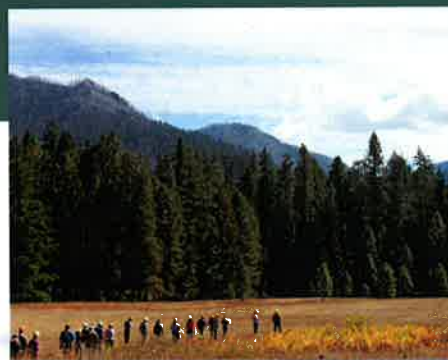


Restoration Contracts and Timber Sales on the Willamette National Forest

Trends and Local Capture, 2011–2015

AUTUMN ELLISON AND HEIDI HUBER-STEARNES

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Executive Summary

Restoration contracts and timber sales to private businesses can help the Forest Service accomplish work on national forests while generating economic activity and social benefits in nearby communities. The extent to which communities realize these benefits depends on the ability of local businesses to bid on and receive contracts and sales. The Southern Willamette Forest Collaborative was interested in understanding the recent contracting and timber sale history on the Willamette National Forest, as well as where contractors and purchasers are located. To address these interests, we used Forest Service restoration service contracting data and timber sales data to examine how the Forest Service contracts with businesses on the forest. For the study period of fiscal years (FY) 2011–2015, we found:

- **The Forest Service issued restoration service contracts worth nearly \$8.8 million on the Willamette National Forest.** Investments in road maintenance were responsible for half the total contract spending. No contracted dollars went to technical pre-implementation activities.
- **71 percent, \$6.4 million, of the restoration service contract investment was awarded to local contractors.** Lane County contractors received the most dollars of any county, while Deschutes County contractors received less than other local counties. Local capture of road maintenance contracts was 89 percent and was responsible for the majority of the local dollars awarded.
- **Businesses located in the Middle Fork Watershed were awarded 11 percent of the service contract dollars on the forest.** The proportion of dollars captured in the watershed increased modestly during the study period, and, similar to awarded contracts in local counties, road maintenance contracts were responsible for the majority of the contract dollars awarded in the watershed.
- **The Forest Service awarded more than \$27.1 million in timber sales on the Willamette National Forest.** More than 95 percent of the total bid value of timber sales went to local purchasers, and Lane County businesses alone purchased 66 percent of the total timber sale value.
- **48 percent of both the timber sale value and volume on the forest originated in the Middle Fork Ranger District.** Businesses located in the Middle Fork Watershed purchased only 0.2 percent of the sales originating in the district, while the large majority—97 percent—was purchased by businesses in local counties but outside the watershed.



Private businesses often play a key role in forest management and restoration efforts on US Forest Service lands. Contracts to private businesses for restoration efforts can include activities such as mechanical tree thinning and slash treatment, riparian or range fencing, invasive weed control, road maintenance, and in-stream aquatic restoration. Timber sales also help the Forest Service accomplish work on national forests. Both restoration contracts and timber sales can positively impact local economies and communities by providing jobs and economic stimulus. The extent to which local communities realize these benefits depends on the amount of work contracted, the type of work contracted, and the ability of local businesses to bid on and receive the work.

Stewardship End Result Contracting, often referred to as stewardship contracting, is a contracting mechanism used by the Forest Service that aims to help “achieve land management goals while meeting local and rural community needs, including contributing to the sustainability of rural communities and providing a continuing source of local income and employment.”¹ Stewardship contracts can be offered for up to 10 years in length and can

bundle multiple contracts to treat a landscape; they typically include both timber sales and restoration service contracts, and consider local community benefit as evaluation criteria in contract offers.

In 2016, the Southern Willamette Forest Collaborative (SWFC) started a stewardship collaboration committee to develop recommendations for stewardship contracts proposed on the Middle Fork Ranger District of the Willamette National Forest. The SWFC, formed in 2014, has the mission, “to bring together interested parties to promote forest management solutions that sustain ecological resiliency and socioeconomic health for the southern Willamette forest area and nearby communities.” To inform their recommendations, the SWFC was interested in understanding how work related to timber and restoration was occurring on the Willamette National Forest, and especially in the Middle Fork Watershed (the geographic focus of the SWFC). The SWFC partnered with the Ecosystem Workforce Program at the University of Oregon to conduct this workforce assessment and learn about recent restoration contract and timber sale history on the Willamette National Forest.

This working paper provides an overview of restoration service contracts and timber sales awarded on the Willamette National Forest from FY 2011 to FY 2015, including overall spending trends, the amounts of spending awarded locally, and awards in the focus area of the Middle Fork Watershed. This assessment provides information to SWFC to inform their understanding of work on the forest that is conducted by private businesses, and where key investments in this work are happening. This information can also serve as a basis for focusing the collaborative's efforts to help the Willamette National Forest plan and assess restoration activities on the forest in ways that could increase benefits in local communities.

Approach

Projects on national forests can be accomplished through a variety of venues, including through Forest Service employees, timber sales and service contracts to private businesses, and agreements with other agencies or non-governmental organizations. For this assessment, we focused on recent timber sales and service contracting patterns with private businesses. Although we did not consider them for this report, federal employment of the local population for forest management and restoration work performed by the agency, as well as agreements with other agencies and organizations, can have significant impacts as well.

We reviewed basic demographic information as background context for the study area and examined fed-

eral data for recent restoration service contract and timber sale history on the Willamette National Forest between FY 2011 to FY 2015. This 5-year study period offers a glimpse into recent contracting history on the forest, while still being able to note annual variability in contract spending and awards between recent years. The analysis years begin after FY 2009 and FY 2010, during which the American Reinvestment Recovery Act (ARRA) influenced federal spending in national forests across the west.

Throughout the assessment, we consider patterns of local capture, or contract/sale dollars that are awarded to local contractors. Based on direction from SWFC, we defined local businesses as those with a business address in one of six counties: Benton, Deschutes, Douglas, Lane, Linn, or Marion. We also review restoration service contract and timber sale award values to businesses in the even more localized area of the Middle Fork Watershed, the geographic focus of the SWFC. We defined Middle Fork Watershed businesses as those with a business address that includes one of six zip codes found in the Middle Fork Watershed (see Table 1, below, and Figure 1, page 4).

Background and context information

We used state and federal sources, including the Oregon Department of Education, American Community Survey, and the Oregon Department of Employment to provide information on basic demographic information at the county level for each of the six local counties as well as at the state level. We list sources below the tables in which the information is presented.

Table 1 Definition of "local" analyses used in assessment

Area in assessment	Geographic definition
Middle Fork watershed contractors	Vendors located in the Middle Fork Willamette watershed – approximated by including the following zip codes: 97431, 97438, 97452, 97455, 97463, and 97492
Local contractors	Vendors located within counties: Benton, Deschutes, Douglas, Lane, Linn, Marion
Nonlocal contractors	All other vendors

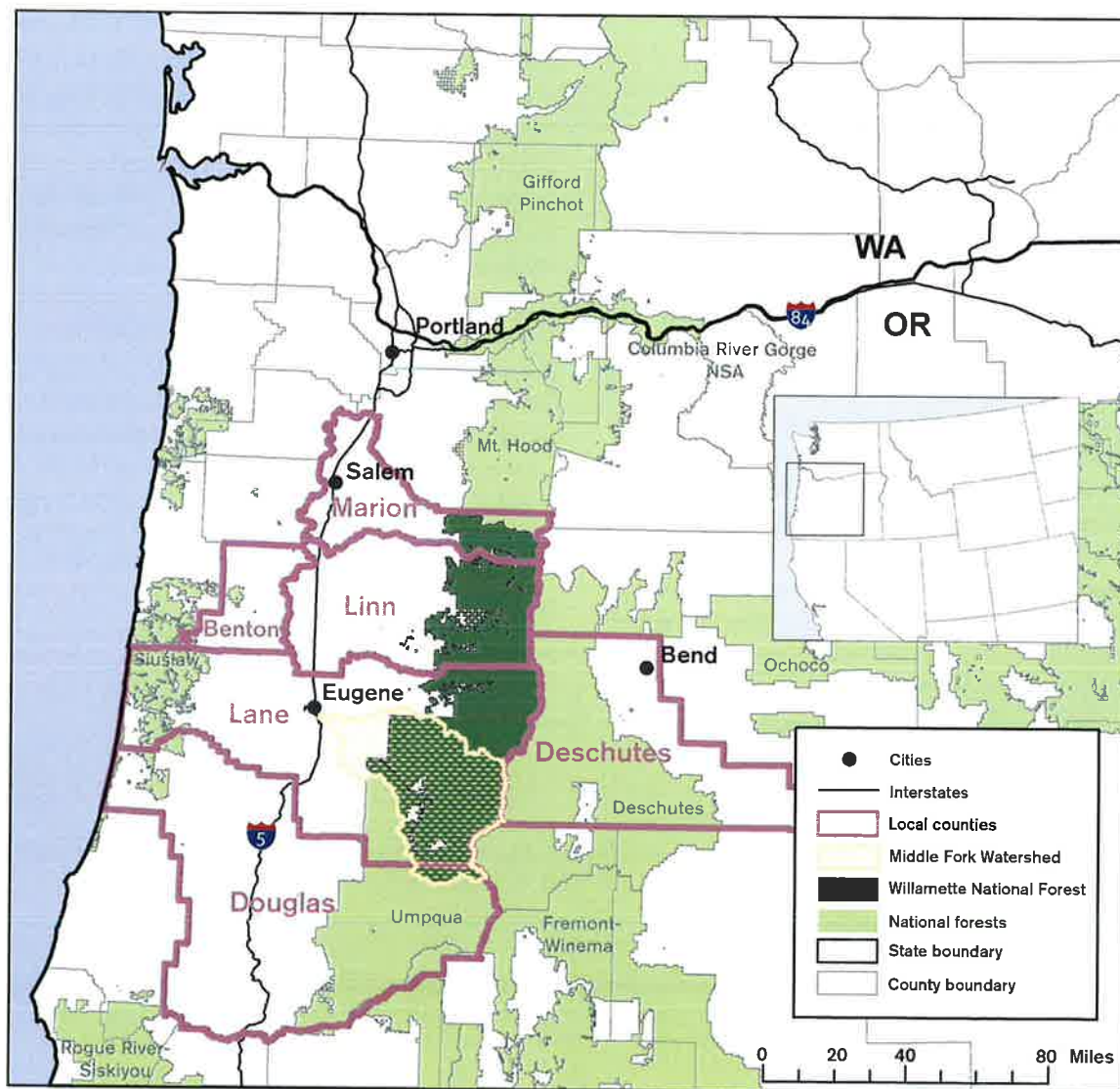
Restoration service contract history and patterns

We used data from USASpending.gov to identify all contracts issued by the Willamette National Forest for restoration work from FY 2011 through FY 2015. We report on: 1) the most common types of restoration service work contracted, 2) the amount contracted over the study period, and 3) the amount awarded to local contractors and contractors in the Middle Fork Watershed. We also considered the differences in contracts awarded between each of the local counties, and the location of nonlocal con-

tracts (e.g. awarded to in-state or regionally located contractors). Federal service contracting data only record awards to primary vendors. Thus, our assessment does not consider the impacts of subcontracting to other contractors (which is often considerable) on where awarded contract dollars end up.

We isolated contracts for restoration work from other service contracts using an established set of Forest Service-issued Product Service Codes (PSCs) related to forest and watershed restoration. These were grouped into five general categories of restora-

Figure 1 Willamette National Forest, local counties, and the Middle Fork Watershed study area



tion work: special studies/analyses (PSC category B), design and engineering (PSC category C), natural resources and conservation (PSC category F), construction of roads and facilities (PSC category Y), and maintenance/repair/alteration of roads and facilities (PSC category Z) (see Table 2, below).

Our initial analysis by these codes showed that contracts in PSC Category B (special studies and analyses for environmental assessments) and PSC Category C (design and engineering) were either zero dollar or negative dollar contracts. These types of contracting entries are often used for accounting purposes, thus no dollars were spent in these categories. The categories do not appear as restoration service contract work types throughout the report.

Initial analysis also showed that within PSC Category F (natural resource and conservation serv-

es), 178 contracts under a single code, "F018: Other forest/range improvements," were responsible for 67 percent of spending in the category, and 42 percent of total spending on the forest during the five years reviewed. To better understand the types of work included in these contracts, we examined the project description field, where contracting officers can include additional contract details and requirements. We searched for key words in the project description field, reviewed the full description information available for each of the 178 contracts, and determined that 85 of the contracts in the F018 PSC Code were explicitly for road maintenance activities. We reclassified these 85 contracts, worth \$1,469,527 million, with other road maintenance contracts in PSC Category Z, "maintenance of roads and facilities," throughout the assessment. We summarized activities described in the remaining 92 non-road maintenance contracts in F018; because

Table 2 Contract categories, restoration product service codes (PSCs), and services included in restoration service contract analysis, Willamette National Forest, FY 2011–2015

Category	PSC Category	Services included in this study and associated PSCs
Special studies and analyses for environmental assessments*	B*	Special studies/analysis- water quality (B533)
Design and engineering*	C*	Landscaping, interior layout, and designing (C211)
Natural resources and conservation	F	Forest-range fire suppression (F003) Forest tree planting services (F005) Seed collection/production services (F009) Tree thinning services (F014) Other wildlife management services (F019) Natural resources/conservation- other (F099) Environmental systems protection- water quality support (F103) Toxic and hazardous substance removal, cleanup, and disposal (F108) Other environmental services (F999)
Other forest/range improvements (non-construction)	F018	Other forest/range improvements (non-construction)
Construction of roads and facilities	Y	Construction of highways, roads, streets, bridges, and railways (Y1LB and Y222) Construction of exhibit design (non-building) (Y1PB) Construct/rec of non-building structures (Y291)
Maintenance of roads and facilities	Z	Repair or alteration of highways/ roads/ streets/ bridges/ railways (Z222) Repair or alteration of highways, roads, streets, bridges, and railways (Z2LB) Repair or alteration of recreation facilities (non-building) (Z2PA)

* Service contracts in PSC categories B and C were either zero dollar or negative contracts, which are often used for accounting purposes, thus no dollars were spent in these categories and they do not appear as contracted work types throughout this report.

these contracted activities did not explicitly belong in a different service category we left them under the original PSC Category F (natural resources and conservation). However, because the contracts described a variety of different contracted work activities and still accounted for a quarter of the total spending, we considered contracts under the F018 code separately from all other Natural Resource and Conservation services codes throughout the assessment.

Timber sale history and patterns

We used data from the US Forest Service's Timber Information Manager (TIM) database to identify all timber sales issued by the Willamette National Forest from FY 2011 through FY 2015. We summarized timber sale patterns including the sale value and volume awarded in timber sales: 1) each year, 2) to local versus nonlocal purchasers, 3) to purchasers with zip codes located in the Middle Fork Watershed specifically. TIM data reports include the ranger district of each sale; our analysis of capture within the Middle Fork Watershed considers sales

sales that both originated from the Middle Fork Ranger District and were awarded to purchasers in the Middle Fork Watershed zip codes.

Throughout the report, we used winning-bid sale value, as reported in the TIM database, for timber value. Winning-bid sale value is the dollar value that the purchaser of a sale in the database paid for the timber included in the sale, and was the most consistently reported sale data available for this analysis. We shorten "winning-bid sale value" to "bid value" throughout this report.

In some cases, zero dollar timber sales were recorded in the database; we did not include these sales in our analysis. We were not able to consider the impacts of timber sale subcontracting for cutting, hauling, processing, or other subcontracted activities. Although subcontracting often has a significant impact on how federal timber sales are completed and processed, TIM data only include transactions between the Forest Service and primary purchasers of timber sales.



Background: Local social and economic context

The Willamette National Forest covers nearly 1.7 million acres and spans the Cascade Mountain crest, containing forestland on both the east and west side of Oregon. For this analysis, local contractors are defined as those with businesses in one of six counties located near the Willamette National Forest: Benton, Deschutes, Douglas, Lane, Linn, and Marion counties. Although all near the forest, these counties have very different socioeconomic conditions. For context, we show basic demographic metrics for each county as well as the state average to highlight these differences (see Table 3, below).

Deschutes County, for instance, has a median household income that is nearly the same as the state average; this is greater than the other counties, which are all below the state average. Douglas County has the greatest unemployment rate, the lowest median income, and the highest school dropout rate of the local counties. Douglas County also has the oldest population with a median age that is five to 14 years greater than other local counties and nearly eight years greater than the state average. Benton County, in contrast, the youngest of the local counties, has a median age more than six years below the state average.

Table 3 Comparison of key socioeconomic characteristics in local counties

Characteristic	Benton County	Deschutes County	Douglas County	Lane County	Linn County	Marion County	Oregon State
Unemployment rate (2011-2015)	8.6%	9.4%	12.2%	9.9%	10.6%	10.7%	9.3%
Median household income (2011-2015)	\$49,802	\$51,223	\$41,312	\$44,103	\$45,644	\$48,432	\$51,243
Percent of population in poverty (2011-2015)	8.9%	10.5%	13.9%	11.8%	13.7%	14.2%	11.2%
Median age (2011-2015)	32.7	41.9	46.9	39.3	39.5	35.8	39.1
School enrollment (change from previous year) (2013/2014 to 2014/2015)	0.42%	1.17%	-0.51%	0.61%	1.70%	0.93%	0.90%
Dropout rate (2013/2014 to 2014/2015)	2.07%	3.11%	8.47%	4.73%	4.18%	5.62%	4.26%
Percent of students eligible for free and reduced lunch (2013/2014 to 2014/2015)	38.31%	47.83%	61.47%	53.19%	44.10%	61.73%	49.74%
Population	86,495	166,622	107,194	357,060	118,971	323,259	3,939,233

Source(s): American Community Survey 2015 estimate tables, Oregon Department of Education

Table 4 Selected employment sectors in local counties, 2016

Economic sector	Benton County	Deschutes County	Douglas County	Lane County	Linn County	Marion & Polk Counties*	Oregon State
Mining, logging, and construction	--	7.78%	6.84%	4.63%	7.37%	6.65%	5.03%
Manufacturing	6.21%	6.62%	12.41%	8.50%	17.31%	8.50%	10.41%
Durable goods	5.72%	4.19%	11.10%	5.63%	13.05%	3.71%	7.35%
Wood product manufacturing	--	--	8.04%	2.06%	3.90%	--	1.26%
Trade, transportation, and utilities	10.42%	19.29%	18.79%	18.94%	21.51%	16.23%	18.79%
Professional and business services	10.35%	12.22%	10.80%	11.25%	7.19%	8.80%	12.89%
Education and health services	15.98%	16.62%	13.31%	16.44%	13.32%	16.23%	14.67%
Leisure and hospitality	10.16%	14.02%	8.82%	10.63%	8.12%	8.80%	10.51%
Federal government	1.22%	1.16%	3.81%	1.06%	0.72%	0.78%	1.51%
State government	28.05%	1.73%	3.11%	8.94%	3.18%	13.83%	4.95%
Local government	6.64%	9.77%	14.64%	9.56%	14.22%	11.80%	10.69%
Local education	3.67%	5.80%	7.64%	5.19%	9.45%	6.89%	5.71%

Source(s): Oregon Department of Employment, 2016

* Some counties do not report employment in all economic sectors. Data reflected above are for counties that reported employment rates in the economic sectors listed. Cells are left empty in places where counties did not report data.

The economies of the counties are also different (see Table 4, above). For example, Deschutes County has a higher portion of its population employed in the professional and business services sector and leisure and hospitality sector than the other counties. Benton and Marion/Polk Counties have a much higher proportion employed in state government than other counties or the state as a whole, likely due to proximity to Salem, the state capital. Douglas County has a greater proportion of wood product manufacturing, while Linn County has a higher portion in manufacturing.

It is important to consider these differences in socioeconomic demographics and economic sectors when reviewing and comparing contracting awards and local capture between counties. While widespread economic impacts from USFS contracts with private businesses are unlikely to affect these broad social and economic metrics at the state and county level, this information can help indicate where certain types of industries (e.g. natural resource based trades) have more a presence. For this reason, they offer relevant contextual information to consider alongside the workforce assessment results.

Results

Restoration service contracts on the Willamette National Forest

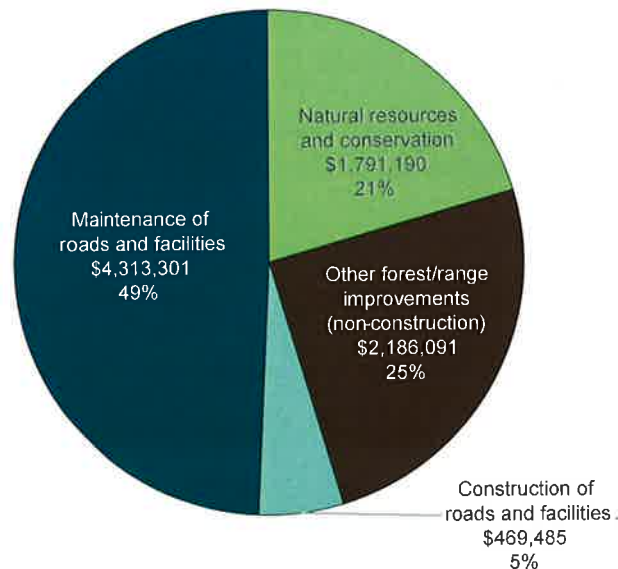
From FY 2006 to FY 2015, the U.S. Forest Service invested a total of \$8.76 million in service contracts for restoration activities on the Willamette National Forest, an average investment of \$1.75 million per year. About half of the total investment was on contracts for the maintenance of roads and facilities (see Figure 2, below). Much less of the investment, (five percent) was on the construction of roads and facilities. Natural resources and conservation service contracts were responsible for the remainder of the investment, accounting for 45 percent of the total spending on restoration service contracts. More than half the spending for natural resource and conservation services —one quarter of the total spending—was listed under a single Forest Service-issued service code “F018: Other forest/range improvements (non-construction).” There were no

contract dollars awarded in either of two restoration service contract categories: special studies and analyses, and design and engineering. Contracts in these categories are typically for activities associated with pre-implementation design and analysis of projects such as stand surveys, resource monitoring, or environmental assessments. This suggests that restoration service contract spending to private businesses during the study period was entirely for implementation of projects.

“Other forest/range improvements (non-construction)”

To better understand the types of work supported under the single contract activity code of “Other forest/range improvements (non-construction),” we performed a more detailed analysis of contracts listed under the code. We identified 92 contracts worth nearly \$2.2 million in this “other” category, as noted above and in Figure 2 (below). We re-

Figure 2 Restoration service contract dollars by work type on the Willamette National Forest, FY 2011–2015



Restoration service contract total: \$8,760,068

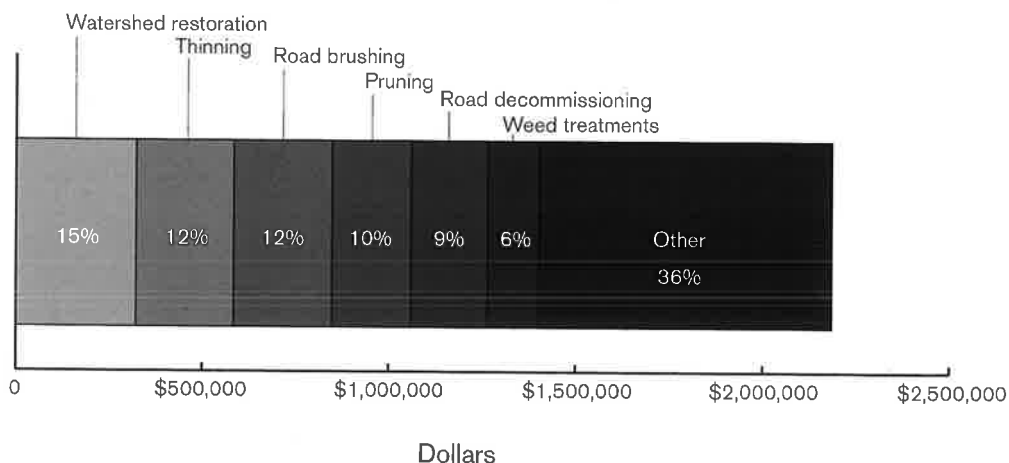
viewed the project descriptions of these contracts, where contracting officers can enter additional details about contract requirements and scope of work, and grouped contracts into six “types of work” that were described (see Table 5 and Figure 3, below). Together, these six work types described 64 percent of spending in the category. Fifteen percent of the spending in the F018 “other” category was for contracts described as either watershed or creek restoration; twelve percent was for brush or tree thinning contracts, another twelve percent was

for pruning contracts, nine percent was for road decommissioning contracts, and six percent was for noxious weed, invasive weed, or weed treatment contracts. Of the remaining 36 percent, there were small contracts for tree planting, ditch cleaning, vegetation management, and several others, but none contributed significantly to the spending in the category, and the large majority of the remaining contract descriptions did not provide enough detail to determine the type of work required in the contract.

Table 5 Work activities included in the F018 service code for restoration contracts, based on contract descriptions, by year, on the Willamette National Forest, FY 2011–2015

FY	Watershed restoration	Thinning	Road brushing	Pruning	Road decommissioning	Noxious weed treatments	Other
2011	\$0	\$46,144	\$15,037	\$47,290	\$111,536	\$4,125	\$65,211
2012	\$0	\$69,985	\$45,831	\$0	\$4,090	\$0	\$177,517
2013	\$173,078	\$79,099	\$19,640	\$20,647	\$18,286	\$49,426	\$172,996
2014	\$129,778	\$42,268	\$115,573	\$87,955	\$10,300	\$40,467	\$186,022
2015	\$20,390	\$22,674	\$67,173	\$56,260	\$61,825	\$43,623	\$181,846
Total	\$323,246	\$260,170	\$263,254	\$212,152	\$206,037	\$137,641	\$783,591
Percent of total	15%	12%	12%	10%	9%	6%	36%

Figure 3 Work activities included in the F018 service code for restoration service contracts, based on contract description on the Willamette National Forest, FY 2011–2015



Annual variation in spending

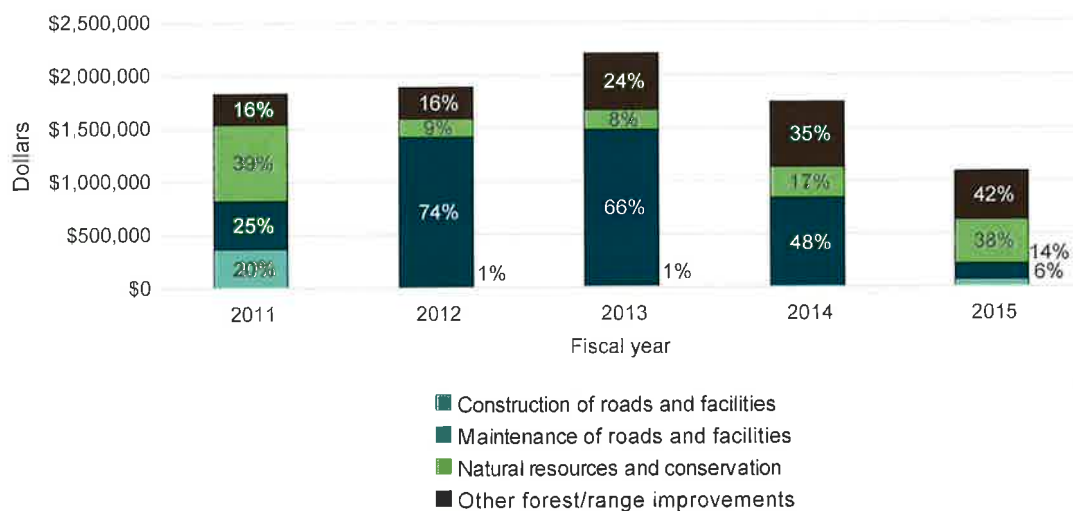
Annual spending on restoration service contracts fluctuated over the five-year period from a low of \$1.1 million in FY 2015 to a high of \$2.2 million in FY 2013 (see Figure 4, below). Fluctuations are somewhat linked with variations in spending on the maintenance of roads of facilities contracts, the largest category of spending during the study period. Contract spending in total and contract spending on roads and facilities maintenance were both greatest in FY 2013 and lowest in FY 2015. Spending in every category varied between years, however. For instance, even though spending on the maintenance of roads and facilities contracts was responsible for the majority of contract spending each year from 2011 to 2014, in 2011 and 2015 maintenance of roads and facilities contracts were just 25 and 14 percent of the annual restoration service contract dollars spent, respectively. Meanwhile, the proportion spent on natural resources and conservation services and the construction of roads and facilities increased in FY 2011 and 2015 relative to other years.

Often, spending each year followed large projects. For example, contract spending on construction of roads and facilities contracts occurred during four of the five fiscal years reviewed, but most of it (79 percent) was awarded during a single year, FY 2011. During this year, a single contract worth

\$369,551 for bridge construction accounted for 20 percent of the total restoration service contract dollars awarded. This shows how a large project can have a significant impact for a contractor or contractors during a single year. This is so even if the contracted work category, like construction of roads and facilities, which only accounted for five percent of all contract spending, does not appear as a major player in the contract spending portfolio overall.

Spending in natural resources and conservation services varied from \$175,000 (FY 2012) to \$723,000 (FY 2011) per year, and from 8 percent to 40 percent of the total spending in each year. Dollars awarded under “other natural forest/range improvements (non-construction)” grew consecutively from FY 2011 until FY 2014, when they totaled more than \$600,000, and accounted for more than 35 percent of the Willamette National Forest’s yearly spending on restoration contracts. The proportion of dollars awarded in this category increased even more consistently from the beginning to the end of the study period: in FY 2011 16 percent of awarded dollars were for contracts in this “other” category, and by 2015, it was 42 percent. It is not clear why progressively more dollars were awarded under this code each year, but, because contracts awarded under the code described a wide variety of services, clarity about the exact types of restoration services contracted decreases as the study period progresses.

Figure 4 Restoration service contract spending by year and work type on the Willamette National Forest, FY 2011–2015



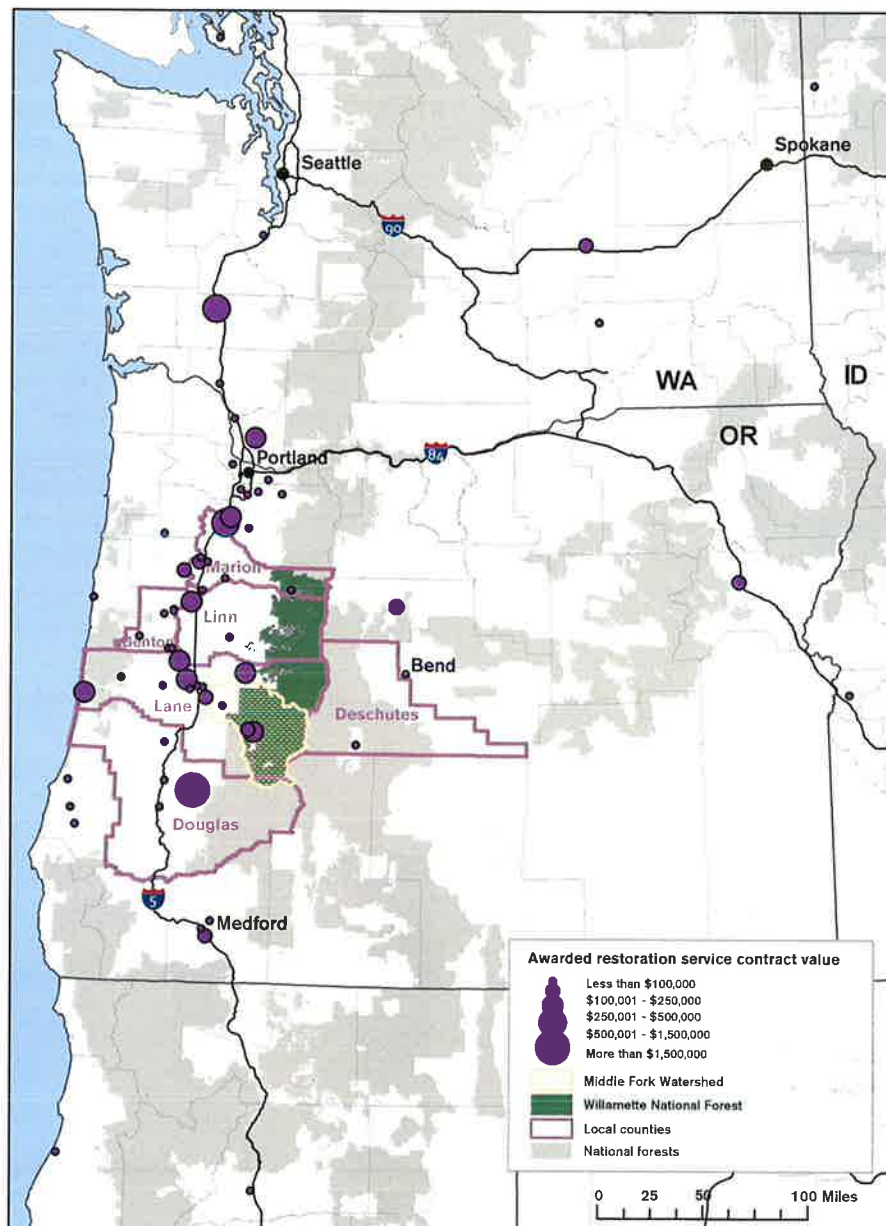
Local capture

Local capture describes the amount of the total restoration service contract spending in any year or work type that went to businesses located in six counties considered local to the Willamette National Forest (Benton, Deschutes, Douglas, Lane, Linn, and Marion counties). Overall, local contractors were awarded \$6,363,021, or 73 percent, of the

total restoration service contract investments from FY 2011 to FY 2015. Sixty percent of the locally awarded dollars were for the maintenance of roads and facilities.

An additional \$1.1 million (13 percent) in restoration service contracts was awarded to contractors located elsewhere in the state of Oregon. \$1.18 mil-

Figure 5 Restoration service contract dollars by contractor location on the Willamette National Forest, FY 2011–2015



Note: 99.7% of awarded contract value is shown on the map. Five contracts worth \$25,291 were awarded outside the map extent in Florida, Missouri, New York, and Virginia.

lion (13 percent) was awarded to Washington State contractors, and \$81,000 (less than one percent) was awarded to states outside of Oregon and Washington (see Figure 5, below). It is important to keep in mind that this distribution of awarded dollars does not account for any subcontracting that may occur after a contract is awarded to a business. More or less capture in any area may have happened as a result of subcontracts with other businesses to accomplish contracted work.

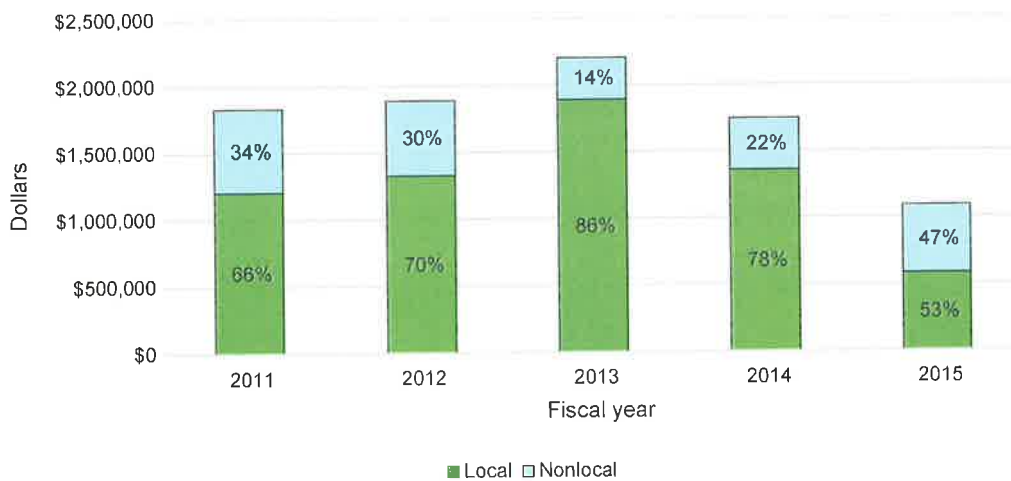
Local capture of awarded restoration service contract dollars varied somewhat across years, but the dollars awarded to local contractors always

made up the majority of these award in all years (see Table 6 and Figure 6, below). Local contractors captured as much as 86% of all service contract dollars, which happened in FY 2013. The high capture rate during FY 2013 is particularly noteworthy because it also occurred during the year with the greatest restoration service contract spending. This suggests that, at least from some types of work, local capacity is sufficient to capture nearly all the contract spending, even in years with relatively high spending. By contrast, the year with the least total spending (FY 2015) also saw the lowest proportion of local capture at just 53 percent.

Table 6 Local capture of restoration service contract spending on the Willamette National Forest by year, FY 2011–2015

FY	Total restoration service contract value awarded	Contract value awarded to local businesses	Local capture
2011	\$1,831,996	\$1,206,929	66%
2012	\$1,890,453	\$1,327,020	70%
2013	\$2,205,673	\$1,890,689	86%
2014	\$1,744,701	\$1,358,056	78%
2015	\$1,087,245	\$580,327	53%
Total	\$8,760,068	\$6,363,021	73%

Figure 6 Local capture of restoration service contract spending on the Willamette National Forest by year, FY 2011–2015



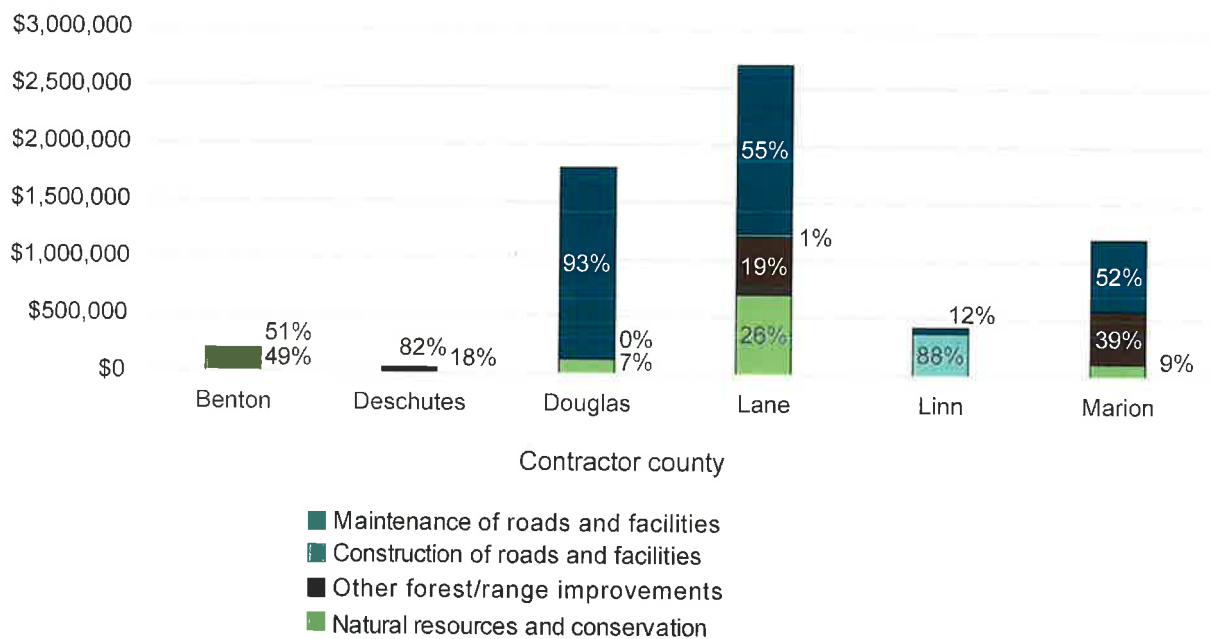
Differences between local counties

The amount and type of restoration service contract work awarded to each of the local counties differed. Contractors located in Lane County were awarded more contract dollars overall (more than \$2.7 million) than any other county, receiving 42 percent of the locally-awarded dollars and 31 percent of the total service contract dollars awarded anywhere from FY 2011 to FY 2015 (see Figure 7, below). Douglas and Marion Counties both received more than \$1 million during the five years (\$1.8 million and \$1.2 million, respectively). For each of these counties, road maintenance contracts accounted for the most value, and contractors from these counties

were awarded 87% of all road maintenance contract dollars on the forest during the study period. For Douglas County in particular, road maintenance contracts were particularly important: 93 percent of contract dollars awarded in Douglas County were for road maintenance services.

Conversely, Deschutes County contractors received just one half of one percent of total contract dollars and Benton County contractors received two percent. In both of these counties, no businesses were awarded any road maintenance contracts, and the majority of the relatively small local capture by businesses in these counties was for other forest/

Figure 7 Restoration service contract dollars by county and work type on the Willamette National Forest, FY 2011–2015



range improvement services. In Linn County, local capture was just shy of \$420,000, and 88 percent of this (\$370,000) was to a single contractor for a single road construction contract in FY 2011. The remaining 12 percent in Linn County was for four road maintenance contracts.

In total, 27 counties received restoration service contract dollars from the Willamette National Forest from FY 2011–2015. Five of the six local counties except Deschutes were among the top ten counties to receive restoration service contract dollars during the study period (see Table 7, below). Lane,

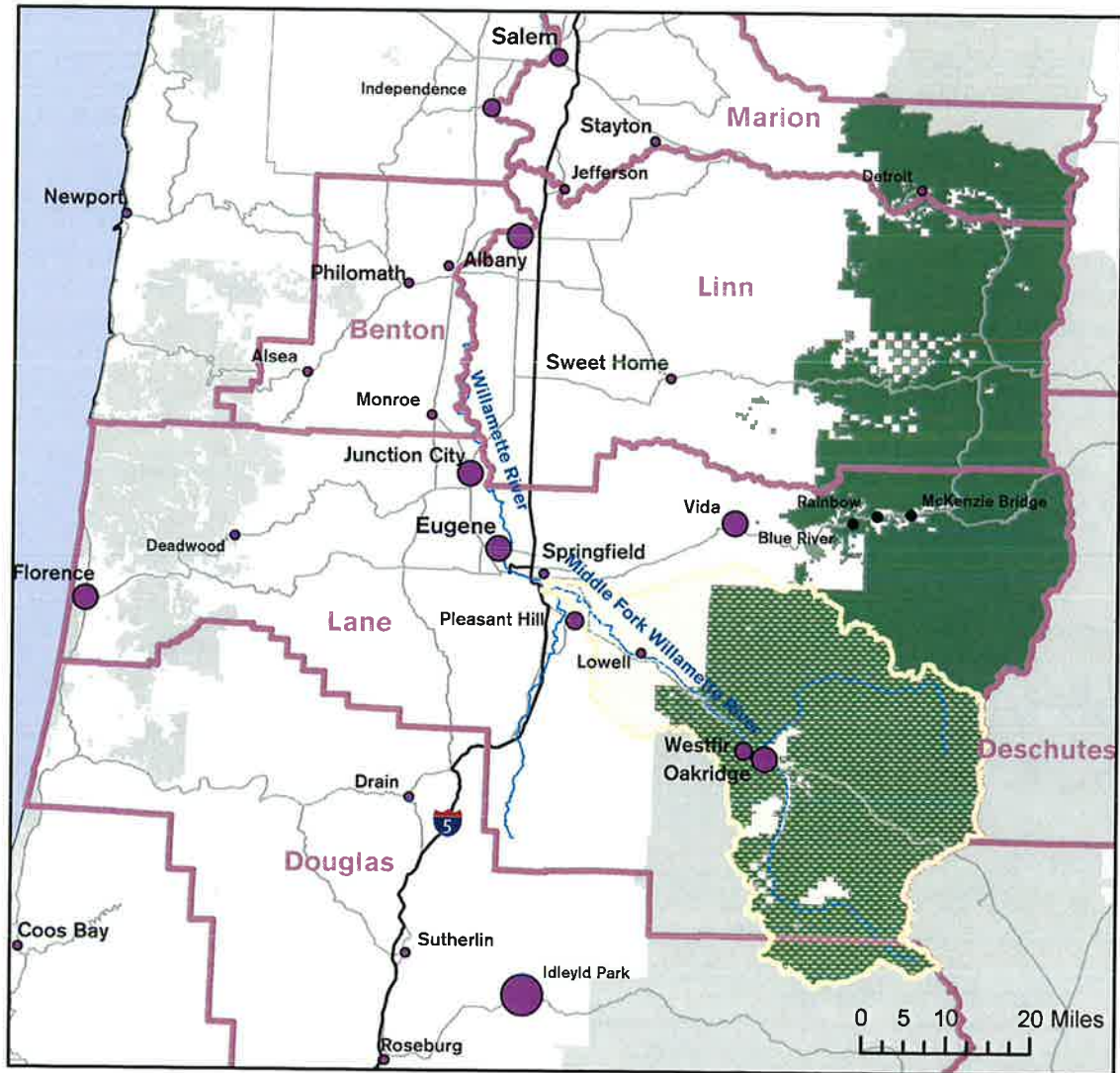
Douglas, and Marion counties were awarded the most dollars. Deschutes County, which was not in the top ten counties receiving restoration service contract dollars, received \$37,630, 0.4 percent of the restoration service dollars awarded. Of the five nonlocal counties in the top ten, three were in Oregon and two were in Washington State; the Washington State contractors did not receive any contracts in either FY 2014 or FY 2015. Altogether, the top ten counties received 89 percent of the total restoration service contract value on the Willamette National Forest from FY 2011–2015.

Table 7 Top 10 counties receiving restoration service contract dollars on the Willamette National Forest, FY 2011–2015*

County	2011	2012	2013	2014	2015	County total	Percent of total dollars
Lane, OR	\$568,229	\$414,514	\$585,321	\$609,782	\$523,787	\$2,701,634	31%
Douglas, OR	\$46,959	\$626,821	\$981,495	\$145,089	--	\$1,800,363	21%
Marion, OR	\$115,931	\$217,120	\$301,263	\$562,748	--	\$1,197,062	14%
Lewis, WA	\$336,295	\$143,111	\$51,340	--	--	\$530,746	6%
Linn, OR	\$399,781	\$20,490	-\$677	--	--	\$419,594	5%
Clark, WA	--	\$330,437	--	--	--	\$330,437	4%
Polk, OR	\$58,908	\$15,253	--	\$87,955	\$56,260	\$218,376	2%
Baker, OR	\$15,037	--	\$32,920	\$86,309	\$67,173	\$201,439	2%
Benton, OR	\$69,322	\$29,436	\$23,286	\$40,437	\$36,150	\$198,631	2%
Jackson, OR	\$17,343	--	\$20,647	\$42,268	\$87,568	\$167,826	2%
Total	\$1,627,805	\$1,797,182	\$1,995,596	\$1,574,588	\$770,938	\$7,766,108	89%

* Counties are listed from highest to lowest. Local counties are highlighted.

Figure 8 Communities and restoration service contracts awarded near the Middle Fork Watershed from the Willamette National Forest, FY 2011–2015



Middle Fork Watershed contractors

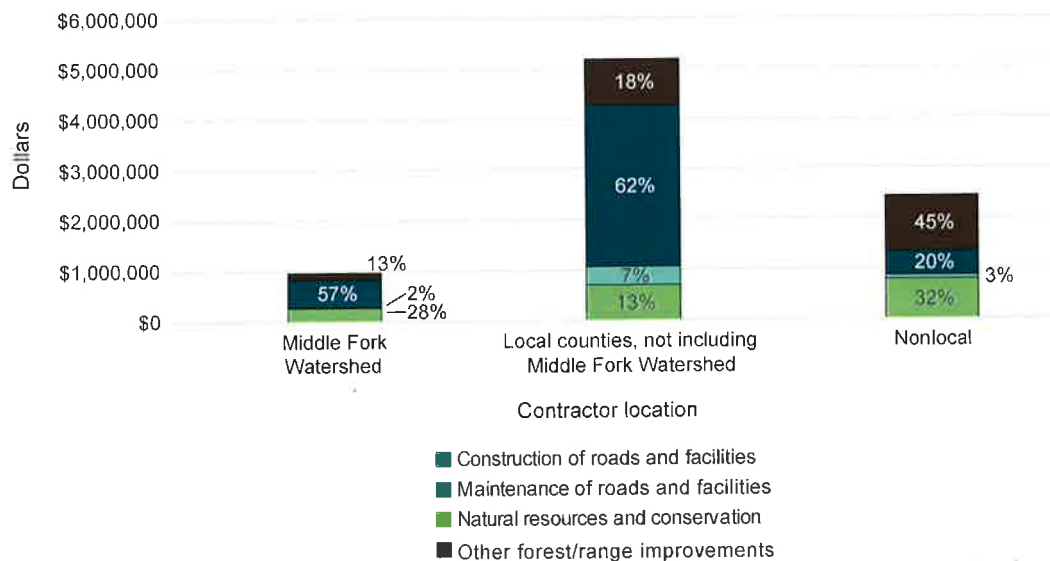
We looked at the amount of restoration service contracting on the forest that went to vendors in the Middle Fork Watershed, defined as vendors with zip codes 97431, 97438, 97452, 97455, 97463, or 97492. The Oregon communities located in this area are: Dexter, Fall Creek, Pleasant Hill Oakridge/Westfir, and Lowell (see Figure 8, page 16). Contractors in the Middle Fork Watershed received \$984,969 in service contracts during FY 2011–2015. This represents 15 percent of the locally awarded dollars and 11 percent of total service contract dollars on the Willamette National Forest during the study

period (see Table 8, below). The proportion of service contract dollars going to contractors in Middle Fork Watershed increased from 9 percent of total service contract dollars in FY 2011 and FY 2012, to 12 percent in FY 2013, dipping back down to 10 percent in FY 2014, but then going up to 19 percent in FY 2015. Of the spending awarded to Middle Fork Watershed contractors, 57 percent (\$557,000) was for road maintenance contracts (see Figure 9, below). Twenty-eight percent was for natural resource and conservation services, 13 percent was for “other” natural resources and conservation services, and 2 percent was for road and facilities construction.

Table 8 Restoration service contract spending by year and contractor location on the Willamette National Forest, FY 2011–2015

FY	Amount awarded in MF Watershed	Percent awarded in MF Watershed	Amount awarded elsewhere in local counties	Percent awarded elsewhere in local counties	Amount awarded nonlocally	Percent awarded nonlocally	Total
2011	\$163,397	9%	\$1,043,532	57%	\$625,067	34%	\$1,831,996
2012	\$177,129	9%	\$1,149,891	61%	\$563,432	30%	\$1,890,453
2013	\$264,558	12%	\$1,626,131	74%	\$314,984	14%	\$2,205,673
2014	\$171,191	10%	\$1,186,865	68%	\$386,645	22%	\$1,744,701
2015	\$208,695	19%	\$371,632	34%	\$506,918	47%	\$1,087,245
Total	\$984,969	11%	\$5,378,052	61%	\$2,397,047	27%	\$8,760,068

Figure 9 Value of service contracts by work type and contractor location on the Willamette National Forest, FY 2011–2015



Timber sales on the Willamette National Forest

From FY 2011 to FY 2015, the Forest Service awarded timber sales with a total bid value of more than \$27 million on the Willamette National Forest, resulting in a timber volume sold of 377,093 thousand board feet (MBF). Bid values of these sales ranged from a low of \$3.3 million in FY 2015 to a high of \$7 million in FY 2014 (see Table 9, below). Nearly all—99 percent—of the bid value of sales was for sawtimber. Non-sawtimber products included fuelwood, grass, limb/bough, and non-saw timber; all together these non-sawtimber products accounted for \$348,511, or just over one percent of

the total timber sale bid value during the study period, and two percent of the total volume sold (7,887 of 377,093 MBF).

Local capture

Nearly all of the total timber sale bid value—more than 95 percent—was awarded to purchasers located in the six local counties (see Figure 10, below, and Figure 11, page 19). In total, \$25,905,746 of timber was sold to local purchasers. Just 4.6 percent of the total bid value went to nonlocal purchasers, all of which were in either Oregon (Oregon nonlocal contractors were awarded 3.1 percent of total bid value sold; \$848,987) or Washington State (Washington State contractors were awarded 1.4 percent

Table 9 Timber sale bid value and volume sold by year on the Willamette National Forest, FY 2011–2015

FY	Sawtimber bid value	Non-sawtimber bid value	Total bid value of sales	Sawtimber volume sold (MBF)	Non-sawtimber volume sold (MBF)	Total volume sold (MBF)
2011	\$6,216,267	\$119,332	\$6,335,599	60,114.58	1,375.24	61,489.82
2012	\$4,841,622	\$85,152	\$4,926,774	72,738.81	1,402.74	74,141.55
2013	\$5,583,282	\$67,852	\$5,651,134	83,067.22	1,455.66	84,522.88
2014	\$6,879,688	\$75,425	\$6,955,113	78,178.43	1,640.52	80,234.94
2015	\$3,276,213	\$750	\$3,276,963	72,076.42	1,992.52	76,703.49
Total	\$26,797,072	\$348,511	\$27,145,583	366,175.46	7,886.68	377,092.68

Figure 10 Local capture of timber sale bid value on the Willamette National Forest, FY 2011–2015

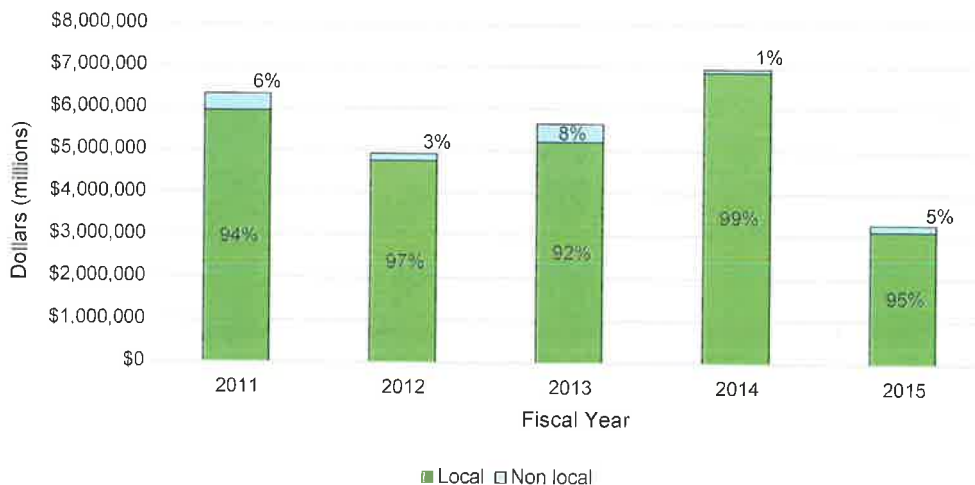
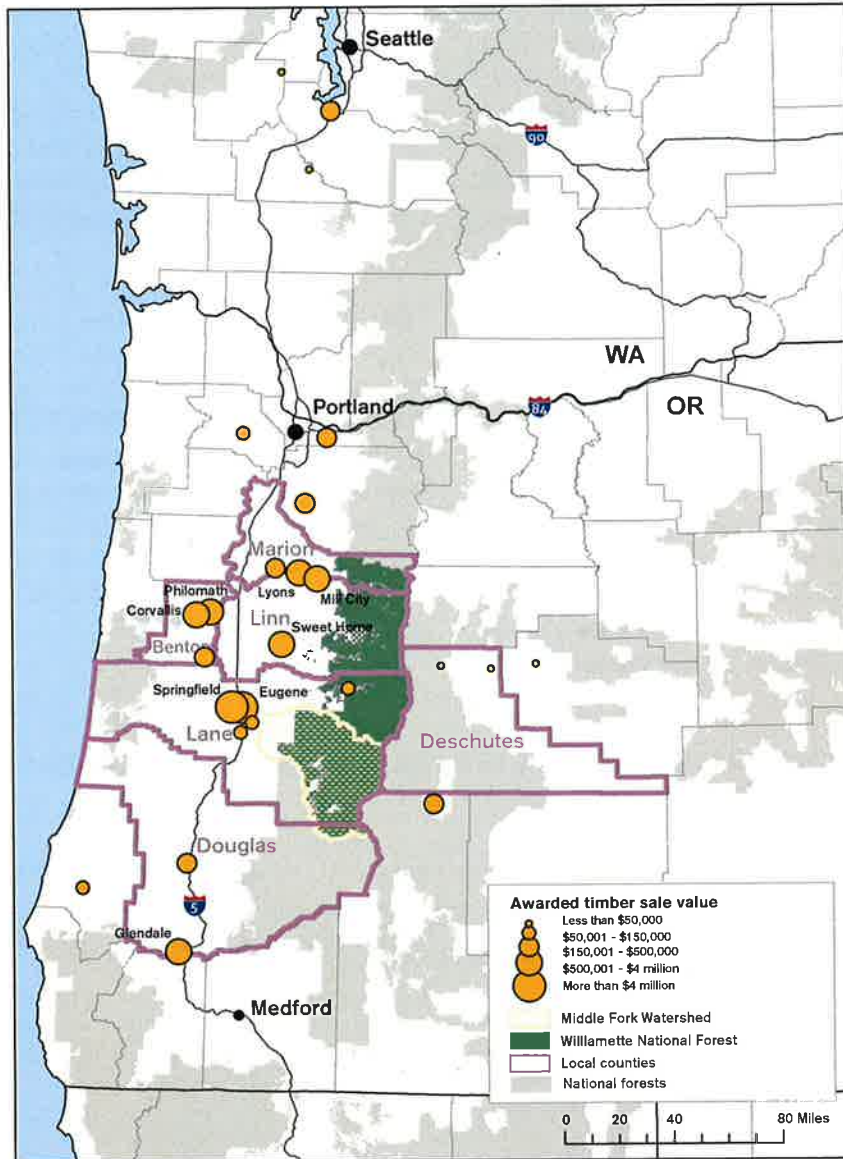


Figure 11 Timber sale value awarded to purchaser locations on the Willamette National Forest, FY 2011–2015



Note: 98.5% of awarded timber sale bid value is shown on the map. Three additional timber sales worth \$397,732 were awarded outside the map extent in Washington State.

of total bid value sold; \$390,850). Local capture of the bid value each year was at least 92 percent. The Willamette National Forest sold the most timber by bid value during the study period in FY 2014, and local purchasers also captured the highest proportion—99 percent and just shy of \$6.8 million—of the total bid value during FY 2014.

The analysis of timber sales and purchaser locations only takes into account the location of the sale’s awarded purchaser and the value for each

sale, and not how purchasers subcontracted after sales were awarded. Although Forest Service timber sales data does not show how these timber sales may influence businesses and capacity in other places due to subcontracting, we know that subcontracting of sales is common in many places for cutting, hauling, processing, and other services after the timber sale is awarded. Subcontracting practices should be considered when interpreting timber sales data for the study area.

Differences between local counties

Between the local counties, there was again considerable variability in how much of the total value businesses in each county purchased, and some similarities to patterns of local capture for service contracts. Like with the capture of restoration service contracts, Lane County purchasers captured the greatest value from timber sales, and Deschutes County was the only local county not to make the top ten counties based on the value of purchased timber (see Table 10, below). This pattern, however, was even more pronounced for timber sale purchases. Lane County businesses purchased not just the most of any county, but a considerable majority—66 percent—of the value of the sales on the forest during the study period. Deschutes County businesses were awarded a half of a percent of the total service contract dollars, but only 0.03 percent of the total timber sale bid value. Following Lane County for the greatest bid value purchased were, in order: Linn County (20 percent), Benton County

(6 percent, and the only other county besides Lane to have purchases during each fiscal year), and Douglas County (3 percent). Marion County made the top ten counties in sixth place, but like all of the counties after Douglas, purchasers in the county were responsible for one percent or less of the total bid value sold, even though there were modest purchases in the county during four of the five fiscal years reviewed.

Middle Fork Watershed purchasers

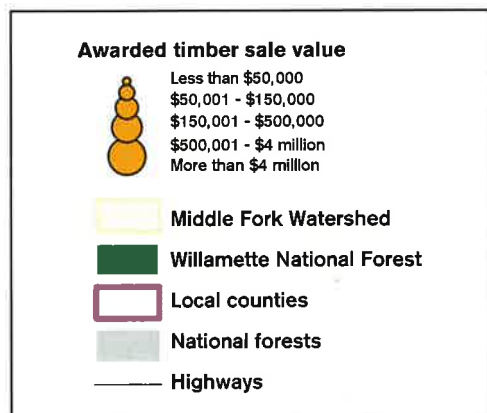
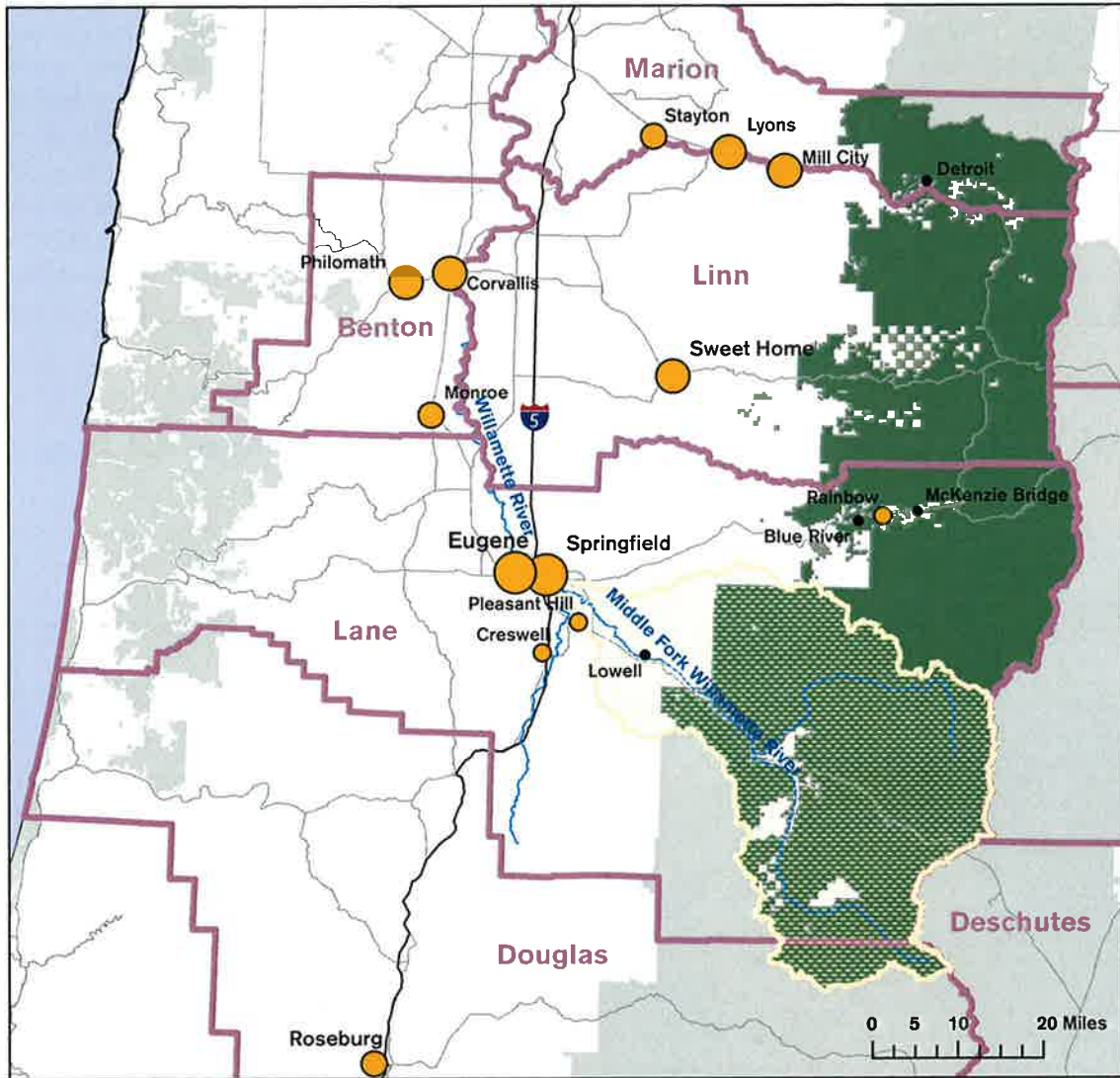
We looked at the amount of the timber sale bid value on the Willamette National Forest awarded to contractors in the Middle Fork Watershed (see Figure 12, page 21). Purchasers in the Middle Fork Watershed were awarded \$145,321 in timber sales, 0.5 percent of the total timber value sold on the forest during FY 2011–2015. No timber sales were awarded to purchasers in the Middle Fork Watershed during FY 2013, 2014, or 2015.

Table 10 Top ten counties by total bid value of timber sales purchased from the Willamette National Forest, FY 2011-2015

County	2011	2012	2013	2014	2015	County total	Percent of total dollars
Lane	\$4,055,663	\$3,214,785	\$3,136,810	\$4,498,628	\$2,983,199	\$17,889,086	66%
Linn	\$1,314,505	\$1,505,140	\$986,985	\$1,552,009	--	\$5,358,638	20%
Benton	\$306,902	\$1,591	\$517,372	\$628,252	\$133,781	\$1,587,898	6%
Douglas	--	--	\$539,261	\$162,134	--	\$701,396	3%
Pierce, WA	--	--	\$372,850	--	--	\$372,850	1%
Marion	\$264,108	\$26,983	\$30,003	\$38,665	--	\$359,759	1%
Klamath	\$324,275	--	--	--	--	\$324,275	1%
Multnomah	\$70,005	\$47,132	\$66,832	\$56,600	--	\$240,569	1%
Clackamas	--	\$40,763	--	--	\$159,233	\$199,997	1%
Coos	--	\$52,360	--	--	--	\$52,360	0.2%
Total	\$6,335,458	\$4,888,754	\$5,650,114	\$6,936,288	\$3,276,213	\$27,086,827	99.8%

* Counties are listed from highest to lowest. Local counties are highlighted.

Figure 12 Communities and timber sale values awarded near the Middle Fork Watershed of the Willamette National Forest, FY 2011–2015

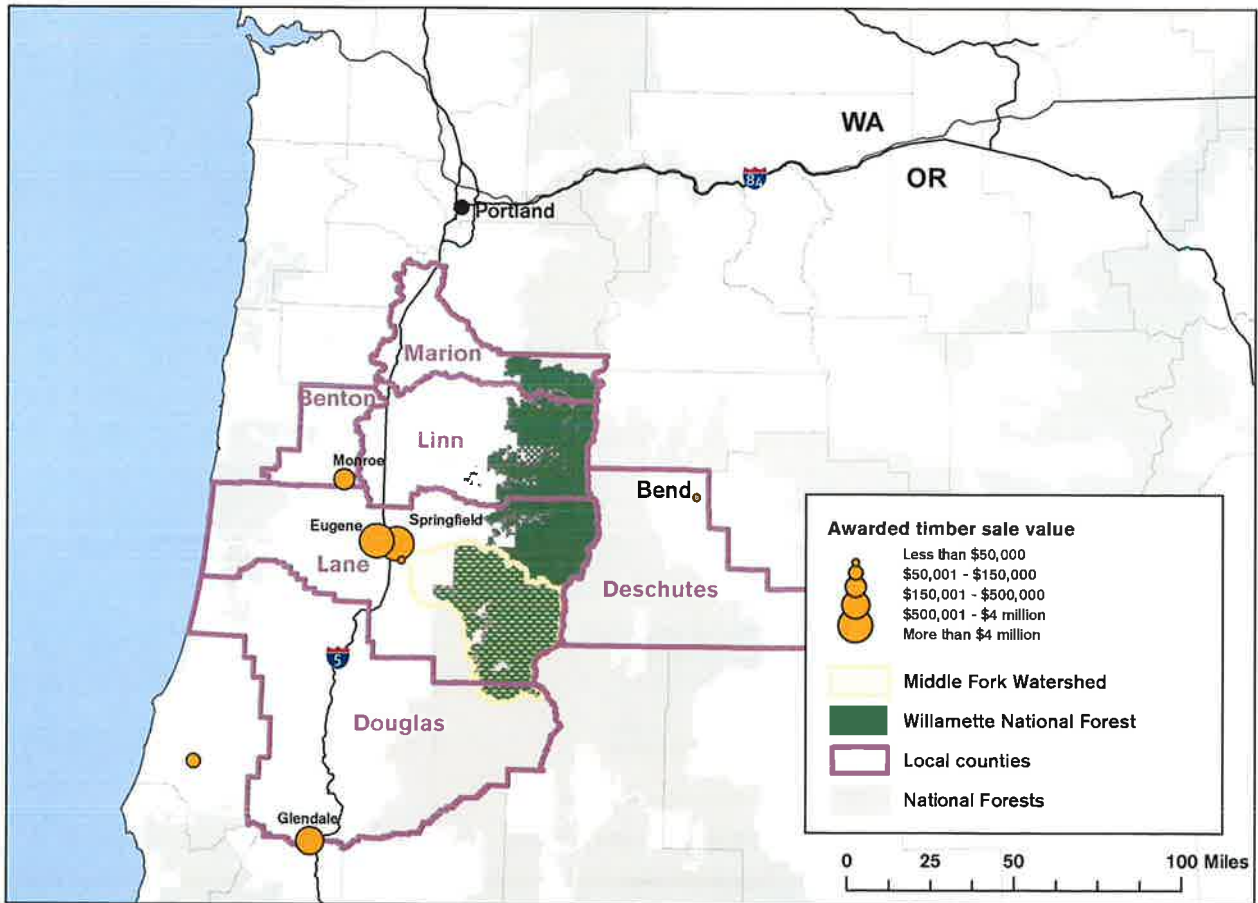


Sales on the Middle Fork Ranger District

TIM timber sale data includes the ranger district from which sales are awarded on national forests. We took a closer look at timber sales originating from the Middle Fork Ranger District (MFRD) on the Willamette National Forest specifically, and where the purchasers of those sales were located (see Figure 13, below). From FY 2011–2015, timber sales from the MFRD totaled \$12.9 million in total bid value and just under 179,500 MBF in volume (see Table 11, page 23). This was 47.5 percent of the total bid value of sales on the Willamette National Forest as a whole, and 47.6 percent of total volume sold.

Nearly all of the total bid value (96.5 percent) and the total timber volume (89.5 percent) originating from the MFRD during the study period was awarded to purchasers located within local counties, but outside of the Middle Fork Watershed (see Figure 14, page 23). Sales from the MFRD to Middle Fork Watershed purchasers occurred only during FY 2011 and totaled just \$28,255—only 0.2 percent—of the timber sale bid value from the Middle Fork Ranger District. The volume of these sales was 64 MBF, less than 0.04 percent of the volume sold from the MFRD.

Figure 13 Timber sale value awarded to purchaser locations from the Middle Fork Ranger District of the Willamette National Forest, FY 2011–2015

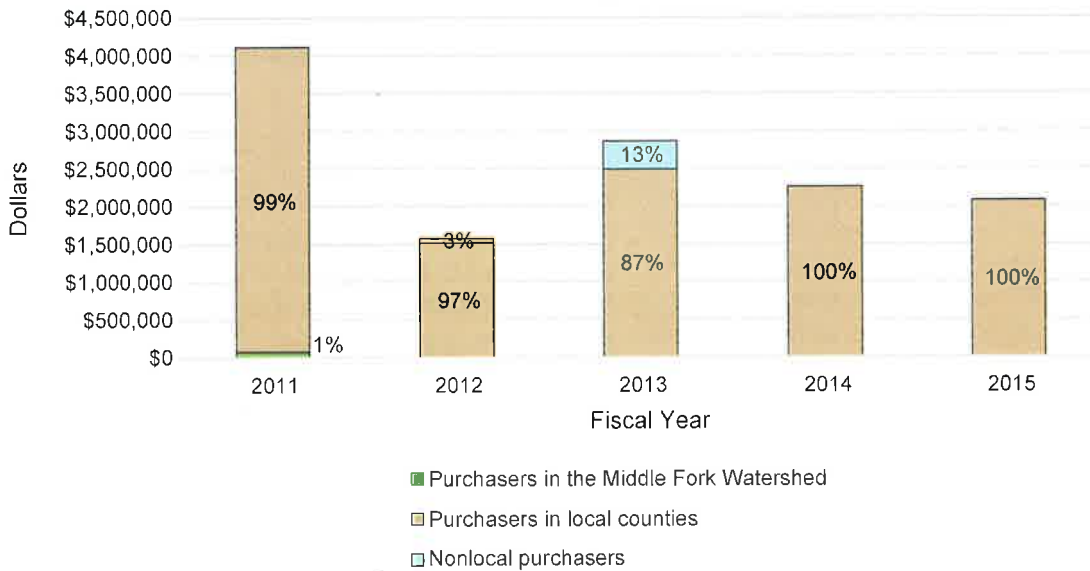


Note: 97.1% of awarded timber sale bid value is shown on the map. One additional timber sale worth \$372,850 was awarded to a Washington State purchaser outside the map extent.

Table 11 Timber sale bid value and volume from the Middle Fork Ranger District of the Willamette National Forest, FY 2011–2015

FY	Bid value of all sales from WNF	Bid value of sales from MFRD	MFRD % of total sale bid value	Volume of all sales from WNF (MBF)	Volume of sales from MFRD (MBF)	MFRD % of total sale volume
2011	\$6,335,599	\$4,118,926	65%	61,489.82	40,348.07	66%
2012	\$4,926,774	\$1,580,079	32%	74,141.55	26,686.67	36%
2013	\$5,651,134	\$2,865,517	51%	84,522.88	47,506.14	56%
2014	\$6,955,113	\$2,255,955	32%	80,234.94	33,053.20	41%
2015	\$3,276,963	\$2,077,252	63%	76,703.49	31,891.83	42%
Total	\$27,145,583	\$12,897,729	48%	377,092.68	179,485.91	48%

Figure 14 Total bid value of timber sales by purchaser location from the Middle Fork Ranger District of the Willamette National Forest, FY 2011–2015





Summary and conclusion

In this working paper, we reviewed the restoration service contracts and timber sales awarded to private businesses from the Willamette National Forest from FY 2011 to FY 2015. We summarized the types of work invested in and the locations of businesses that performed the work, including the role of local service contractors and timber purchasers, paying particular attention to the work and businesses located in the Middle Fork Watershed. We found that during the study period, the Forest Service awarded timber sales valued at more than \$27.1 million, more than three times the value of the nearly \$8.8 million in restoration service contracts they awarded on the forest.

Our analysis showed high local capacity for both restoration service contracts and timber purchases on the forest. Local businesses captured the majority of both contracts and sales awarded on the forest,

but were awarded more of the timber sale value (95 percent) than the restoration service contract value (71 percent) during the years reviewed. Local capture of restoration contract value was greatest (86 percent) during the year with the greatest spending on contracts (FY 2013), and local capture of timber sale value was greatest (99 percent) during the year with greatest awarded timber sale value (FY 2014). This suggests that local capacity is sufficient to capture nearly all contract spending and timber sales even during years with relatively high spending. In total, from FY 2011 to FY 2015, local purchasers bought more than \$25.9 million in timber from the forest and local contractors were awarded contracts for restoration work on the forest worth nearly \$6.4 million. Of the restoration service contract dollars awarded to local businesses, most (60 percent) were for the maintenance of roads and facilities.

Lane County contractors were awarded more restoration service contract dollars than any other county, local or nonlocal. Although 55 percent of the dollars awarded to Lane County contractors were for road maintenance contracts, contractors in the county received contracts in all of the four work type categories awarded on the forest. In some local counties, contracted work was more concentrated. In Linn County, for example, 88 percent of awarded contract dollars were for a single large road construction project. In Douglas County, contracts for the maintenance of roads and facilities accounted for nearly all (93 percent and \$1.7 million) the contract dollars awarded. Lane County businesses also purchased more timber than any other county during the years reviewed, buying 66 percent of the total value of the sales offered on the forest. Businesses located in Deschutes County were awarded less of the value from both restoration service contracts and timber sales than other local counties.

Businesses located in the Middle Fork Watershed captured a much greater share of restoration contract dollars (11 percent) than of timber sale dollars (0.5 percent). Restoration contracts awarded to businesses in the watershed totaled \$984,969

and increased from the beginning to the end of the study period. In contrast, timber sales to purchasers in the watershed totaled just \$145,321 in bid value and occurred only during the first two years of the study period.

The type and amount of contracted work that the Forest Service invests in and the amount of timber sales offered on national forests can have significant implications for local communities and economies. As agencies focus on land management goals alongside rural and community needs, national forests, communities, and collaboratives like SWFC are interested in options that can help maintain or increase local capture of work from forests. This report provides information to both the Southern Willamette Forest Collaborative (SWFC) and the US Forest Service about recent restoration contract and timber sale histories on the Willamette National Forest and where contracts and sales have been awarded. Coupled with local knowledge and insight, this information can help inform land management decisions that contribute to restoration efforts while generating economic activity and social benefits in local communities.

Endnotes

- 1 Stewardship Contracting Overview. USDA Forest Service. https://www.fs.fed.us/restoration/Stewardship_Contracting/overview.shtml. Accessed March 1, 2017.

