

Socioeconomic Monitoring Plan for the U.S. Forest Service's Eastside Restoration Efforts

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WINTER 2015



ECOSYSTEM WORKFORCE PROGRAM WORKING PAPER NUMBER 52



UNIVERSITY OF OREGON



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Acknowledgements

We thank the collaborative members and U.S. Forest Service and Oregon Department of Forestry partners who provided input on monitoring questions and metrics and reviewed earlier versions of this monitoring plan. This work was funded, in part, via an agreement with the U.S. Forest Service's State and Private Forestry branch, agreement # 13-DG-11062765-723, and Sustainable Northwest.

Photos: all photos courtesy of Emily Jane Davis

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The U.S. Forest Service's Eastside Restoration initiative intends to increase the “pace and scale” of forest and watershed restoration activities on federal forestlands through more effective environmental planning and agency capacity.¹ It focuses first on the Blue Mountains of eastern Oregon, and will expand to other eastside forest areas in the future. Importantly, it builds on and is closely related to other existing efforts, such as the Oregon Governor's Eastside Forestry strategy, Collaborative Forest Landscape Restoration Program, and the Dry Forest Zone project. We refer to these efforts collectively as “all accelerated restoration investments.”

Socioeconomic outcomes such as job creation, business health, and community development were among the motivations for Eastside Restoration and other accelerated restoration investments. The Ecosystem Workforce Program (University of Oregon), Oregon State University (College of Forestry), and Sustainable Northwest partnered with support from the U.S. Forest Service's State and Private Forestry and the Oregon Department of Forestry

to develop a socioeconomic monitoring program to measure the collective impacts of these accelerated restoration investments.

This monitoring program has the following **over-arching goals**:

- Report the impacts of Eastside Restoration specifically while contributing to the monitoring of all accelerated restoration investments in eastern Oregon national forests;
- Provide objective, robust scientific research that supports innovative management decisions;
- Deliberately produce information that responds to the needs of managers, collaboratives, landowners, local leaders, and others;
- Deliver monitoring findings through succinct narratives and spatial representation to illustrate where outcomes accrue;
- Complement existing performance measures and other monitoring efforts; and,
- Coordinate with other researchers working on similar topics in the region.



Monitoring process

To monitor the effects of the U.S. Forest Service's Eastside Restoration effort, we will develop the following:

1. A ten-year, multi-scaled plan for monitoring the socioeconomic impacts of this sub program (this document is the plan).
2. A baseline assessment and report to analyze current conditions, as well as provide some background trends from the previous five to ten years where possible. Baseline data collection will identify current strengths and needs to inform ongoing implementation of Eastside Restoration.
3. Facilitated dialogues with key stakeholders to share findings and encourage adaptation in partnership with Sustainable Northwest.

In the longer term, we will seek additional resources to implement the monitoring plan through periodic data collection and reporting over a ten-year period. We will emphasize annual learning meetings and provide results to diverse key stakeholders within and beyond the region using diverse media including reports, briefing papers, webinars, and presentations.

Plan development

This monitoring plan was developed through an iterative approach to reviewing existing socioeconomic monitoring documents and consulting with stakeholders. First, we reviewed 12 existing guides on socioeconomic monitoring in a public lands context and compiled the measures and methods from each in a briefing paper.² We also reviewed socioeconomic monitoring plans and reports from other landscape efforts such as the Four Forests Restoration Initiative (4FRI). We disseminated the briefing paper at several forest-level collaborative group meetings as well as at two Blue Mountains Coalition of Collaboratives meetings to facilitate broad understanding of the possible "menu" of socioeconomic monitoring options. The Blue Mountains

Coalition of Collaboratives is composed of stakeholders from each of the five collaborative groups of the Blue Mountains national forests, regional Forest Service representatives, and regional partners.

At the first Coalition of Collaboratives meeting (July 2013), we presented on possible directions for the monitoring strategy and obtained feedback. At the second meeting (February 2014), we presented a draft monitoring plan and obtained detailed feedback on all proposed questions and measures. In May 2014, we refined the draft plan and shared it with the Federal Forests Advisory Committee (FFAC).³ Following feedback from the FFAC, we revised the plan and in May/June 2014, sought additional response from collaborative groups specifically on the collaborative capacity measures and process that they desired. In August 2014, we presented the monitoring plan to Regional Office planners and project partners in U.S. Forest Service Region 6. Additional plan revisions were made based on feedback from that meeting.

What will be monitored?

Eastside Restoration, as described by the U.S. Forest Service's Region 6 Office, spans eastern Washington and Oregon and includes nine national forests (Colville, Okanogan-Wenatchee, Wallowa-Whitman, Umatilla, Malheur, Ochoco, Deschutes, Fremont-Winema; and dry forest parts of the Rogue River-Siskiyou). However, it focuses first on the Blue Mountains of eastern Oregon (Wallowa-Whitman, Umatilla, Malheur, and Ochoco national forests).

For this plan, we only consider the U.S. Forest Service's Oregon Eastside Restoration effort. The initial focus of the U.S. Forest Service Eastside Restoration effort included the work of the dedicated Blues NEPA planning team (Lower Joseph Creek, Strategic Fuel Breaks), Coalition of Collaboratives efforts, and the Malheur National Forest Ten-Year Stewardship Contract.

Our monitoring effort is nested geographically. Monitoring results would be developed for all Eastside Oregon national forests collectively, for the Blue Mountains national forests collectively, and for each individual eastside Oregon national forest. Appendix 1 (page 13) describes how this monitoring project relates to other socioeconomic monitoring efforts that will be occurring concurrently in this same geography.

The Eastside Restoration monitoring strategy has **four thematic emphases and seven questions:**

A. Context and trends

1. What are the socioeconomic conditions and context in the eastern Oregon counties in which Eastside Restoration is occurring?

B. Employment and economic impacts

2. What are the employment effects, in the communities around national forests, from restoration contracting and timber sales?
3. What are the personal income effects, in the communities around national forests, from restoration contracting and timber sales?
4. What is the economic activity resulting, in the communities around national forests, from restoration contracting and timber sales?

C. Business health and impacts

5. What are the effects of Eastside Restoration on restoration contracting business health?
6. How much restoration work and timber sales are local and regional businesses capturing?

D. Collaborative capacity and impacts

7. What is the capacity of collaborative groups to undertake accelerated restoration?

Monitoring questions and measures

Many of the measures in this plan and the data collected will also apply, or be scaled to apply, to monitoring of other accelerated restoration investments (see Appendix 1, page 13). Table 1 (page 7) outlines the monitoring questions and measures; “M” indicates that this measure will also specifically be reported for the Malheur 10-year Stewardship Contract.



Table 1 Monitoring questions and measures

Theme	Question addressed	Measures	Scale reported
A. Context and Trends	1. What are the socioeconomic conditions and context in the eastern Oregon counties in which Eastside Restoration is occurring?	Employment in different sectors	County
		Unemployment rates	County
		Poverty rates	County
		Number of students eligible for free and reduced lunch	County
		School enrollment	County
		Median age	County
B. Employment and economic impacts	2. What are the employment effects, in the communities around national forests, from restoration contracting and timber sales?	Private sector jobs (direct, indirect, induced) associated with: <ul style="list-style-type: none"> ▪ <i>Restoration service contracts and stewardship</i> ▪ <i>Timber sale harvesting and processing wood products</i> 	Forest ^M , Blue Mountains counties, eastern Oregon
	3. What are the personal income effects, in the communities around national forests, from restoration contracting and timber sales?	Private sector labor income (direct, indirect, induced) associated with: <ul style="list-style-type: none"> ▪ <i>Restoration service contracts and stewardship</i> ▪ <i>Timber sale harvesting and processing wood products</i> 	Forest ^M , Blue Mountains counties, eastern Oregon
	4. What is the economic activity resulting, in the communities around national forests, from restoration contracting and timber sales?	Business output (direct, indirect, and induced) associated with: <ul style="list-style-type: none"> ▪ <i>Restoration service contracts and stewardship</i> ▪ <i>Timber sales and processing wood products</i> 	Forest ^M , Blue Mountains counties, eastern Oregon
		Tax revenue associated with: <ul style="list-style-type: none"> ▪ <i>Restoration service contracts and stewardship</i> ▪ <i>Timber sales and processing wood products</i> 	Statewide reporting of tax impacts from eastern Oregon activities
C. Business health and impacts	5. What are the effects of Eastside Restoration on restoration contracting business health?	Businesses reporting good health as indicated by: <ul style="list-style-type: none"> ▪ <i>Workforce maintained or hired</i> 	Malheur National Forest 10-year Stewardship Contract
	6. How much restoration work and timber sales are local and regional businesses capturing?	Percent of service contracts and timber sales captured by businesses local to a Forest annually; total value of contracts and timber sales captured locally annually, and primary types of work captured locally/not captured locally	Forest ^M , eastern Oregon
D. Collaborative capacity	7. What is the capacity of collaborative groups to undertake accelerated restoration?	Collaborative guided self-evaluation rankings for: <ul style="list-style-type: none"> ▪ <i>Spatial scales at which they are working</i> ▪ <i>Timelines at which they are working</i> ▪ <i>Level of ecological/social complexity of projects</i> ▪ <i>Level of trust</i> 	Collaborative group and eastern Oregon

Detailed methods and procedures

A. Context and trends

1. What are the socioeconomic conditions and context in the eastern Oregon counties in which Eastside Restoration is occurring?

Methods: We will track established socioeconomic indicators to ground and lend significance to monitoring findings. Baseline data will be collected for the most recent year available as of November 2014. Annual remeasurements will be completed in November. Importantly, it is likely that changes in these indicators will not easily be attributed to Eastside Restoration, given the different scales at which these all operate.

Data collection: Information related to demographics, education information, and poverty will be drawn from appropriate state agency reports and databases: Oregon DHS County Quick Facts, State of Oregon Employment Department, and Oregon Department of Education School Enrollment Report. Figures will be reported at the county level.

B. Employment and economic impacts

2. What are the employment effects, in the communities around national forests, from restoration contracting and timber sales?
3. What are the personal income effects, in the communities around national forests, from restoration contracting and timber sales?
4. What is the economic activity resulting, in the communities around national forests, from restoration contracting and timber sales?

Methods: The values of restoration service contracts and the volume of timber harvested will be combined with the economic model IMPLAN to estimate the economic effects of those activities on local economies. For baseline reporting, records in this database will be queried for restoration service contracts issued between 2004 and 2013. For timber sales, federal fiscal years 2009 to 2013 will serve as

the baseline. For future monitoring, both datasets will be updated annually with all new contracts and timber sales.

Data collection: Restoration work completed through service contracts will be identified from records contained within the Federal Procurement Data System (FPDS). Restoration-related service contracts will be identified using an existing set of Product Service Codes (PSC) related to restoration. Advertised volume of timber sold to local purchasers will be obtained from U.S. Forest Service Timber Information Management System (TIMS).

Analysis: Economic impact analysis will be completed using IMPLAN. Forest-level analyses will be completed using economic impact areas that represent the counties containing land managed by the national forest under consideration. The Blue Mountains analysis will be completed using a model constructed for all the counties associated with Blue Mountains national forests. Eastside-wide analysis will be complete for an impact area that represents all of eastern Oregon.

The economic effects of harvesting and wood processing associated with timber sales will be estimated following standard Forest Service practices embedded in the U.S. Forest Service Forest Economic Analysis Spreadsheet Tool (FEAST). Direct effects of timber harvest and processing will be estimated using the Keegan Coefficients for Oregon and Washington. The indirect and induced effects of harvesting and processing will be estimated based on the Keegan Coefficients and economic information obtained from IMPLAN.

The economic effects from restoration service contracting for non-timber producing activities will be estimated using custom production functions for restoration work and information on local wage rates for restoration-related work. Service-type restoration work will be cross-walked from PSC to one of five types of restoration work: equipment-intensive, labor-intensive, material-intensive, technical, and professional. The total value of contracts in

each restoration work type will be treated as the change in final demand. Direct effects will be computed based on local wage rates and the assumed amount of final demand change going to wages. Indirect and induced effects will be estimated using custom production functions for each restoration work type developed by University of Oregon Ecosystem Workforce Program and the U.S. Forest Service.

C. Business health and impacts

5. What are the effects of Eastside Restoration on restoration contracting business health?

Methods: We will interview businesses engaged with the Malheur 10-year Stewardship Contract only for the baseline report in October-November 2014. We will identify businesses that have received contracts from the Forest Service for the Malheur 10-year Stewardship contract by using FPDS and publicly-available materials about the stewardship contract. Iron Triangle LLC has the stewardship contract. These businesses would be re-interviewed annually to identify changes from the baseline.

Data collection and analysis: We will interview managers and administrators working for Iron Triangle and subcontractors to assess the effects of the Stewardship Contract on their company's well-being and operations. Interviews will consist of open-ended and close-ended questions. Detailed notes will be taken. For close-ended questions, we will produce simple reports-outs and descriptive statistics. We will analyze the data to identify recurrent and/or relevant themes and findings.

Interview instrument

General business characteristics

1. Primary work type: labor, equipment, material, technical, professional, or other.
2. Approximate proportion of work performed for different customer types (Forest Service, private, Tribes, etc.).
3. Number of employees (high-low range).
4. Approximate percent employees who are local to business's county.

State of forest and watershed restoration in their area and relationship to federal lands

5. Are opportunities for forest and watershed work increasing, decreasing, or staying the same?
6. Are you performing more or less work on federal lands than you were five years ago? (Y/N)
7. Have you interacted with the U.S. Forest Service and/or a collaborative group in any of the following ways (e.g. field tour, collaborative group meeting, contracting officer meeting, hired staff person to work with collaboratives, others)?

Business health

8. Is your business doing better, worse, or about the same as it was five years ago?
9. For each, please indicate if it has increased or decreased: workforce size, profits, diversity of capacities.
10. In what other ways has your business changed over the past five years?

Influence of Eastside Restoration projects

11. Have the Eastside Restoration projects been important to your business's health?
12. How did the contract structure (size, number of tasks, opportunities to subcontract, level of marking) work for you?
13. How did the timing and duration of the contract work for you?
14. Did anything affect your work on these projects that was outside the control of the U.S. Forest Service or your control? (prompt: prices, markets, labor availability; or turn into close-ended)
15. How did having these projects change your business? What was the biggest difference they made for you?
16. Is there anything that you would change about how these projects were administered to make it better for your business, and why?
17. If you had to sum it up, would you say that the U.S. Forest Service has been offering a consistent program of work that is aligned with your business's needs?

6. How much restoration work and timber sales are local and regional businesses capturing?

Methods: We have already created a custom database of FPDS records for restoration service contracts performed on Oregon Eastside National Forests. For baseline reporting, records in this database will be queried for contracts issued between 2004 and 2013. For future monitoring, this database will be updated annually with all new actions.

Data collection and analysis: We will use the FPDS data to count the number of contracts offered by worktype for national forests, the Blue Mountains area, and across the eastern Oregon region. Contracts will be characterized by their amount, contract types, and types of restoration work. We will augment this by gathering stewardship contracting records for each project that falls under Eastside Restoration. These records will be obtained from Washington Office Stewardship personnel. Timber sale records will be obtained from TIMS. Timber sales values will be reported by local and non-local purchasers. Advertised product and species combinations will be summarized and reported by local and non-local purchasers. Baseline analysis will include federal fiscal years 2009 to 2013. Annual reporting will include all subsequent fiscal years and be compared to baseline values.

D. Collaborative capacity

7. What is the capacity of collaborative groups to undertake accelerated restoration?

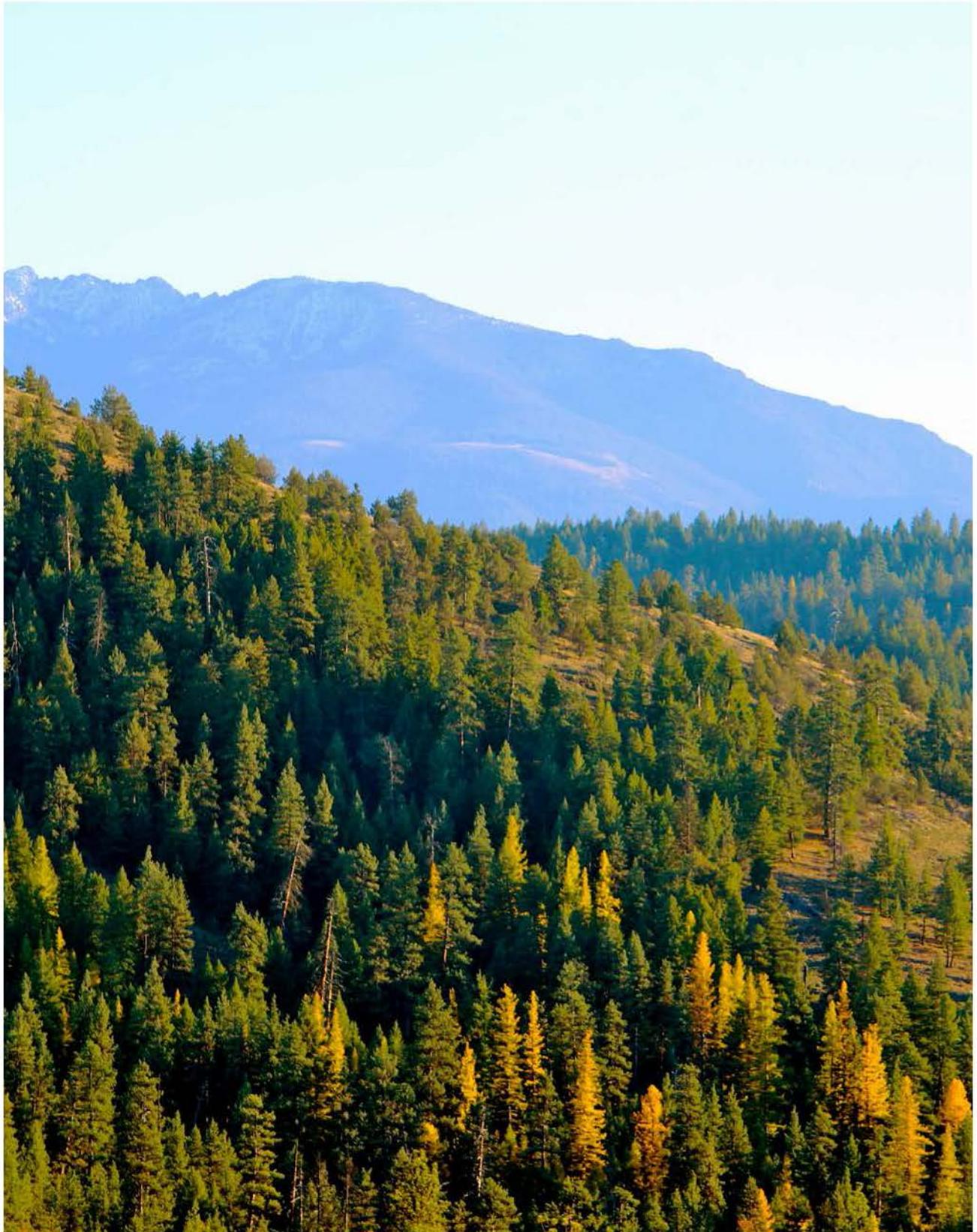
Methods: We will administer a collaborative group self-evaluation exercise by developing a set of capacity indicators so collaboratives can describe their performance, relationships, and work on accelerated restoration projects at the time of the data collection. We will conduct baseline data collection for five focus groups in October-November 2014, one with each collaborative's facilitator and administrative/operations/executive committee. Re-measurement will take place annually.

Data collection and analysis: We will guide the participants through a structured self-evaluation. Each participant will have this chart (see Table 2, page 11) in front of them with several indicators of collaborative group capacity for accelerated restoration. They will be asked to discuss and agree upon all the indicators that best match their current capacity at the time the focus group is held, and explain why they have selected those. We will audio-record the meetings and code transcripts using standard social science procedures for identifying key findings and themes related to each indicator chosen.



Table 2 Self-evaluation instrument

	Working at larger spatial scales	Working on accelerated timelines	Working on more ecologically and/or socially complex issues	Trust and relationships in the context of risk taking
1	We work at smaller spatial scales (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe why and discuss both planning acres and treatment acres.</i>	We are working on slower than typical timelines (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe how much slower and why, and discuss both NEPA planning and any other types of interaction with the Forest Service (pre-NEPA, post-implementation).</i>	We don't work on ecologically and/or socially complex issues right now. <i>Describe why not, and the current "zones of and limits to agreement."</i>	We have limited trust and relationships such that it is hard for us take risks and/or innovate in our processes. <i>Describe why trust is currently limited, and if this is widespread or limited to a few specific members/issues.</i>
2	We work at typical spatial scales (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe why and how, and discuss both planning acres and treatment acres.</i>	We are working on typical timelines (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe why and discuss both NEPA planning and any other types of interaction with the Forest Service (pre-NEPA, post-implementation).</i>	We work on one or only a few ecologically and/or social complex issues right now. Describe them, how you are working on them, and why those, and why not more or different ones. <i>Describe the current "zones of and limits to agreement."</i>	We have some trust and relationships such that we can take some risks (work at larger scales, or on more complex issues), and/or innovate in our processes. <i>Describe where trust is currently limited, and if this is widespread or limited to a few specific members/issues.</i>
3	We work at larger spatial scales than typical for the past and/or for this Forest on some projects (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe why and how, and discuss both planning acres and treatment acres.</i>	We are working on faster than typical timelines for some projects and issues (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe how much faster, why, on which kinds of projects and issues, and discuss both NEPA planning and any other types of interaction with the Forest Service (pre-NEPA, post-implementation).</i>	We work on several ecologically and/or social complex issues right now but are making limited progress. <i>Describe them, how you are working on them, and why those issues; and why you are not making progress. Describe the current "zones of and limits to agreement."</i>	We have a lot of trust and relationships such that we are taking some risks (work at larger scales, or on more complex issues), and/or innovate in our processes—but it has not yet resulted in noticeable changes in what we are trying to get done. <i>Describe why trust is present, and how it manifests for different members and issues; and why it has not yet led to changes.</i>
4	We work at larger spatial scales than typical for the past and/or for this Forest on all projects (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe why and how, and discuss both planning acres and treatment acres.</i>	We are working on faster than typical timelines on all projects and issues (as defined by group and what is typical for the Forest Service on that particular national forest). <i>Describe how much faster, why, and discuss both NEPA planning and any other types of interaction with the Forest Service (pre-NEPA, post-implementation).</i>	We work on several ecologically and/or social complex issues right now and are making noticeable progress. <i>Describe them, how you are working on them, and why those issues. Describe the current "zones of and limits to agreement."</i>	We have a lot of trust and relationships such that we are taking some risks (work at larger scales, or on more complex issues), and/or innovate in our processes—and it is resulting in noticeable changes in what we are getting done. <i>Describe why trust is present, and how it manifests for different members and issues.</i>



Appendix 1

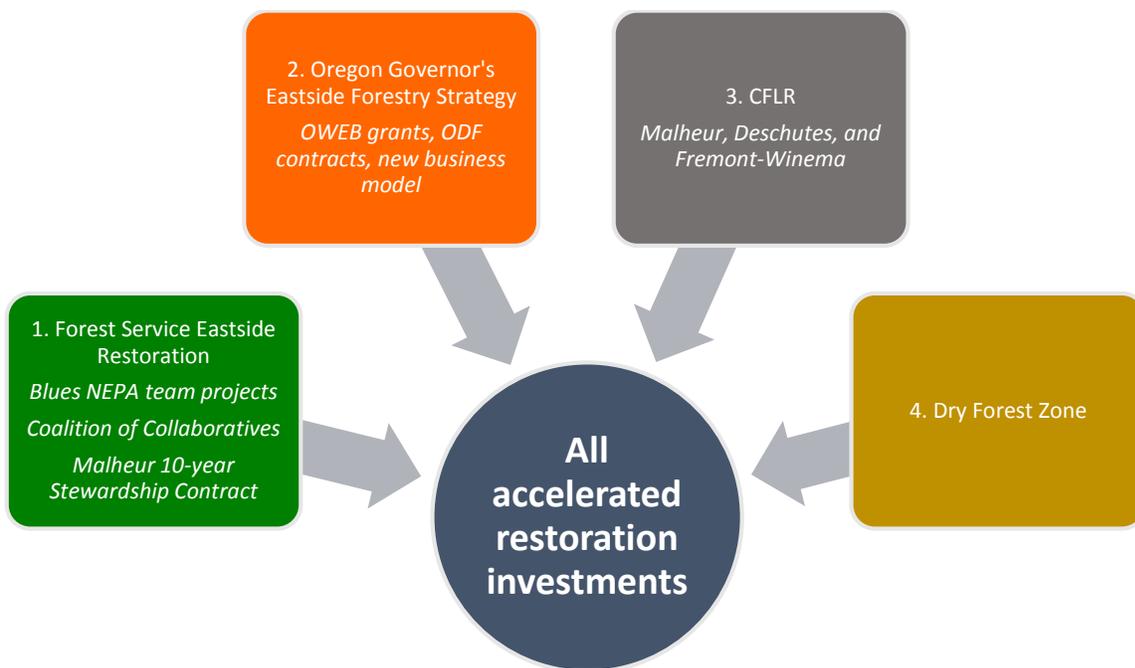
Although the U.S. Forest Service's Eastside Restoration Strategy and the state of Oregon's investments are recent (since 2013), both build on existing, ongoing projects and capacities at multiple scales. Therefore, a socioeconomic monitoring strategy needs to analyze the aggregate impacts of what we refer to as all accelerated restoration investments (see Figure 1, below) as well as attempt to pull out the outcomes of specific initiatives and their contributions to the aggregate impacts, including:

1. Forest Service's regional Eastside Restoration effort, including the dedicated Blues planning team, coalition of collaboratives efforts, and Malheur 10-year stewardship contract.
2. State of Oregon investments in collaborative capacity, regional technical assistance, and a new business model;

3. Collaborative Forest Landscape Restoration Program spending (CFLR; on Malheur, Fremont-Winema, and Deschutes national forests⁴);
4. Dry Forest Zone Program.

This document explains our approach for monitoring the U.S. Forest Service Eastside Oregon restoration effort. Other monitoring efforts will address the other accelerated restoration investments in eastern Oregon using a consistent set of metrics and approaches. This coordinated and nested strategy will allow us to compare the effects of investing through different projects and structural approaches (e.g., formation of a dedicated NEPA team to work across national forests, CFLR projects, etc.), assistance type (e.g., U.S. Forest Service funds, state of Oregon funding, technical assistance to collaborative groups), and implementation mechanisms (e.g., timber sales, large stewardship contracts, agreements with nongovernmental partners).

Figure 1 Components of the accelerated restoration investments in eastern Oregon





Endnotes

- 1 For an overview of the Forest Service Eastside Restoration effort see: <http://www.fs.usda.gov/detail/r6/landmanagement/resourcemanagement/?cid=stelprdb5423597>
- 2 Davis, E.J. and C. Moseley. 2013. Socioeconomic monitoring of public lands management: A compilation of measures. Ecosystem Workforce Program, University of Oregon. Briefing Paper #55. Available at http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/BP_55.pdf
- 3 The FFAC is comprised of representatives of Oregon state boards and commissions, local government, labor interests, forest conservation groups, and forest industry.
- 4 The Ecosystem Workforce Program is under contract to conduct socioeconomic monitoring of CFLR programs for the Malheur (Blue Mountains Forest Partners and Harney County Restoration Collaborative) and Fremont-Winema (Lakeview Stewardship Group) National Forests, and will partner with the Deschutes Forest Collaborative Project to incorporate their data as well.



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