will lay the groundwork for future landscape planning and implementation success.

The Middle Applegate Pilot provides a context for the BLM and USFWS to advance interagency coordination, cooperation and shared understanding on how forest restoration can best maintain and enhance Northern Spotted Owl habitat needs. Multiparty monitoring will assess progress toward that goal.

The Initiative will monitor the economic benefits of integrated forest health treatments (restoration, fuels reduction, habitat needs, product utilization) to assess cost-effectiveness related to federal forest management. Findings will inform future management, identifying cost-effective approaches to expand federal acres treated, consequently increasing job opportunities and supplying increased products to markets.

Multiparty Monitoring can help refine future management to improve the health and resilience of federal forests, reduce the risk of loss due to uncharacteristic fire for forests and communities, and promote the long-term capacity of forests to provide natural resources (wood products, wildlife) and generate ecosystem services benefits (water, recreation). Findings will inform decisions aimed at better helping forests adapt to accumulated stressors, from fire suppression to land use decisions, to the expected impacts of climate change.

Set within the Applegate Adaptive Management Area, the Monitoring Initiative is provided a unique opportunity to demonstrate the role of adaptive management in federal forest landscape-scale planning and implementation.

To date Objectives and Indicators

Pilot Joe Multiparty Monitoring Objectives and Indicators

Objective One: Increase forest ecosystem resistance and resilience

Indicators:

1. Fire Behavior
2. Tree vigor
3. Stand density
4. Composition of tree and understory diversity
5. Mean diameter

Objective Two: Increase spatial heterogeneity to benefit biodiversity and species of concern at the stand and landscape scale

Indicators:

1. Stand level skips and gaps
2. Stand level structural complexity
3. Canopy cover
4. Seral stage composition at the landscape scale
5. Bird species composition
6. Snag and down woody material abundance

Objective Three: Conserve and improve northern spotted owl habitat through LSEA (late seral emphasis area) design

Indicators:

1. Risk of fire to LSEAs
2. Percentage of NRF, dispersal and unsuitable habitat
3. Spotted owl presence and reproduction

Objective Four: Generate jobs and support regional manufacturing infrastructure

Indicators:

1. Jobs created or maintained
2. Board feet and ton weight of material harvested
3. Market utilization by product category

4. Implementation and contracting efficiency

Objective Five: Gain public support for active management in federal forests

Indicators:

1. Public awareness
2. Pilot community outreach and engagement
3. Scoping and Environmental Assessment comments
4. Multiparty monitoring

Current Field Evaluation

The FIREMON (Fire Effects Monitoring and Inventory) system was selected as the key methodology to evaluate forest conditions and ecological trends. Twenty FIREMON plots were installed in the commercial units of Pilot Joe. The FIREMON plots measure all trees on 0.1 acre fixed radius plot. Species, DBH, height, crown ratio, etc. are recorded for all trees greater than 8" DBH. Trees greater than 8" DBH are tagged with numbered aluminum identifiers.

Trees less than 8" will be tallied by DBH size classes, by height classes (seedlings & saplings), and by species. Fuel loading is measured along transects. All species will be recorded by average height and percent cover, including herbaceous & graminoids. General site information such as aspect, plant association, ground cover, and slope are recorded. Plot centers are marked with rebar and the location is noted with GPS coordinates. A minimum of two digital photographs are taken from the plot center looking north and east. Due to last minute changes in unit boundaries, one plot was not treated for harvest.

Spatial heterogeneity is an essential attribute of the prescriptive approach. A spatial monitoring protocol was also developed to assess stand level changes and 18 plots have been established in conjunction with the aforementioned FIREMON plots centers. The spatial monitoring work intends to assess; 1) variation in canopy closure, 2) regularity of tree distribution ("clumpiness factor"), 3) percent of area occupied by canopy openings ("gaps"). The protocol consists of five sample points for each plot with multiple photos of vegetation and canopy characteristics along with an assessment of "clumpiness" at each of the five points.

Photo Points

Objective: Create and implement a protocol to provide a visual record across multiple phases of project implementation and generate a baseline to identify change over time through repeat photography

Photos provide opportunities to assess project implementation and change over time. They can also provide a tool to build public understanding of the dynamic nature of stand response to active management over time. Initial photo points have been established in the spatial heterogeneity plots, non-commercial units, yarder corridors, and commercial units.

Other Related Efforts

In addition to work coordinated by the Multiparty Monitoring Team, there exist several other monitoring efforts in the Middle Applegate area. Oregon State University undertook a large scale study (120 plots) during the summer of 2011 to evaluate historic stand development. Results from this study are expected to be published in 2012.

The USFWS is expected to undertake a minimum three year monitoring effort to assess Northern Spotted Owl presence and absence with an eye toward population dynamics.

The BLM maintains an ongoing landscape vegetation monitoring effort known as CVS.