Siuslaw National Forest
Siuslaw Collaborative Watershed Restoration Program Multi-Party Monitoring Report
Fiscal Year 2014

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Cascade Pacific
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FOREST SERVICE US DEPARTMENT OF AGRICULTURE

Executive Summary

This Multiparty Monitoring Report for the Fiscal Year 2014 (FY14) documents and analyzes the effects of the Siuslaw Collaborative Watershed Restoration Program (SCWRP). The SCWRP Program is a forest stewardship cooperative collaboration between the Siuslaw National Forest (SNF), Cascade Pacific Resource Conservation & Development (CPRCD), and other partners.

The following report documents the biophysical accomplishments and economic impacts of:

- Stewardship Timber Sales; and
- Watershed Restoration projects funded with retained receipts generated from Stewardship Timber Sales both on the SNF and other lands near the SNF.

In addition, this report documents the following changes and upgrades made to the monitoring methodologies:

- upgrades to the new MS Access® database which includes standardization of restoration categories, new input forms for each program type (see above) and enhanced capabilities to generate multiple summary reports of each program type;
- the development of an ArcGIS® web map which provides spatial reference for the SCRWP; and
- detailed analysis of silvicultural prescriptions used in the Stewardship Timber Sale [thinnings].

FY2014 was a highly successful year for the SCRWP program. Some of the major accomplishments included:

- 17.8 million board feet (mmbf) of timber harvested from Stewardship Timber Sales;
- $1,070,291 retained receipts generated from Stewardship Timbers Sales;
    - $595,424 spent on watershed restoration projects on the SNF
    - $474,866 spent on watershed restoration projects on other lands near the SNF
- 266 jobs created;
- $12,833,081 in Earned Income; and
- 34 active on and off forest watershed restoration projects.

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Section 1: Introduction

Integrated Resource Management (IRM), a forestry consulting firm headquartered in Philomath Oregon, has been hired by Cascade Pacific RC&D to compile, analyze, and summarize the biophysical and socioeconomic impacts of projects completed with stewardship funds on an annual basis since 2008. Each Annual Report, including this FY2014, provides a summary and analysis of all the Siuslaw Collaborative Watershed Restoration Program (SCRWP) project data. The data was compiled into a custom MS Access® database created by IRM. The *Siuslaw Monitoring Project (SMP) Database* provides users with a quick and easy way to query data relating to stewardship contracting. The database can be downloaded at www.cascadestewardship.org.

1.1 The Siuslaw Collaborative Watershed Restoration Program (SCWRP)

The SCWRP program is a forest stewardship cooperative collaboration between CPRCD, the Siuslaw National Forest (SNF) and other partners that funds watershed restoration projects located in the Alsea, Hebo, Marys Peak, and Siuslaw Stewardship Group areas (map).

The SCRWP structure includes the following programmatic elements:

- Stewardship Timber Sales - NEPA approved sales, sold to local purchasers, includes required restoration on-the ground work to be completed as part of timber sale.
- On-Forest restoration projects – Projects located on the SNF, developed and managed by the SNF staff;
- Off-Forest restoration projects – Projects located on nearby lands developed by the collaborative, managed by the local partners (watershed councils, SWCD's, local government, non-profits, etc.) and fiscally sponsored by CPRCD.

For more information about the SCWRP visit www.cascadestewardship.org.

1.2 About Stewardship Contracting

Stewardship contracting is an innovative method for the United States Forest Service (USFS) and Bureau of Land Management (BLM) to manage forests. Stewardship contracting is

- a suite of authorities or contracting tools that are intended to help the agencies meet land management objectives and rural community needs;
- rooted in collaboration and adaptive management;
- contributes to the economic viability of rural communities;
- works towards restoring and maintaining healthy forest ecosystems;
- provides a continuing source of employment and local income.

The use of Stewardship contracting authority in lieu of conventional timber sale contracting, allows the United States Forest Service (USFS) and Bureau of Land Management (BLM) to retain the receipts of the timber sales within the SNF for use in watershed restoration projects on and off the forest. These projects contribute to the economic viability of rural communities, restore and maintain healthy forest ecosystems, and provide a continuing source of employment and local income.

In 2003, Congress enacted legislation enabling the UFSF and the BLM to use stewardship contracting to accomplish land management. Specific mechanisms authorized by the legislation include:

- *Exchange of goods for services*: Contractors can be paid in goods—with the value of any timber or other forest products removed by the contractor used to offset what the agency

owes the contractor for services performed, as written in 16 U.S.C. 2104 Note (Revised February 28, 2003 to reflect Sec. 323 of H.J. Res. 2 as enrolled)

- *Receipt retention*: Excess receipts from the sale of timber or other forest products removed can be kept and used by the agency, rather than being deposited in the U.S. Treasury.
- *Best-value contracting*: Contracts must be awarded on the basis of achieving best value to the government. A variety of criteria, in addition to price, can be used in making the award determination.
- *End-results contracting*: The agency determines the end result desired for the work, but the contractor has flexibility to propose the methods to be used, including, in some instances, which individual trees to cut.
- *Multi-year contracts*: Service contracts can be held for up to 10 years, instead of the current 5 year maximum.

1.3 Stewardship Contracting History

The Northwest Forest Plan designated much of the forested land of the SNF as late successional reserves (LSR). LSRs are managed to provide habitat for threatened and endangered species. The SNF uses stewardship contracting as a means to address the health of the land within or adjacent to the SNF. Salmon habitat enhancement and restoration is high priority in the basin. Given that much of the lands with the highest habitat potential for salmonids are on private land, there is a natural strategic partnership between the National Forest, watershed councils, soil and water conservation districts and other organizations that promote conservation on private lands. The local partners are organized into four stewardship groups: the Alsea, Hebo, Marys Peak, and Siuslaw groups.

1.4 Stewardship Groups/Collaboratives

There are four stewardship groups on the SNF from the following geographic areas: Alsea; Hebo; Marys Peak; and Siuslaw. Each stewardship group includes participants from federal and state agencies, landowners, conservation organizations, local governments, timber companies, tribes, and other interested parties, that collaborate with the SNF on the planning, implementation, and monitoring of the stewardship projects on land within or adjacent to the SNF (see page 9). Each group has formed its own charter and meets monthly to discuss projects within its area.

The stewardship groups dedicate much of their attention to the use of the SCRWP funds, a subset of the receipts retained from stewardship contracts that can be utilized by landowners through non-governmental organizations for restoration projects on non-federal lands that benefit the National Forest.

Visit www.cascadepacificstewardship.org/ for more information about the Stewardship Groups, their funded projects, meetings and information on how to become a participant.

Section 2: What's New in FY2014

2.1 New Multi-Party Monitoring MS Access® Database

A new MS Access® database has been developed to create more accurate multi-party monitoring on the SNF. Through careful consideration and input from the SNF, Cascade Pacific and a database expert, IRM has re-designed the overall structure to assess projects by restoration category, type, cost, program level, and on a multi-year cumulative basis. The purpose and details of the database upgrades are described below. Visit www.cascadepacificstewardship.org to view the database.

2.2 MS Access® Database Standardized Restoration Categories

Prior to this report, many of the accomplishments were listed in an unorganized method and it became increasingly difficult to tally and compare annual accomplishments between the three SCWRP programs. Therefore, in order to ensure bio-physical and economic accomplishments are reported accurately a list of standardized restoration categories was developed for all project managers to identify which applied to their project (see below).

In addition, data collection methods and consistent units of measurement (acres, miles, linear feet, etc.) for all three programs (Stewardship Timber Sale contracts and on and off forest retained receipts projects) were developed (see Section 2.2 for details). The following list of categories was revised to reflect restoration accomplishments from past and present projects.

Vegetation Management
- Controlled Burning
- Course Wood Creation/falling trees
- IRTC Commercial Thinnings
- Meadow Maintenance - Mowing
- Meadow, Dunes or Upland Planting
- Piling – Manual or Mechanical
- Pre-Commercial Thinning
- Snag Creation/Young or Mature Trees
- Site Prep–Herbicide, Manual or Mechanical
- Seedling Protection

Road Work
- Decomissioning/Sidecast Pullback
- Culvert & Fill Removal
- Roadside (water quality) Improvements: revegetation, grading, rocking

Invasives Control
- Meadow, Dunes or Upland Forest-Herbicide: Manual or Mechanical
- Riparian–Herbicide: Manual or Mechanical
- Roadside–Herbicide: Manual, or Mechanical

Stream Lake or Wetland Treatment
- Riparian Planting
- Fencing
- Fish Ladder/Passage Improvement
- Culvert or Bridge - Replacement or Repair
- Boulders/Log Placement – Excavator or Helicopter

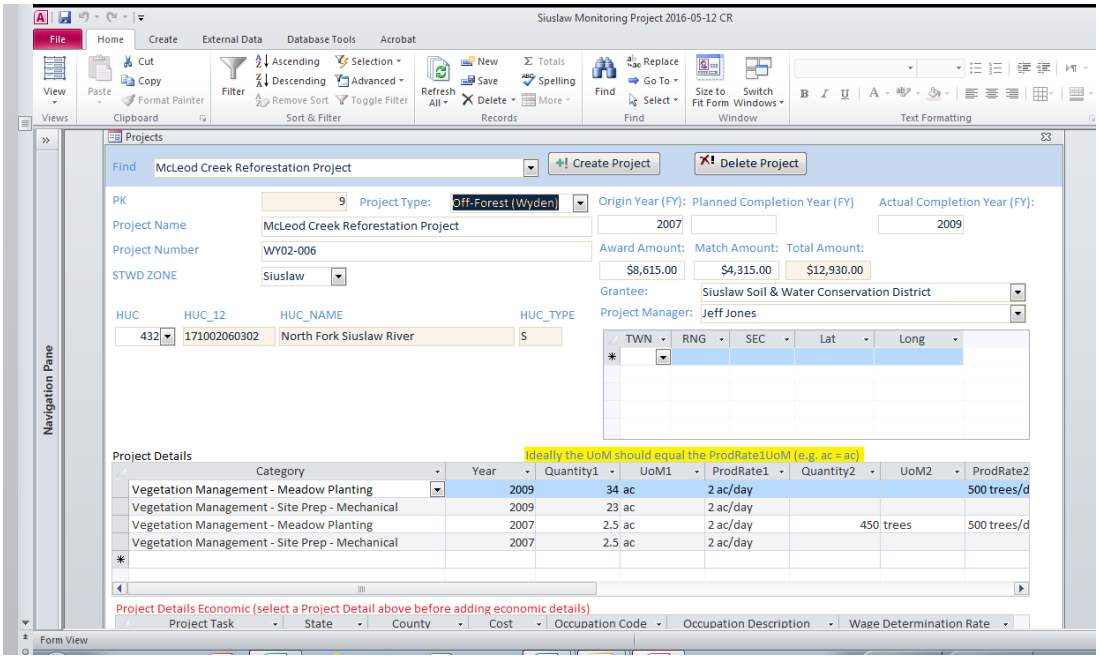
T&E Species
- Habitat Restoration
- Predator Control/Protection Devices

Project Management
- Project Management
- Project Administration

The creation of program-wide standard categories has resulted in more accurate summary reports of overall SCWRP program watershed improvements and local community benefits.

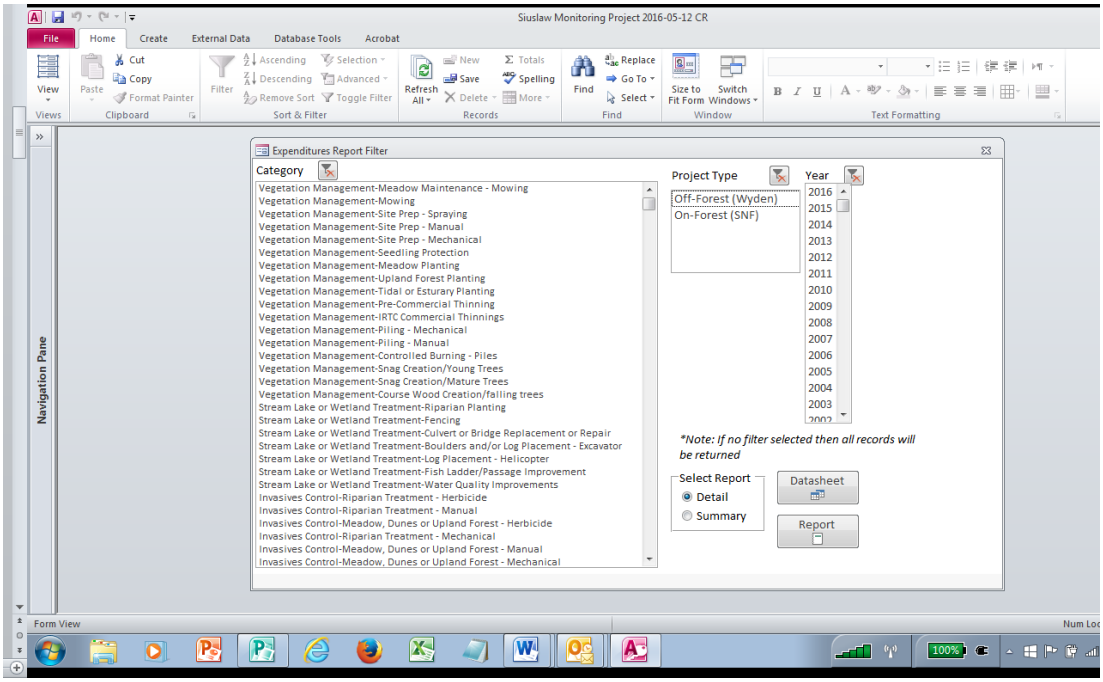
2.3 MS Access® Database Input Form

In order to facilitate accurate data entry of the accomplishments and minimize errors in reporting a new database entry form was created to input each project's detail. Each stewardship project (over 225 to date) has its own input form (see example below).



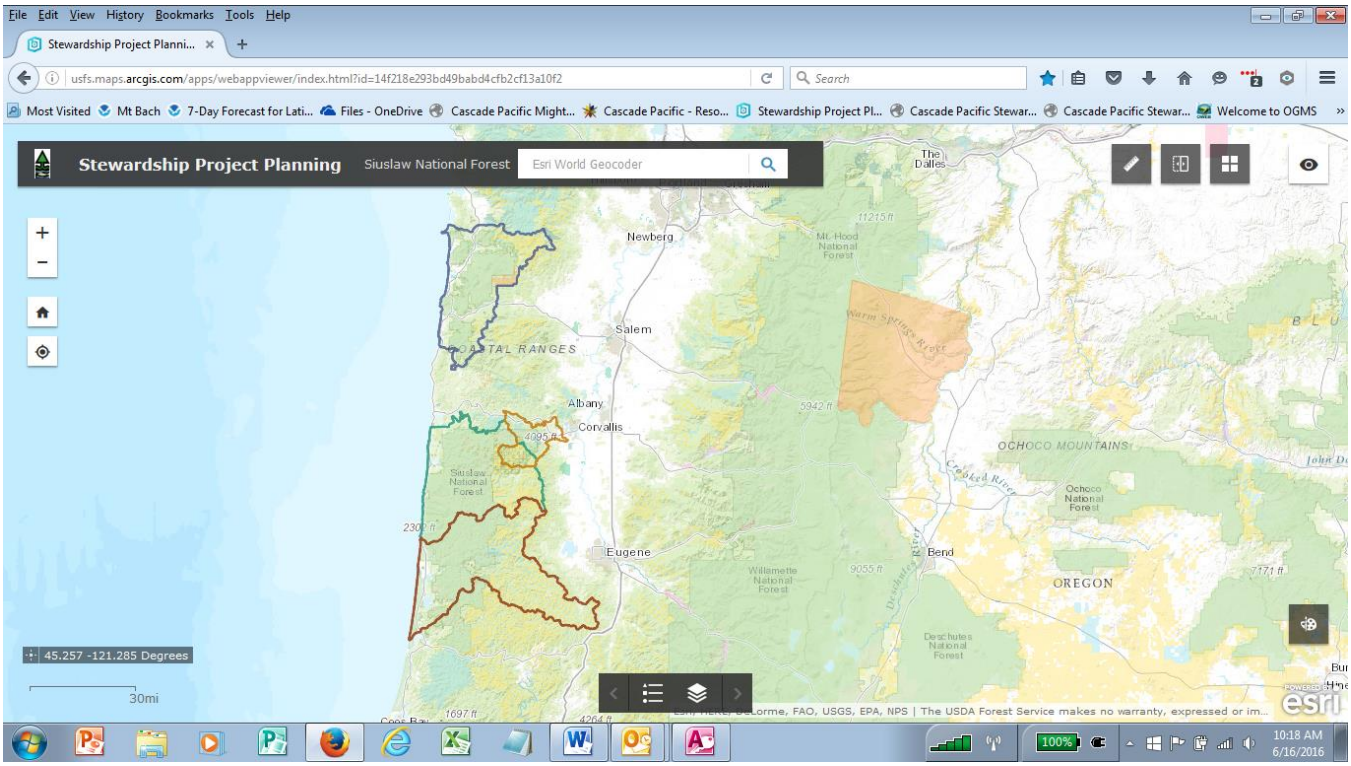
2.4 MS Access® Database Improved Summary Reports

To redesign the ACCESS database to allow the user to run Economic, Bio-physical, Expenditures and Summary Reports of all projects within each program type. Reports may be generated based on desired outcomes such as restoration type, costs, county, etc.



2.5 ArcGIS Online Stewardship Web Map

IRM worked closely with the SNF GIS staff to develop an ArcGIS® web map which provides spatial reference for the SCRWP.



To view the map visit:
http://usfs.maps.arcgis.com/apps/webappviewer/index.html?id=14f218e293bd49babd4cfb2cf13a10f2

2.6 Stand Exam Analysis of Stewardship Timber Sales

After five years of collecting common stand exam (CSE) data through plot sampling and photo point monitoring, IRM has included in this FY2014 report a complete analysis of the data collected at selected Stewardship Timber Sale (thinnings). The data was exported into a *Forest Vegetation Simulator* growth model (FVS) to create stand modeling and a complete analysis and recommendations are described in Section 9, pages 22-26.

Section 3: Monitoring Methodology

This section provides an overview of the methods used to determine the biophysical and economic impacts of stewardship contracting. There were slight variations in data analysis between the three categories of stewardship contracting (Forest Service stewardship timber sale contracts, Forest Service retained receipts and Wyden projects), as described below.

3.1 Biophysical Accomplishments and Outcomes: Restoration Activities

Direct outcomes of the restoration project accomplishments were recorded based on quantity and specific units of measurement of the restoration type (category). Information was provided from the SNF and Cascade Pacific to IRM. IRM entered the data into the MS ACCESS® Database. Detailed analysis tables and spreadsheets were derived from the database summary reports as shown in this report on pages 10-16.

3.2 Economic Benefits: Income and Employment

Due to difficulty in obtaining socioeconomic data from contractors during stewardship monitoring efforts prior to Fiscal Year 2008 (FY08), the USFS and IRM utilized worker production estimates and federal wage determination rates to derive FTE jobs, average wages, net incomes and state tax revenue (based on a 9% state income tax assessment). These estimates were analyzed based upon contractor location at a county level. To determine the socioeconomic impacts of the associated restorative activities that were part of these stewardship contracts, IRM used the methodologies listed below.

Production rates for individual tasks were based upon past experience and knowledge of actual job/task completion time. As an example, for young tree snag creation, local contractors average about 17 per 8 hour day. Total quantities for each task were divided by these estimated production rates to determine FTE jobs. Total payroll was calculated by multiplying the number of FTE jobs by the appropriate wage determination rates which contractors must pay their workers as required by the McNamara-O'Hara Service Contract Act of 1965. This bill, amended on October 13th, 1976 as Public Law 94-480, requires contractors and subcontractors performing services on prime contracts in excess of $2,500 to pay service employees in various classes no less than wage rates and fringe benefits found prevailing in the locality.

The estimated production rates along with the wage determination rates (as found on www.wdol.gov/, a federal wage determination website) are contained within the *SMP ACCESS Database* and available in report format. The tables found on pages 10-15 display a subset of these economic data broken down by county.

The LSR thinning treatments, which are the tree harvest portion of the stewardship contracts, represent direct, indirect and induced employment figures. The associated restorative activities, retained receipts and Wyden projects are strictly based upon direct employment figures.

For the stewardship timber sales portion of the stewardship contracts, IRM used a multiplier to determine the number of direct, indirect, and induced jobs created. According to Gary Lettman, former forest economist with the Oregon Department of Forestry, 11.4 direct, indirect and induced FTE jobs are created for every one million board feet (MMBF) of timber harvested and processed. Of these, 2.2 FTE jobs are associated with the harvesting (felling, logging, and trucking) of the timber, and 9.2 FTE jobs are associated with the processing of the logs in the mills.

Section 4: Stewardship Timber Sale Contracts

Stewardship contracting was developed as a method to achieve land management goals for National Forest System lands while meeting local and rural community needs. The SNF awarded four new Stewardship Timber Sale contracts in FY2014, however no "on the ground" work was implemented for these sales during FY2014. Stewardship Timber Sales contract operations and on-site activities often occur over a period of years, depending on the size of the sale, the contractor's capacity, and log and mill prices.

4.1 Stewardship Timber Sales sold in FY2014

Sale-Thin	Purchaser	Planned Acres	MMBF*	Sale Value
High Tide	B&G Logging	406	8.84	$1,589,649
Drew	Georgia Pacific West	184	4.04	$ 835,238
Noble	Georgia Pacific West	143	2.97	$ 175,542
Choker Bell	Georgia Pacific West	150	2.78	$ 540,342
Total		***883***	***18.43***	***$3,140,774***

Implementation activity occurred on five previously awarded stewardship timber sale contracts as listed below.

4.2 Stewardship Timber Sales with Activity in FY2014 *(from sales awarded in previous years)*

Sale-Thin	Harvested Acres	MMBF*	Purchaser	Year
Camp	116	2.45	Swanson Group	2010
Missouri	224	4.35	B & G Logging	2013
Morris	305	9.15	B & G Logging	2013
Rock	140	1.83	Georgia Pacific West	2012
Skinner	27	.00051	Georgia Pacific West	2011
Total	***812***	***17.79***		

**Million Board Feet*

4.3 Bio-physical Accomplishments: Stewardship Timber Sales

Restoration Services performed by Timber Sale Purchaser and/or sub-Contractor

Stewardship contracting was developed as a method to achieve land management goals for National Forest System lands while meeting local and rural community needs. The major biophysical accomplishments achieved through stewardship contracts across the five stewardship timber sales during FY2014 were as follows:

VEGETATION MANAGEMENT

12,542	trees	Upland Forest Planted
2045	pieces	Snags created from young trees
1198	pieces	Coarse woody debris created
68	pieces	Snags created from mature trees
24	acres	Site Prep- herbicide
29	acres	Upland Forest Planted
812	acres	Stewardship Timber Sales
72	mmbf	Harvested on Stewardship Timber Sale

STREAM, LAKE OR WETLAND TREATMENT

16	structures	Bridges or culverts replaced or repaired to improve fish passage

INVASIVES CONTROL

370	acres	Riparian - herbicide treatment
70	acres	Meadow, Dunes or Upland Forest – herbicide treatment

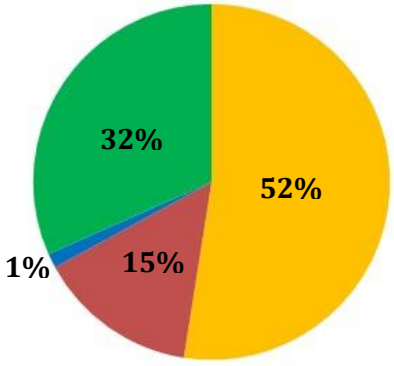
ROAD WORK

6.3	miles	Decommissioning/Sidecast Pullback

4.4 Cost Distribution: Stewardship Timber Sales

Total Expenditures by Restoration Category of Services performed by local Contractors

Invasives Control	**$**	**41,225**
Vegetation Management	**$**	**24,846**
Road Work	**$**	**11,426**
Stream, Lake or Wetland	**$**	**1,027**
FY2014 EXENDITURES	***$***	***78,527***



4.5 Local Economic Benefits: Stewardship Timber Sales

Jobs created from Logging, Mill work and Restoration Services performed by Contractors

County	Person Hours Worked	$ Earned	FTE Jobs	Avg. Wage	State Taxes Paid
Benton, OR	365,921.46	$8,738,855.68	181.51	$23.88	$782,014.07
Lane, OR	126,296.36	$3,153,971.09	62.65	$24.97	$283,168.97
Marion, OR	483.86	$7,625.56	.24	$15.76	$.027
TOTAL	**492,701.68**	**$11,900,452.32**	**244.40**	**$24.15**	**$1,065,183.31**

Section 5: On-Forest Retained Receipts Stewardship Projects

Forest Service retained receipts are funds that are received from the sale of forest products removed under a Forest Service stewardship timber sale contract. Some of these funds are retained by the agency and used to pay for resource restoration, maintenance and enhancement projects on the National Forest. During FY14 there were 22 active retained receipts projects, which expended a total of $595,424.00. Please see Appendix A, page 30. The major biophysical accomplishments and economic benefits are listed below. IRM determined the socioeconomic impacts for these activities based on the methodologies described on page 9.

5.1 Biophysical Accomplishments: On-Forest Watershed Restoration Projects

Restoration Services performed by SNF Staff or local Contractors

VEGETATION MANAGEMENT

330	acres	Meadow - maintenance mowing
20	acres	Meadow habitat planted
8000	trees	Meadow plantings
700	pieces	Seedling protectors on 5 acres
5	acres	Pre-Commercial Thinnings

INVASIVES CONTROL

2	acres	Meadow, Dunes or Upland Forest – herbicide

STREAM, LAKE OR WETLAND TREATMENT

225	pieces	In-stream log placement – helicopter
50	pieces	In-stream log placement - excavator
8	structures	Bridges or culverts replaced or repaired to improve fish passage

THREATENED & ENDANGERED SPECIES

940	acres	Habitat improvement and species protection measures

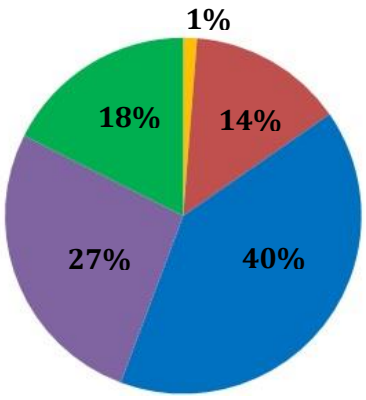
ROAD WORK

2.8	miles	Road decommission/side-cast pullback
3.5	miles	Road work to improve water quality

5.2 Cost Distribution: On-Forest Biophysical Accomplishments

Total Expenditures by Restoration Category

Stream, Lake or Wetland	**$ 240,382**
Threatened & Endangered Species	**$ 159,147**
Vegetation Management	**$ 104,590**
Road Work	**$ 83,905**
Invasives Control	**$ 7,400**
FY2014 EXENDITURES	***$ 595,424***



5.3 Local Economic Benefits: On-Forest Watershed Restoration Projects

Jobs & income created from Siuslaw Collaborative On-Forest Restoration Projects

County	Person Hours Worked	$ Earned	FTE Jobs	Avg. Wage	State Taxes Paid
Benton, OR	2,875.50	$59,918.00	1.43	$20.84	$5,392.62
Coos, OR	894.36	$19,202.00	0.44	$21.47	$1,728.18
Lane, OR	5,982.84	$123,234.00	2.97	$20.60	$11,091.06
Lincoln, OR	5,602.14	$120,278.00	2.78	$21.47	$10,825.02
Linn	1,164.42	$25,000.00	0.58	$21.47	$2,250.00
Marion	5,170.00	$111,000.00	2.56	$21.47	$9,990.00
Multnomah, OR	4,514.19	$105,000.00	2.24	$23.26	$9,450.00
Tillamook, OR	155.29	$3,334.00	0.08	$21.47	$300.06
Wallowa, OR	680.58	$14,612.00	0.34	$21.47	$1,315.08
Total	***27,039.33***	***$581,578.00,***	***13.41***	***$21.51***	***$52,342.02***

Section 6: Off-Forest Retained Receipts Stewardship Projects

The Wyden Authority authorizes the USFS to expend funds (including retained receipts) on resource restoration and enhancement projects on non-federal lands as long as the projects provide resource benefits to National Forest Service lands within the watershed. Off-Forest (Wyden) projects within the vicinity of the SNF are accomplished through cooperative agreements and public assistance grants. Agreement to protect, restore or enhance natural resources may be with governmental, private and/or nonprofit entities.

During FY14 there were 22 active retained receipts projects, which expended a total of $474,866.82. The major biophysical accomplishments and economic benefits are listed below. To determine the socioeconomic impacts for these activities, the same methodology used to calculate the production, jobs in the stewardship timber sale (described on page 7) was used to determine local economic benefits of On Forest Retained Receipts funded projects.

6.1 Biophysical Accomplishments: Off-Forest Watershed Restoration Projects

Restoration Services performed by local partners of the collaborative Stewardship Groups

VEGETATION MANAGEMENT

500	pieces	seedling protectors installed on 5 acres
21	acres	site prep-manual/mechanical
33	acres	site Prep - herbicide
9	acres	meadow planting
8	acres	upland forest planting
53	acres	pre-commercial thinning
20	pieces	snags created

INVASIVES CONTROL/TREATMENT

1550	acres	riparian herbicide treatment
329	acres	riparian manual/mechanical treatment
30	acres	meadow/dunes/upland forest herbicide
10	acres	roadside herbicide treatment

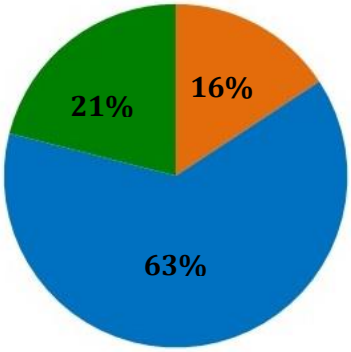
STREAM, LAKE OR WETLAND

22,604	acres	riparian habitat planted and 25,033 native plantings
1.8	miles	stream corridor planted
330	pieces	logs placed in-stream
5	culverts	replaced or repaired
.56	miles	fencing installed along riparian habitat

6.2 Cost Distribution: Off-Forest Watershed Restoration Projects

Total Expenditures by Restoration Category

Stream, Lake or Wetland	**$ 300,281**
Vegetation Management	**$ 99,812**
Invasives Control	**$ 74,773**
FY2014 EXENDITURES	***$474,866***



6.3 Local Economic Benefits: Off-Forest Watershed Restoration Projects

Jobs & income created from Siuslaw Collaborative On-Forest Restoration Projects

County	Person Hours Worked	$ Earned	FTE Jobs	Avg. Wage	State Taxes Paid
Benton, OR	6,080.91	$131,941.32	3.02	$21.70	$11,874.72
Coos, OR	529.27	$8,500.00	0.26	$16.06	$765.00
Lane, OR	2,062.65	$44,412.60	1.02	$21.53	$3,997.13
Lincoln, OR	4,866.12	$95,417.39	2.41	$19.61	$8,587.57
Tillamook, OR	3,565.66	$70,048.66	1.77	$19.65	$6,304.38
Yamhill, OR	45.52	$731.00	0.02	$16.06	$65.79
Total	***17,150.13***	***$351,050.97***	***8.51***	***$20.47***	***$31,954.59***

Section 7: FY2014 Outcomes

7.1 Biophysical Accomplishments: Program-wide

Restoration Services performed by SNF Staff, local Contractors, and/or partners of the Collaborative Stewardship Groups

VEGETATION MANAGEMENT

330	acres	meadow maintenance – mowing
29	acres	meadow habitat planted
8000	trees	meadow plantings
37	acres	upland Forest habitat planted
13,342	trees	upland Forests plantings
1200	pieces	seedling protectors installed on 10 acres
58	acres	pre-commercial thinnings
812	acres	stewardship Timber Sales Thinnings
17.79	mmbf	harvested on Stewardship Timber Sale Thinnings
2065	pieces	snags created from young trees
68	pieces	snags created from mature trees
1198	pieces	coarse woody debris created

STREAM, LAKE OR WETLAND TREATMENT

22,604	acres	riparian habitat planted
25,033	pieces	riparian native plantings on 1.8 miles of riparian corridor
380	pieces	logs placed instream – excavator
225	pieces	logs placed instream – helicopter
29	structures	culverts or bridges replaced or repaired
.56	miles	fencing installed along riparian habitat

INVASIVES CONTROL

1919	acres	riparian herbicide treatment
40	miles	riparian herbicide treatment
329	acres	riparian manual/mechanical treatment
100	acres	meadow/dunes/upland forest herbicide
10	acres	roadside herbicide treatment
10	miles	roadside herbicide treatment

ROAD WORK

9.1	miles	road decommissioning/side-cast pullback
3.53	miles	road work to improve water quality

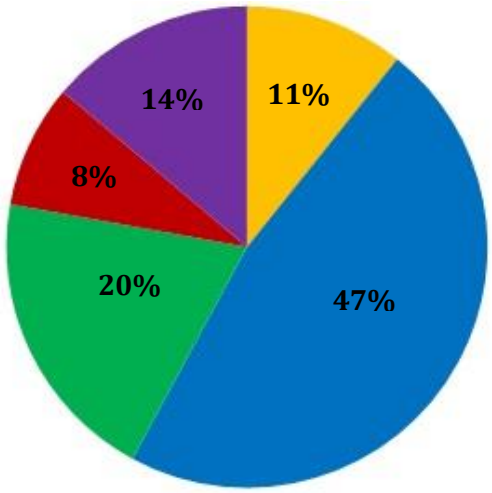
THREATENED & ENDANGERED SPECIES

940	acres	habitat Improvement and Species Protection measures

7.2 Cost Distribution: Program-wide

Total Expenditures by Restoration Category

Stream, Lake or Wetland	**$ 541,691**
Vegetation Management	**$ 229,249**
Threatened & Endangered Species	**$ 159,147**
Invasives Control	**$ 123,398**
Road Work	**$ 95,331**
FY2014 EXENDITURES	***$1,148,817***



7.3 Local Economic Benefits: Program-wide

Jobs created from Restoration Services performed by Contractors of the collaborative Stewardship Groups

County	Person Hours Worked	$ Earned	FTE Jobs	Avg. Wage	State Taxes Paid
Benton, OR	374,877.88	$8,930,715.00	185.95	$23.82	$799,281.41
Coos, OR	1,423.63	$27,702.00	.71	$19.46	$2,493.18
Lane, OR	134,341.86	$3,321,617.69	66.64	$24.73	$298,257.16
Lincoln, OR	10,468.26	$215,695.39	5.19	$20.60	$19,412.59
Linn, OR	1,164.42	$25,000.00	0.58	$21.47	$2,250.00
Marion, OR	5,653.86	$118,625.56	2.80	$20.98	$9,990.27
Multnomah, OR	4,514.19	$105,000.00	2.24	$23.26	$9,450.00
Tillamook, OR	3,720.95	$73,382.66	1.85	$19.72	$6,604.44
Wallowa, OR	680.58	$14,612.00	0.34	$21.47	$1, 315.08
Yamhill, OR	45.52	$731.00	0.02	$16.06	$65.79
TOTAL	**536,891.14**	**$12,833,081.29**	**266.32**	**$23.90**	**$1,149,119.92**

Section 8: FY 2015 Approved Stewardship Projects

The FY2015 Stewardship Timber Sales and Retained Receipts watershed restoration stewardship projects approved by the USFS are listed below. These projects will be actively monitored along with the ongoing projects from FY13 and included in 2015 multi-party monitoring report.

8.1 FY2015 Approved Stewardship Timber Sale Contracts

Sale	Purchaser	Planned Acres	MMBF	Sale Value
Woods Thin	Georgia Pacific West	*unknown*	--	--
Ona Thin	B&G Logging	*unknown*	--	--

8.2 FY2015 Approved Retained Receipts Watershed Restoration Projects

On-Forest Projects

Project #	Project Name	Award
FS-103	Horse Creek Bridge Replacement	$75,000
FS-104	2015 Fivemile Restoration	$94,000
FS-105	Dunes Day-Use Upland Dune Restoration	$25,000
FS-106	CCRD Meadow Maintenance and Restoration	$41,000
FS-107	ORBIC Plover Nest Protection	$30,000
FS-109	AHS-WS Snowy Plover Predator Management	$50,000
FS-110	CCRD Silverspot Butterfly Habitat Restoration	$50,000
FS-112	Fraser Creek Stream Restoration	$150,000
TOTAL		*$515,000*

Off-Forest Projects

Project #	Project Name	Award
WYA15-23	Tenmile Tributary and Off Channel Enhancement Phase I	$49,985
WYH15-06	Moon Creek Fish Passage Improvements	$45,840
WYH15-07	North Lincoln County Invasive Species Control Project	$13,644
WYH15-08	Lower Salmon River Fish Passage Improvement	$27,861
WYH15-09	Tillamook SWCD Invasive Species Control	$26,000
WYM15-15	Greasy Creek Cutthroat Trout Habitat Project: Riparian Planting	$75,684
WYM15-16	Corvallis Forest Invasive and Riparian Weed Control	$11,525
WYS15-17	Grant Creek Stream & Wetland Restoration	$27,744
WYS15-18	Cleveland Creek Railroad Culvert Replacement	$40,000
WYS15-19	Cox Island Spartina patens Survey and Control	$25,158
TOTAL		*$343,441*

Section 9: Stewardship Timber Sales – Photo Point Monitoring and Common Stand Exam (CSE) Plot Sampling

In order to track ecological responses to the Stewardship Timber Sales, Photo Points and Common Stand Exams (CSE) have been installed from FY2008 to FY2013. To date, 135 CSE plots have been installed and 5 photo-points per plot have been taken (675). Specific monitoring methodologies are described below. No photo points or plots were installed in FY2014. Instead efforts were focused on upgrading the database (see Section 2) to improve methodologies and expand database to include the original projects dating back to 1999 to 2016. The goal of this section of this report is to provide a complete assessment of the data collected to date, analyze the results of the data, and make recommendations for future thinning methodologies.

9.1 Photo Point Monitoring

The purpose of the photo point monitoring is to establish pre and post-harvest photo point plots to document pre-harvest conditions and track changes resulting from timber harvesting associated with stewardship contracts. The first set of photo points were installed in FY2008 and have continued to been installed through FY2013. The table below summarizes the years sample plots and photo Points have been installed.

Stewardship Timber Sale Photo Points Installed FY2008-FY2013

	Bixby	Bridge	Buck	Camp	Cascade	Choppel	Elk	High	Jeep	Meadow	Misery	Missouri	Morris	N Beaver	Noble	Ol Cleve	Old Man	Panther	Rock	Skinner
2008			x		x	x			x		x			x						
2009				x												x				
2010							x												x	
2011	x	x	x	x					x		x	x				x	x		x	
2012		x		x			x			x			x					x	x	x	
2013		x		x				x	x						x					

All photo point plots installed are permanently referenced with metal posts and tags as well as blazed reference trees. In addition, each plot has been mapped using a resource grade Global Positioning System (GPS), to ensure accurate locations and to facilitate future monitoring. Each photo point plot includes four cardinal directions (North, East, South and West) photos, and a canopy (overhead) photo. These photos allow individuals viewing the photos to track visual changes to vegetation such as species composition, size and percent cover over time as the stands grow.

Case Study: - Bridge Thin Unit 2, Plot 1 - Canopy Closure Photos

Pre-Harvest – April 2010

Post Harvest – November 2013

Bridge Thin Stewardship Timber Sale

Sale MMBF	*4.7*
Total Acres	*275*
Purchaser	*B&G Logging*
County	*Benton*
Completion	*Summer 2013*

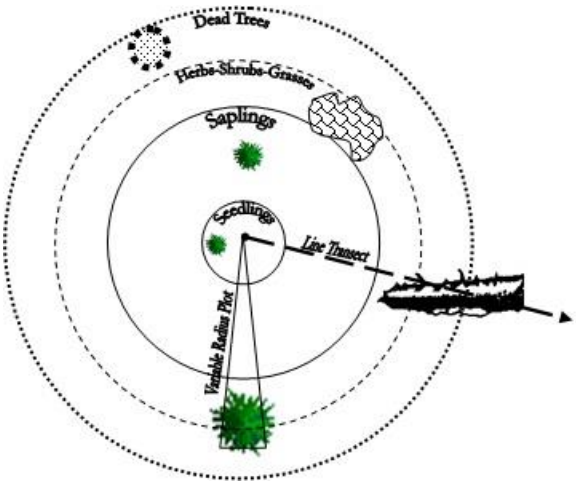
Stewardship Restoration Services

Invasives Control	*122 acres*
Snag creation	*744 pcs*
CWD creation	*440 pcs*

9.2 Common Stand Exam (CSE) Plot Sampling

The purpose of the Common Stand Exam (CSE) plot sampling is to collect pre and post-harvest ecological data and establish a baseline to track changes in stand dynamics over time. CSE olots are co-located at the same location as the Photo Point Monitoring. Each plot is 1/10th of an acre and has a 37.2 ft. radius, as shown below.

CSE Plot Diagram



The following data is collected on each plot:

- Tree level data: Species, diameter, height, crown class, crown ratio, damage, age and growth information
- Vegetation data: Species, % cover and average height of all plants down to trace presence
- Down woody material: Piece count, length, diameter at large and small end and decay class

9.3 Case Study: Bridge Thin-Unit 2, Plot 1: CSE plot detail data

Plot Information

Photo Folder (pick SMP Photos): F:\Multiparty Monitoring Photos\FY2013\Camp Thin\Camp.U22.P2\Photo - Small

UNIT 2012 Bridge Thin Unit: 2

File Structure

Compare

DBH	TPA	BA	%DF	%WH	%RA	%BM	%CH	#Plots	TPP
16.4	80	118	100%	0%	0%	0%	0%	1	8.

PLOT	Elevation-ft	Aspect-deg	Cruise Date
1	1353	344	11/14/2013

PP_PLOT	DBH	TPA	BA	%DF	%WH	%RA	%BM	%CH	#Plots	TPP
BRIDGE.U2.P1	16.4	80	118	100%	0%	0%	0%	0%	1	8.0

PLOT	TREE	SPC	DBH	STAT	HT	CBHT	CC	AGE	RG10
1	56	DF	15.3	L	129	96	CO	0	0
1	57	DF	13.7	H	118	82	CO	0	0
1	58	DF	16	L	124	101	CO	0	0
1	59	DF	18.4	H	121	75	DO	0	0
1	60	DF	16.6	L	131	90	CO	0	0
1	61	DF	18	L	125	86	DO	0	0
1	62	DF	17.6	L	125	100	DO	0	0
1	63	DF	17.8	H	117	62	CO	0	0
1	64	DF	17.5	H	123	76	CO	0	0
1	65	DF	16.2	L	120	75	DO	0	0
1	66	DF	14.1	L	120	89	CO	0	0
1	67	DF	15.6	H	119	69	CO	0	0
1	68	DF	11.2	H	104	71	IN	0	0
1	69	DF	11.8	M	79	0		0	0
1	70	DF	17.5	L	127	89	DO	43	22
1	71	DF	18.6	H	124	84	CO	0	0
1	72	DF	18.8	H	125	85	DO	45	14
1	73	WH	16.4	H	109	73	CO	0	0
1	74	DF	14.8	H	118	79	CO	0	0

SP	HT	COVPCT
MANE2	1	15
POMU	1	10
ACCI	5	2

CNT	DEC	LEN	LARGE	SMALL
1	2	60	12	2
1	2	17	5	2
1	2	20	20	14
1	2	28	15	10
1	1	60	9	1
1	1	9	11	8

SPC = Species
DF = Douglas-fir, WH = Western Hemlock
BM = Bigleaf maple, RA = Red Alder
DBH = Diameter at breast height
STAT = Tree status (L=Live, D=Dead, M=Missing, H=Harvested with prev. data displayed)
HT = Total tree height
CBHT = Height to crown base
CC = Crown class (Dominant, Codominant, Intermediate)
AGE = Breast height age of tree
RG10 = 10 year radial grown (in 20th in.)
COVPCT = Ground coverage percent (-1 = trace percentage)
CNT = Count, DEC = Decay Class, LEN = Length
SMALL = Small end diameter, LARGE = Large end dia
Decay Classes:
1 = Least, 2 = Less, 3 = Medium, 4 = High, 5 = Very high

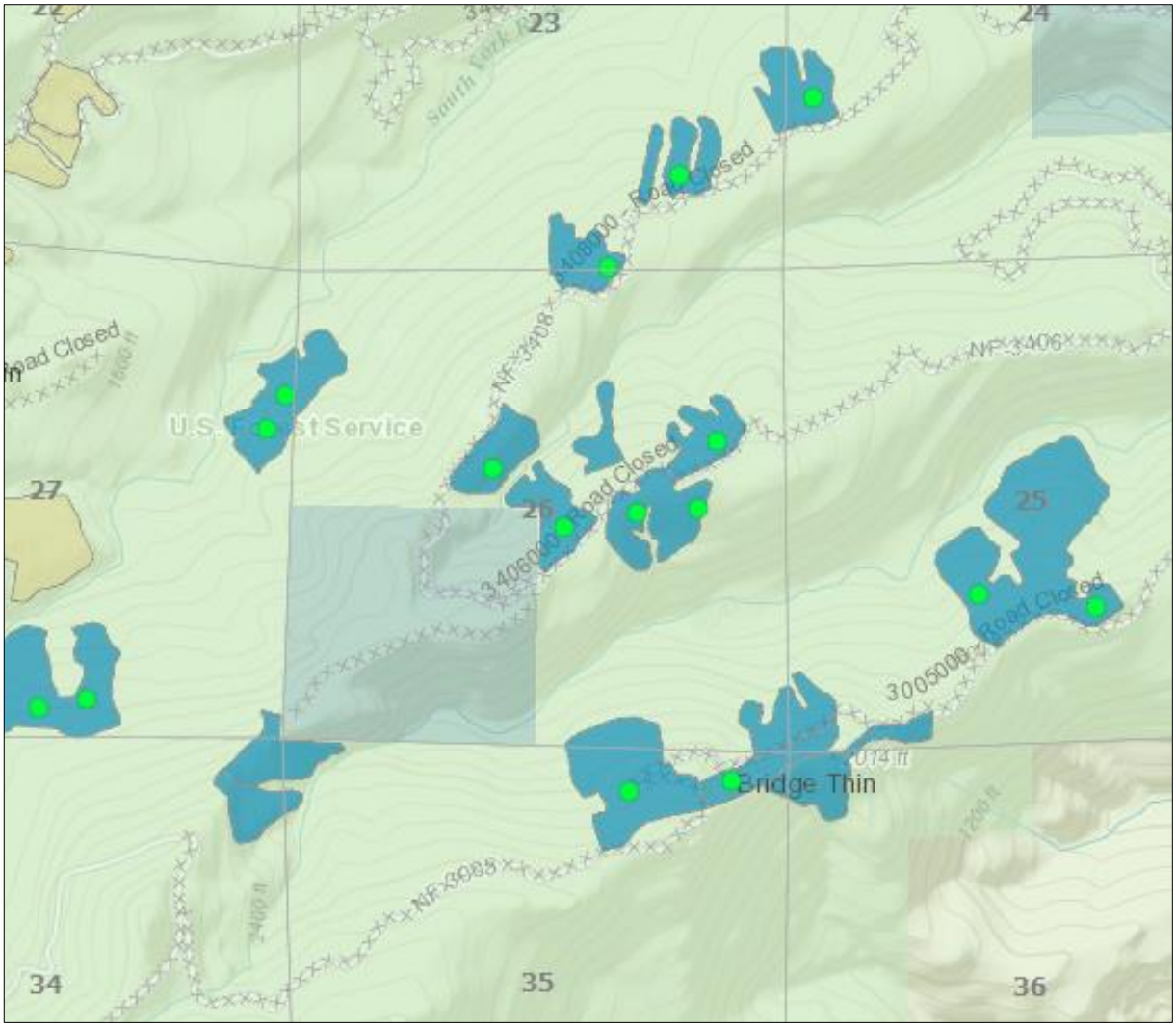
9.3 Case Study: Bridge Thin-Unit 2, Plot 1: CSE plot detail data, *continued*

As part of the Fiscal Year 2009 (FY09) monitoring contract, a custom DataPlus® Professional data collection program was created for use with Windows® Mobile data recorders, and a users' manual was written to document the data collection methodology and the use of the data collection program.

The benefit of these tools is to streamline the data collection process in order to ensure that data collected is compatible with past data collected. In addition, with the data collection program, contractors are able to collect inventory data with the utmost accuracy and efficiency, and transfer these data to the USFS with greater ease.

The MPM database includes the Photo Point Monitoring pictures and as well as the CSE data. The database allows easy viewing of the photos as well as summary information of the CSE. Please contact IRM for assistance or any questions relating to the database and data.

9.4 Case Study: Bridge Thin Map–CSE plots and photo points



Section 10: Stewardship Timber Sale Plot Data Analysis and Stand Modeling

A primary goal of the Siuslaw Collaborative Watershed Restoration Program is to accelerate the development of late seral characteristics in young stands on the SNF. As part of the monitoring program, analysis of the inventory data is conducted to determine if the Stewardship Timber Sale thinnings are achieving this goal. This section of this report describes the methodologies used in the analysis, summarizes the findings, and provides recommendations.

Analysis Questions:

This analysis is framed by these three primary questions:

1. ***Will these stands develop late seral conditions without thinning treatments?***
2. ***Are the commercial thinnings driving the stands towards late seral conditions?***
3. **Is one thinning enough – can we walk away?**

10.1 Methods

The CSE data was analyzed by exporting the data into a tree list, and then importing the data into the Forest Vegetation Simulator (FVS). The MPM Database has an export function which allows for easy exporting of the data into the proper format for use in FVS. The Forest Vegetation Simulator (FVS) is a family of forest growth simulation models. It is a system of highly integrated analytical tools that is based upon a body of scientific knowledge developed from decades of natural resources research and experience. FVS answers questions about how forest vegetation will change in response to natural succession, disturbances, and proposed management actions.

To facilitate understanding the FVS analysis, stand data has been outputted into visual images using the Stand Visualization System (SVS). SVS generates graphic images depicting stand conditions represented by a list of individual stand components, e.g., trees, shrubs, and down material. While abstract, these images provide a readily understood representation of stand conditions. Images produced using SVS help communicate silvicultural treatments and forest management alternatives to a variety of audiences.

10.2 Old Growth Reference Conditions

What is a late seral forest and how is it created?

Characteristics common to late seral Douglas-fir forests include:

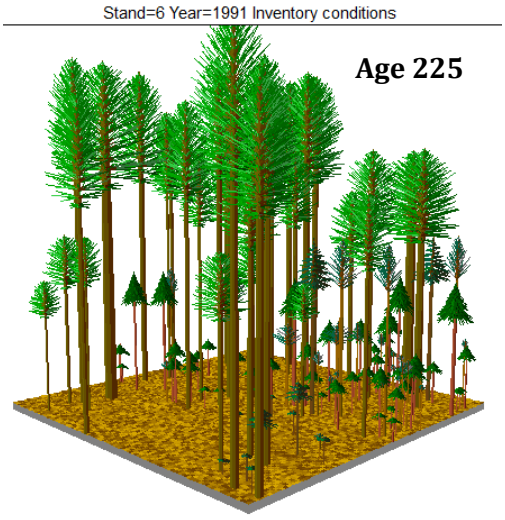
- 18 or more very large live trees (>30" DBH)
- High variation in tree diameters
- Large snags and down logs
- Trees with dead and broken tops
- Diverse conifer, hardwood, shrub species
- High amounts of basal area

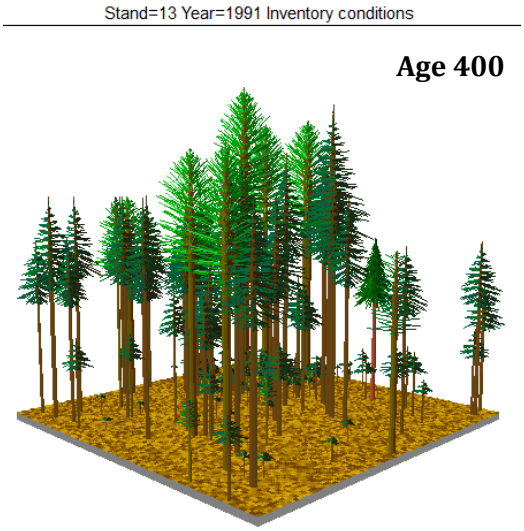
Forests develop late seral characteristics over time with the inclusion of the following natural or "un-natural" disturbances:

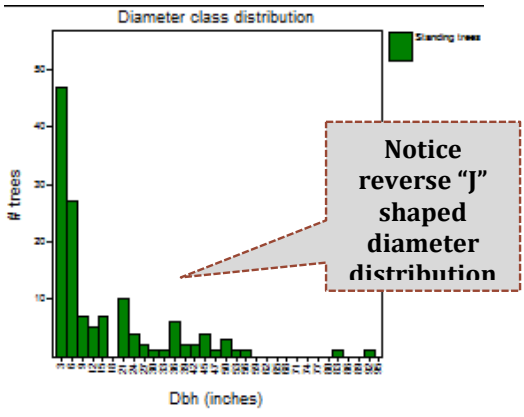
- Fire
- Windthrow
- Insects and Disease
- Timber harvesting

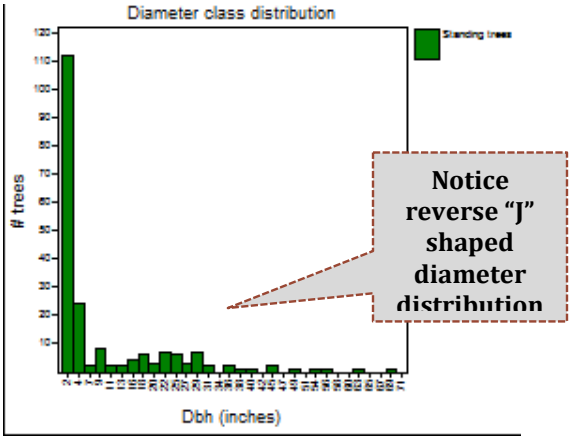
Two old growth stands on the SNF were chosen as reference stands for this analysis. These stands had been previously inventoried as part of the Forest Inventory and Analysis program which documents forest conditions across the USA. Shown below are two images generated using SVS of the plot data from these two stands.

Old Growth Reference Conditions









-Multiple tree species
-Diverse diameter and height distributions
-Large trees (some very large)
Reverse "J" Shaped Diameter Distribution

-Multiple tree species
-Diverse diameter and height distributions
-Large trees (some very large)
-Reverse "J" Shaped Diameter Distribution
-Much different stand but same characteristics as the 225 year old

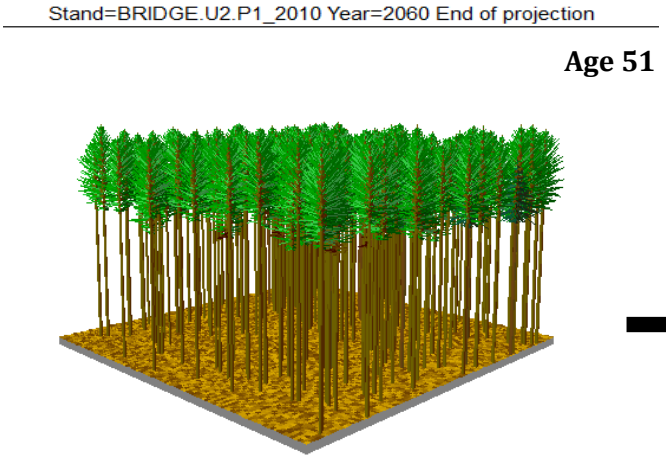
10.3 Case Study - Bridge Thin Stewardship Timber Sale: Thinning Analysis

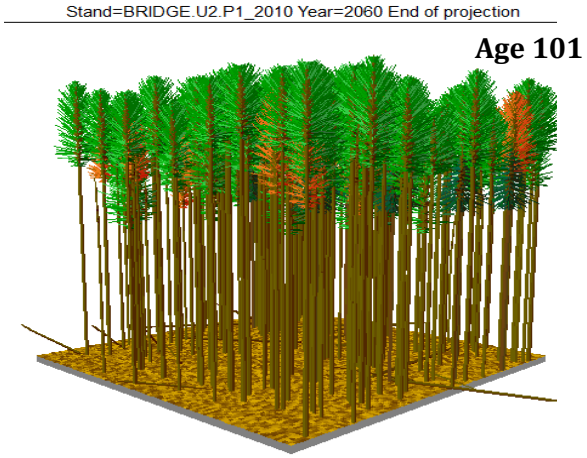
Common Stand Exam data from Plot 1 on the Bridge Thin Timber Sale Unit 2. Plot 1 was modeled using the Forest Visualization System and illustrated using Stand Visualization System.

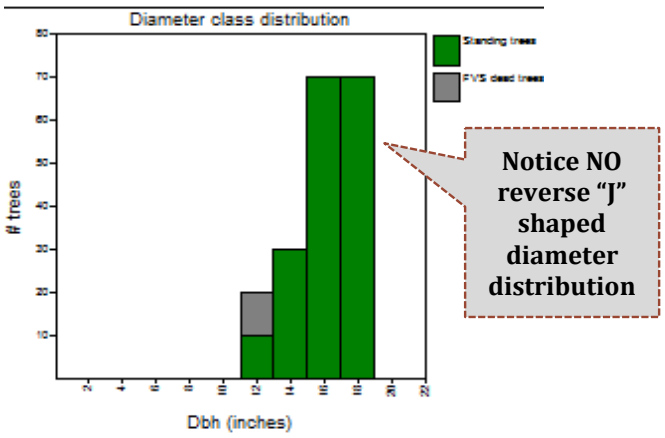
No Thinning/Management Analysis

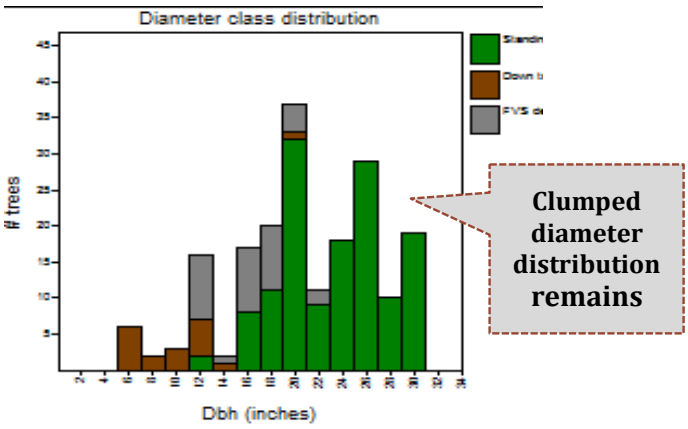
The images below illustrate the stand conditions in 2010 before the unit was thinned. To illustrate the need for thinning, the stand was "grown" for 50 years to demonstrate how the stand would develop in absence of management.

Pre-Thinning Conditions (2010)









-Clumped diameter and height distributions
-All Douglas-fir

-Clumped diameter and height distributions
-All Douglas-fir

The Pre-Thinning Conditions (2010) model shows the following:

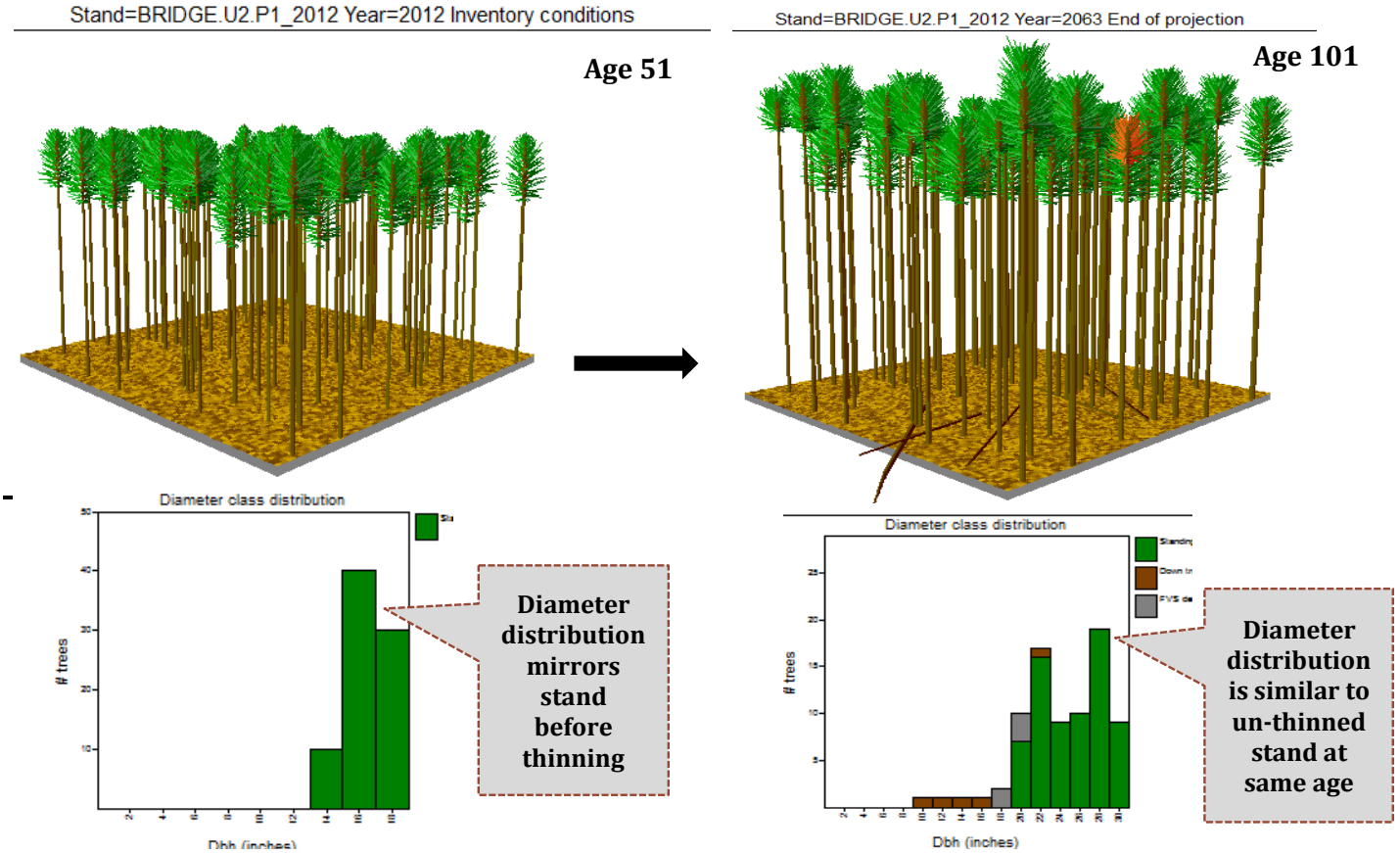
- *Plantations will grow from a dense monoculture of small trees to a dense monoculture*
- *of larger trees.*
- *Some recruitment of small snags and down wood but the mortality in the smaller diameter classes causes the height and diameter distributions to remain clumped.*
- *Clumped Diameter Distribution Remains*
- *Little to no development of late seral characteristics.*

10.3 Case Study - Bridge Thin Stewardship Timber Sale, *continued*

Analysis of Current Management

The images below illustrate the stand conditions after the actual thinning which was conducted in in 2013. To illustrate how the stands will develop in the absence of future management, the stand was "grown" for 50 years.

Post- Thinning Conditions (2013)



The Post – Thinning Long term conditions model shows the following:

- *Similar diameter distribution as the thinned stand with larger and taller trees.*
- *Stand is more vigorous, but mortality is reduced, leading to fewer snags and down wood.*
- *Little to no understory canopy development of tree species.*

Results

Based upon our analysis the answers to our questions are:

1. Will these stands develop late seral conditions without thinning treatments? ***No.*** *In absence of management it will take a very long time for the trees to differentiate and only through many centuries of natural disturbance will they achieve late seral structure.*
2. Are the commercial thinnings driving the stands towards late seral conditions? ***Not very effectively.*** *The silvicultural prescriptions are too simple and therefore do not introduce enough variability into the stands to effectively move the stands towards late seral conditions.*
3. Is one thinning enough – can we walk away? ***Probably Not.*** *The high intensity of management of the stands, during early seral development, has simplified to them to such an extent that it will take multiple thinning entries to create the diversity needed to move them towards late seral conditions.*

Section 11: Silvicultural Recommendations

What problems are we facing when we try to move plantations to mature/old growth forest through evenly spaced thinning?

1. No residual trees or snags from the previous stand so they are starting out in a condition unlike what would have happened under natural disturbance (fire or windstorm).
2. Very few hardwoods or conifer species other than Douglas-fir as a result of intensive earlier stand management.
    a. Slash-burning
    b. Spraying
    c. Single species planting (DF)
    d. Pre-commercial Thinning – eliminated spatial diversity
3. The high health and vigor of the stands lends them to be highly resistant to disturbance (windthrow, root disease, etc.), preventing natural opening which would allow the recruitment of new cohorts.

What silvicultural practices might we use to increase stand differentiation and prevent clumped diameter distributions in the future?

1. Preserve spatial heterogeneity within the stands through the use of variable density thinning:
    a. Example markings should be used to train timber fallers
    b. "Free thin" – thin across all the diameter classes.
    c. Clumps of trees (2-10) should be left to develop at a slower pace. These clumps will also have a tendency to "beat themselves up" in high wind events, thereby creating better "structure", e.g. large limbs, crooks, school marms, bole damage and decay.
    d. Measure spatial heterogeneity pre-harvest and ensure it is at a minimum, maintained and hopefully increased. Timber cruise data (CV of tree counts per plot) can easily be used to determine pre-harvest spatial heterogeneity. Quick plots performed by contractor or TSA can prove compliance.
    e. Care should be taken to avoid damage to any advanced natural regeneration – these young trees are critical to stand differentiation.
2. **Actively manage for the introduction of new cohorts (GAPS):**
    a. Create small openings (1/2 – 1.5 acres) throughout 10% each harvest unit.
    -Skyline corridors are too narrow and landing openings are not well distributed throughout the units

    b. Actively manage these gaps to ensure the introduction of different tree species and just as importantly early seral species: planting; tubing and mechanical release.
    -Gaps provide early seral habitat within the older "matrix"
    -Monitor the gaps to ensure some trees survive.

3. **Un-thinned areas should be better distributed throughout each unit (SKIPS)**
    a. SKIPS provide both vertical and horizontal diversity within the unit
    b. SKIPS should occupy at least 5% of the area of each unit.
    c. Protect and expand on natural openings within the units.
    d. The riparian reserves as SKIPS may provide some diversity at the landscape level, but do little at the stand level.

4. **Future thinnings will be required keep stands moving towards late seral conditions**
    a. Thin sooner than later – probably no more than 20 year interval.
    b. Second and third thinnings should focus on:
    -Variable Density in "Matrix'
    -Opening up GAP created in first thinning
    -Maintaining existing SKIPS
    -Adding 1 new matrix SKIP in each thinning

Section 12: Stewardship Group Stakeholder Field Trips & Special Meetings

12.1 Hebo Stewardship Group – March 21, 2014

On March 21, 2014, the Hebo Stewardship Group held their annual stewardship group field trip. The two sites that were included in this field trip included a stop at the 1888-111 road to discuss road management issues as well as a stop at Panther Thin, a recent stewardship timber sale.

Hebo Stewardship Group discussing Panther Thin stewardship timber sale

The major topics that were discussed at the first stop included the following:

-Current project plan for road;
-Reasons for road management (decommissioning vs. storage);
-Anticipated impacts on water quality and fisheries;
-Anticipated impacts on public use.

At the second stop, the group discussed the short and long term timeframes of the Panther Thin including: silvicultural prescriptions; management objectives; and their impacts to wildlife, water quality and fisheries.

The group also discussed the thinning gaps associated with the operations including cut/leave tree demonstration, snag and down wood creation. and wind throw concerns.

12.2 Siuslaw Stewardship Group Field Trip – August 28, 2014

The 2014 field trip for the Siuslaw Stewardship Group was held at Siltcoos Beach at the Oregon Dunes.

The group discussed several issues that relate to Snowy plover & dunes restoration including:

[3]

- Snowy plover nest protection
- Predator control issues
- Habitat restoration projects

Siuslaw Stewardship Group at the Oregon Dunes

The group participants made stops at several restoration areas including Old Waxmyrtle sand route, Dunes overlook beach, Waxmyrtle campground, Siltcoos day-use beach and Breach Sand Route.

12.3 Marys Peak Stewardship Group Field Trip – October 17, 2014

The purpose of the Marys Peak Stewardship Group (MPSG) field trip on October 17th was to discuss restoration activities included in the Bridge Thin Stewardship Timber Sale and the watershed education program developed by the Marys River Watershed Council, the City of Corvallis and other partners. The MPSG provided outreach funds for the education program.

Field trip participant discussing operations at Bridge Thin

Key topics discussed during the Bridge Thin tour included, snag & down wood creation, false brome monitoring, seedling planting and road decommissioning. Tour guides for this field trip were Van Decker of B & G logging and Jennifer Ward, City of Corvallis Watershed Program Specialist.

Following the discussion of Bridge Thin, the group discussed the watershed education program that was supported by the MPSG.

12.4 Alsea Stewardship Group Special Meeting – October 21, 2014

In lieu of a field trip for 2014, the Alsea Stewardship Group (ASG) chose to ask Kim Nelson, an OSU Marbeled Murrelet researcher, to give a presentation at their regular monthly meeting. The meeting agenda items included: introductions, updates and announcements, led by Kirk Shimeall.

Marbled murrelet

Following the business agenda, Ms Nelson presented the following topics regarding Marbled murrelets with a focus on:

- Species natural history background;
- Habitat issues facing the murrelet; and
- Potential management strategies to help the species recovery.

Following the presentation, the group discussed the 2014 Coast Range Fund project proposals and Forest Service projects selected for stewardship funding.

APPENDIX A – Stewardship Definitions

The terms used to describe the various aspects of stewardship contracting are defined below.

General Definitions

Biophysical Accomplishments: Land and water management practices that help preserve natural resources or ecosystems.

Integrated Resource Service Contract: The Integrated Resource Timber Contract (IRTC) formats (FS-2400-13 and 13T) were developed for exclusive use in implementing stewardship contracting projects when the value of goods exceeds the value of services. These contract formats combine product removal and service work. Only the Integrated Resource Timber Contract can be used to generate receipts for use on another stewardship contracting project.

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Late Successional Reserve (LSR): This phrase became widely used in 1994, when the Northwest Forest Plan (NWFP) established LSRs on 30 percent of the federal land area within the range of the northern spotted owl (United States Department of Agriculture [USDA] and United States Department of Interior [USDI] 1994). The primary objectives for the LSR land allocation are to "protect and enhance conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth forest related species including the northern spotted owl (USDA and USDI 1994)."

Retained Receipts Projects: Refers to service contracts on land managed by the USFS using funds generated from stewardship contracts. These funds may not be used for USFS salaries, overhead administrative costs or indirect costs; neither may they be used for project planning or analysis. This authority was granted by amendment number 2409.19-2008-7, found in the Forest Service Handbook FSH 2409.19 – Renewable Resources Handbook, chapter 60 Stewardship Contracting, effective October 21, 2008.

Seral Forage Creation: Development of specific plant communities which are beneficial to particular animal species. Typical projects would consist of planting various grass and forbs species that would provide additional food sources for deer and elk.

Sidecast Pullback: The process of moving soil and road material from the downhill side of a gravel road to the uphill side for the purpose of road decommissioning.

Stewardship Contracts: Refers to contracts on land managed by the USFS, using either an Integrated Resource Timber Contract (IRTC), or an Integrated Resource Service Contract (IRS C) as described above.

Wyden Projects: Refers to projects on private and non-federal lands that use stewardship funds. The Wyden Amendment (Public Law 109-54, Section 434) passed on November 1st, 2005 authorizes the USFS to provide funds for projects on private and non-federal lands that benefit the National Forest.

Economic Definitions

Direct Jobs: Includes all industry, industry-contracted and government employees involved in: protection of the commercial forest resource, harvesting, reforestation and tending, mill processing/manufacturing, administration, etc.

Full Time Equivalent (FTE) Jobs: Method of calculating amount of jobs created. The assumption is that there are 2,016 work hours in a year (8 hours a day, 21 work days a month, 12 months a year).

Indirect Jobs: Includes all those involved in the provision of goods and services necessary to support the ongoing operations of the industry, and its direct employees including equipment and part suppliers, electrical power, fuel and chemical suppliers, equipment maintenance shops, etc.

Induced Jobs: All those involved in the provision of goods and services purchased by those directly and indirectly employed and contracted by the industry.

Million Board Feet (MMBF)**:** An acronym used to abbreviate One Thousand Thousand Board Feet or Million Board Feet of timber. This is a unit of measure of harvested timber.

Socioeconomic: A phrase used to discuss the combination of social and economic factors (e.g. a salary of a specific job).

APPENDIX B - Timber Sale Restoration Project Activity FY2014

Timber Sale	Category	Quantity	UoM	Q2	UoM2
Bridge Thin	Invasives Control - Riparian Treatment - Herbicide	120	ac		
Camp Thin	Vegetation Management - Upland Forest Planting	23.8	ac	10350	trees
Camp Thin	Vegetation Management - Snag Creation/Young Trees	346	trees		
Camp Thin	Vegetation Management - Snag Creation/Mature Trees	17	trees		
Camp Thin	Vegetation Management - IRTC Commercial Thinnings	2456	mbf	116	ac
Camp Thin	Vegetation Management - Site Prep - Spraying	23.8	ac		
Lawson Thin	Invasives Control - Meadow, Dunes or Upland Forest – Herbicide	70	ac		
Missouri Thin	Vegetation Management - Snag Creation/Young Trees	432	trees		
Missouri Thin	Vegetation Management - Snag Creation/Mature Trees	51	trees		
Missouri Thin	Vegetation Management - IRTC Commercial Thinnings	4355	mbf	224	ac
Missouri Thin	Vegetation Management - Course Wood Creation/falling trees	432	pcs		
Morris Thin	Vegetation Management - Snag Creation/Young Trees	186	trees		
Morris Thin	Vegetation Management - IRTC Commercial Thinnings	9150	mbf	305	ac
Rock Thin	Vegetation Management - Upland Forest Planting	5	ac	2192	trees
Rock Thin	Vegetation Management - Snag Creation/Young Trees	759	trees		
Rock Thin	Invasives Control - Riparian Treatment - Herbicide	250	ac		
Rock Thin	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	16	pcs		
Rock Thin	Vegetation Management - IRTC Commercial Thinnings	1	mbf	140	ac
Rock Thin	Vegetation Management - Course Wood Creation/falling trees	304	pcs		
Skinner Thin	Vegetation Management - Snag Creation/Young Trees	140	trees		
Skinner Thin	Vegetation Management - IRTC Commercial Thinnings	1	mbf	27	ac
Walker Thin	Vegetation Management - Snag Creation/Young Trees	182	trees		
Walker Thin	Road Work - Decomissioning/Sidecast Pullback	33264	linft		
Walker Thin	Vegetation Management - Course Wood Creation/falling trees	462	pcs		

APPENDIX C - Retained Receipts Restoration Project Activity FY2014

On-Forest Watershed Restoration Projects

Project Number	Project Name	Category	Quantity	UoM	Q2	UoM2
FS-036	SZ Riparian Release in Anadromous Habitat	Vegetation Management - Pre-Commercial Thinning	5	ac		
FS-047	Misery-West Fork Riparian Restoration	Road Work - Roadside Brushing	5000	linft		
FS-058	Amanda's Trail Erosion Mitigation	Road Work - Roadside Brushing	2640	linft		
FS-060	Five Mile Creek Riparian Establishment	Vegetation Management - Seedling Protection	400	trees		
FS-069	Siuslaw Meadow Maintenance	Vegetation Management - Meadow Maintenance - Mowing	37	ac		
FS-073	Fivemile Dike Removal and Large Wood	Stream Lake or Wetland Treatment - Log Placement - Helicopter	150	pcs		
FS-079	Road Storm Mitigation	Road Work - Roadside Brushing	11000	linft		
FS-080	Alsea Boat Ramp Sediment Reduction	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	1	pcs	1000	linft
FS-084	Plover Habitat Improvement	Vegetation Management - Meadow Maintenance - Mowing	40	ac		
FS-085	Fivemile Restoration	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	50	pcs		
FS-087	Rock Creek Silverspot Habitat Restoration	Vegetation Management - Meadow Planting	20	ac	8000	trees
FS-087	Rock Creek Silverspot Habitat Restoration	Invasives Control - Meadow, Dunes or Upland Forest - Manual	1	ac		
FS-087	Rock Creek Silverspot Habitat Restoration	Vegetation Management - Meadow Maintenance - Mowing	20	ac		
FS-088	Meadow Maintenance	Vegetation Management - Meadow Maintenance - Mowing	58	ac		
FS-090	Mary's Peak Meadow Restoration	Invasives Control - Meadow, Dunes or Upland Forest - Manual	1	ac		
FS-091	Grass Creek Culvert Replacement	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	1	pcs		

Project Number	Project Name	Category	Quantity	UoM	Q2	UoM2
FS-092	Shotpouch and Sugarbowl Roads – Maintenance	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	6	pcs		
FS-093	Henerson Creek Road Decomissioning	Road Work - Decomissioning/Sidecast Pullback	14784	linft		
FS-094	CCRD Silverspot Butterfly Habitat Restoration	Vegetation Management - Site Prep – Mechanical	1	ac		
FS-095	CCRD Meadow Maintenance	Vegetation Management - Meadow Maintenance - Mowing	175	ac		
FS-096	ORBIC Plover Nest Protection	T&E Species - Habitat Restoration	400	ac		
FS-097	APHIS-WS Plover Predator Management	T&E Species - Habitat Restoration	500	ac		
FS-098	2014 Fivemile Bell Restoration Phase II	Stream Lake or Wetland Treatment - Log Placement – Helicopter	75	pcs		
FS-099	Snowy Plover Habitat Enhancement (EBG Control)	T&E Species - Habitat Restoration	40	ac		

Off-Forest Watershed Restoration Projects

Project Number	Project Name	Category	Quantity	UoM	Q2	Uo M2
WYA13-14	Big Elk and Sugarbowl Creeks Riparian Restoration	Invasives Control - Riparian Treatment - Herbicide	6	ac		
WYA13-14	Big Elk and Sugarbowl Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Riparian Planting	6	ac	1885	tree s
WYA13-14	Big Elk and Sugarbowl Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	80	pcs		
WYA13-14	Big Elk and Sugarbowl Creeks Riparian Restoration	Vegetation Management - Site Prep - Mechanical	6	ac		
WYA13-14	Big Elk and Sugarbowl Creeks Riparian Restoration	Vegetation Management - Site Prep - Spraying	6	ac		
WYH14-04	Bower Creek Fish Passage Enhancement	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	2	pcs	1320	linft
WYH13-02	Butte Creek Fish Passage	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	1	pcs		
	Fiddle and Morris Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Riparian Planting	22543	trees	3590	linft
WYS14-16	Fiddle and Morris Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Fencing	1188	linft		
WYS14-16	Fiddle and Morris Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Culvert or Bridge Replacement or Repair	2	pcs	3379	linft
WYS14-16	Fiddle and Morris Creeks Riparian Restoration	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	120	pcs	7920	linft
WYA13-15	Flynn Creek LW Placement and Riparian Planting	Stream Lake or Wetland Treatment - Riparian Planting	600	trees	2006	linft
WYA13-15	Flynn Creek LW Placement and Riparian Planting	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	70	pcs	3960	linft
WYA13-15	Flynn Creek LW Placement and Riparian Planting	Vegetation Management - Site Prep - Mechanical	1.5	ac	2006	linft
WYA13-15	Flynn Creek LW Placement and Riparian Planting	Vegetation Management - Seedling Protection	300	trees	2006	linft
WYA13-15	Flynn Creek LW Placement and Riparian Planting	Invasives Control - Riparian Treatment - Manual	1.5	ac	2006	linft

Project Number	Project Name	Category	Quantity	UoM	Q2	Uo M2
WYM4-08	Greasy Creek & Woods Creek Knotweed Control	Invasives Control - Riparian Treatment - Herbicide	1320	ac		
WYM13-11	Greasy Creek Riparian Revegetation	Stream Lake or Wetland Treatment - Riparian Planting	1000	trees	2640	linft
WYM13-11	Greasy Creek Riparian Revegetation	Stream Lake or Wetland Treatment - Fencing	1788	linft		
WYM13-11	Greasy Creek Riparian Revegetation	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	18	pcs		
WYM13-11	Greasy Creek Riparian Revegetation	Vegetation Management - Seedling Protection	500	pcs	1320	linft
WYA13-13	Lincoln County False Brome Control	Invasives Control - Roadside Spraying - Mechanical	10	ac	52800	linft
WYA13-16	Lincoln County Invasives Species Control	Invasives Control - Meadow, Dunes or Upland Forest - Herbicide	30	ac		
WYA13-16	Lincoln County Invasives Species Control	Invasives Control - Riparian Treatment - Manual	325	ac		
WYA12-12	Lincoln SWCD Knotweed Control	Invasives Control - Riparian Treatment - Herbicide	0.5	ac	142560	linft
WYA12-12	Lincoln SWCD Knotweed Control	Stream Lake or Wetland Treatment - Riparian Planting	398	trees	1	ac
WYA12-12	Lincoln SWCD Knotweed Control	Invasives Control - Riparian Treatment - Manual	730	linft		
WYM14-14	Lower Woods Creek Stream Enhancement	Stream Lake or Wetland Treatment - Boulders and/or Log Placement - Excavator	42	pcs		
WYS13-13	Misery Creek Riparian Enhancement	Vegetation Management - Upland Forest Planting	800	trees	8	ac
WYS13-13	Misery Creek Riparian Enhancement	Stream Lake or Wetland Treatment - Riparian Planting	800	trees	2	ac
WYS13-13	Misery Creek Riparian Enhancement	Vegetation Management - Site Prep – Spraying	16	ac	3950	linft
WYM14-13	Old Peak Meadow Habitat Enhancement	Vegetation Management - Pre-Commercial Thinning	3	ac		
WYM14-13	Old Peak Meadow Habitat Enhancement	Vegetation Management - Snag Creation/Young Trees	20	trees		
WYM14-13	Old Peak Meadow Habitat Enhancement	Vegetation Management - Site Prep – Mechanical	1	ac		
WYM14-13	Old Peak Meadow Habitat Enhancement	Vegetation Management - Site Prep – Spraying	3	ac		
WYM13-12	Shriver River False Brome Eradication	Invasives Control - Riparian Treatment - Herbicide	70	ac	21120	linft
WYS12-11	Siuslaw Basin Knotweed Control 2012-13	Invasives Control - Riparian Treatment - Herbicide	147	ac	47520	linft

Project Number	Project Name	Category	Quantity	UoM	Q2	Uo M2
WYS12-12	Siuslaw Riparian Restoration 2012-13	Vegetation Management - Pre-Commercial Thinning	50	ac	28000	linft
WYS13-14	Siuslaw Riparian Restoration 2013-2014	Stream Lake or Wetland Treatment - Riparian Planting	9500	trees		
WYS14-15	Siuslaw Riparian Restoration 2015-2016	Stream Lake or Wetland Treatment - Riparian Planting	9800	pcs	50	ac
WYS14-15	Siuslaw Riparian Restoration 2015-2016	Vegetation Management - Site Prep - Mechanical	4	ac	3960	linft
WYS14-15	Siuslaw Riparian Restoration 2015-2016	Vegetation Management - Seedling Protection	10	ac	5280	linft
WYA14-19	Sugarbowl Creek Riparian Restoration	Vegetation Management - Site Prep - Mechanical	8	ac	7920	linft
WYA14-19	Sugarbowl Creek Riparian Restoration	Vegetation Management - Site Prep - Spraying	8	ac	7920	linft
WYH14-05	Tillamook SWCD Invasive Species Control Project	Invasives Control - Riparian Treatment - Herbicide	6.17	ac		
WYA14-22	Upper Five Rivers Salmon & Elk Habitat Restoration	Vegetation Management - Meadow Planting	9	ac		
WYA14-22	Upper Five Rivers Salmon & Elk Habitat Restoration	Stream Lake or Wetland Treatment - Riparian Planting	800	trees	2.35	ac
WYA14-22	Upper Five Rivers Salmon & Elk Habitat Restoration	Invasives Control - Riparian Treatment - Manual	2.35	ac		
WYA14-22	Upper Five Rivers Salmon & Elk Habitat Restoration	Vegetation Management - Site Prep - Manual	9	ac		
WYM12-10	Upper Greasy Creek Multi Partner Restoration	Stream Lake or Wetland Treatment - Riparian Planting	250	trees	1320	linft