

Ecosystem Workforce Program

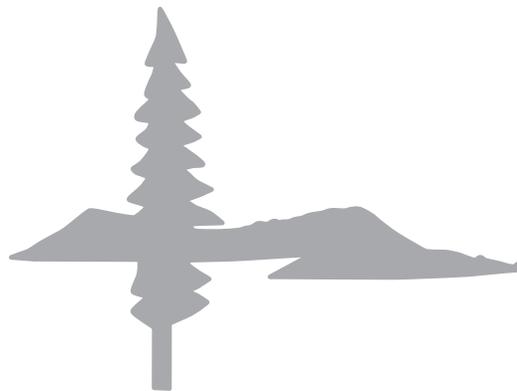
WORKING PAPERS

Forest Management Contracting for the US Forest Service in New Mexico:

In-State Competitiveness and the Use of Guest Workers

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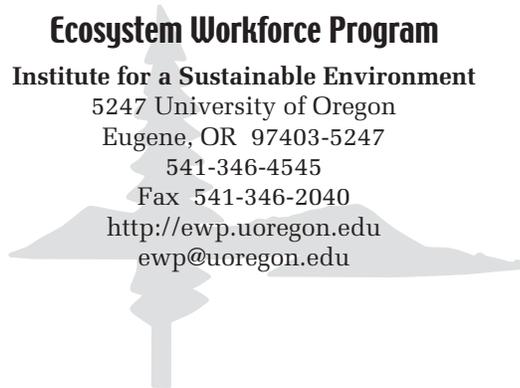


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Forest Management Contracting for the US Forest Service in New Mexico:

In-State Competitiveness and the Use of Guest Workers

Policy Background

Over the past decade, several congressional authorities and Forest Service policy directives have encouraged the Forest Service to increase local community benefit from forest management contracting. Policy initiatives have included the Jobs in the Woods Program, which permitted the setting aside of contracts in the Pacific Northwest for contractors located in the affected communities of the Northwest Forest Plan and the local benefit criteria authorized in the annual appropriations related to the National Fire Plan. Stewardship contracting authorities also encourage the agency to create community benefit when awarding land management contracts.

At the same time, there has been a larger policy debate about the role of immigrants and guest workers in the United States workforce. Some see guest workers as vital to the functioning of the US economy while others are concerned that they take jobs away from longer-term residents. Still others are concerned about the working conditions of immigrant workers.

This immigration debate has touched forestry management because a large fraction of forest workers are Hispanics, particularly in labor-intensive activities such as tree planting, thinning, and firefighting. Periodically over the past three decades, there have been exposés about the poor working conditions of forest workers, particularly Hispanic workers.

Overview of H2B program

The H2B guest worker program came out of the Immigration Reform and Control Act of 1986. The Act established a split for temporary, seasonal work visas: H2A for seasonal agricultural workers and H2B for non-professional, non-agricultural workers. The H2B program is designed to provide temporary guest workers to non-agricultural industries facing scarcities of seasonal labor.

In more heavily-regulated farm work, H2A guest workers are guaranteed work, housing, and overtime pay for the duration of their contract. By contrast, H2B workers must pay for their own housing and transportation. H2B guest workers pay taxes and work is not guaranteed. There is also much less oversight and monitoring by the Department of Labor. During each fiscal year, Citizenship and Immigration Services (CIS) issues up to a limit of 66,000 H2B visas, but recently there have been a number of legislative proposals to have that limit extended up much higher in the range of 200,000 to 300,000 per year.

It is the employer, not the worker, who initiates the H2B visa application. The employer applies to their State labor department, which then advises the Department of Labor on whether to recommend to the CIS to certify or deny the request. The employer is then required to recruit native workers through local media and employment agencies. After a good-faith effort to find native labor is made, the employer must reduce the number of visas they are requesting by the number of qualified native workers they found. The CIS then issues visas through consulates.

An employer may apply for a single work visa or thousands depending on their needs. The visa is non-transferable from employer to employer and from worker to worker, meaning that once workers have completed their contract, they are required to return to their home country. Importantly, it also means that if workers are unsatisfied with their employer, they have no recourse to find other legal employment; the worker must remain with the employer that requested the visa or return to their home country.

Existing Knowledge

A few studies have explored Forest Service and Bureau of Land Management's contract awards to local contractors in the Pacific Northwest. These studies found that the vast majority of contracts offered in Oregon were awarded to Oregon contractors whereas contracts offered in Washington State were less frequently awarded to in-state contractors. In addition, these studies found that equipment-intensive contracts, contracts with lower dollar value, and those on national forests located near major transportation corridors were most likely to be awarded to nearby contractors. Labor-intensive contracts, higher value contracts, and ones on isolated national forests were more likely to be awarded to more distant contractors (Moseley and Shankle 2001). Another study also found that, in some instances, programs such as the authority to consider local benefit when awarding National Fire Plan contracts could increase awards to nearby contractors (Moseley and Toth 2004). Although useful, these studies have been limited to the Pacific Northwest, which has a long-standing, large-scale public and private forest management industry. Other parts of the country might be quite different.

Another series of studies found that reforestation contractors in the Southeast are making extensive use of guest workers in tree planting and other forest management activities (McDaniel and Casanova 2003, 2005; Casanova and McDaniel 2005). These contractors may

come from various parts of the country, including the West. They use guest workers particularly to plant trees on private industrial lands and, less frequently, on public lands. These studies have shown that there are a few large firms that have crews working in various regions across the country. These firms often dominate large contracts because of their ability to maintain a larger workforce through the guest worker programs.

Approach of this Study

The purpose of this project was to understand the extent of Forest Service contracting with local contractors, to determine the extent of Forest Service contracting with companies that employ guest workers, and to the extent possible, illuminate the causes of these patterns.

This study examines contracts and contractors associated with the five national forests in New Mexico—the Carson, Cibola, Gila, Lincoln, and Santa Fe National Forests—from 2001 through 2005 (Fig. 1). Our study had three components.

First, we analyzed Forest Service contracting data to understand the amount of forest management contracting that the agency undertook and where the contractors were located who performed that work. We studied contracts associated with forest and land management such as thinning, tree planting, roadwork, recreation, surveys, studies, and environmental analysis. Supplies and non-land management contract activities, such as staff training and facilities repairs, are not included in the analysis. We used contracting data from the Federal Procurement Data Center and from contract logs. We were unable to obtain complete contract logs from all New Mexico forests (Appendix A describes data gaps).

Second, we compared Forest Service contracting data with the Department of Labor’s list of businesses certified to hire guest workers to identify contractors that are likely to be employing guest workers.

Third, we interviewed a small sample of contractors and contracting officers to garner information about Forest Service contracting, the use of guest workers in forestry, and barriers faced by in-state contractors in forest management contracting. It should be noted that the interview sample was not considered a scientific or systematic sampling of the contracting population in general. The interviews were conducted to provide some qualitative explanation of the patterns identified in the quantitative analysis. Appendix A describes the methods in more detail.

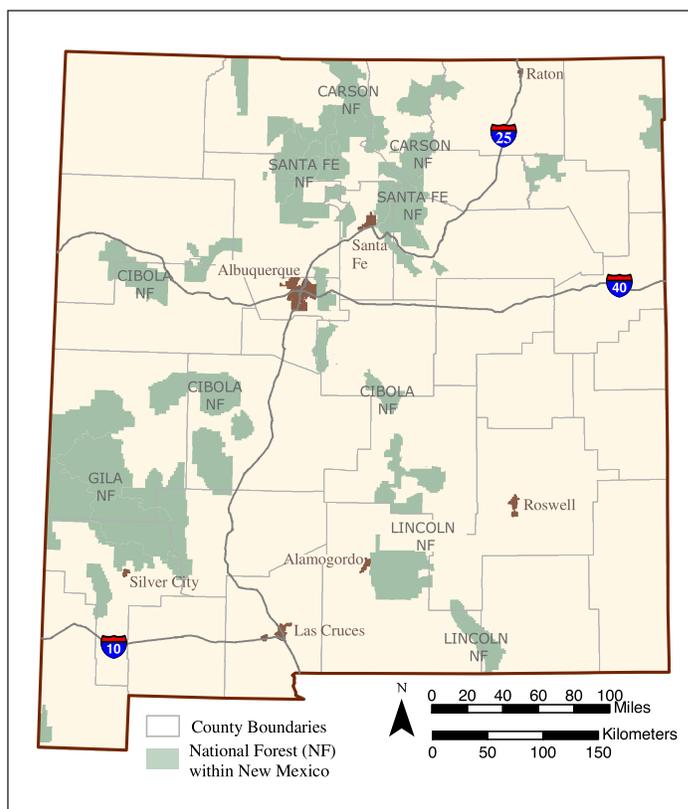


Figure 1 – National Forests in New Mexico

Findings from Contracting and Guest Worker Data

Spending on Contract Forest Management

During the study period 2001-2005, the national forests in New Mexico spent at least \$24.6 million on contracting activities related to forest management, broadly defined. This is likely an underestimate because we were unable to obtain complete contract information from some of the forests (see Appendix A).

Just over \$11 million (46 percent) of contracting dollars were spent on thinning. The next largest category was road maintenance (15.6 percent or \$3.8 million). Other areas of significant spending were on ‘other natural resource and conservation services’ (a diverse category), recreation facilities construction, and archeological surveys (Table 1).

Looking forest-by-forest, the Lincoln National Forest awarded the most contract value and the Carson National Forest the least (Table 2). It is important to remember, however, that only the Lincoln provided complete contract registers, so award numbers of other forests are, to some extent, underestimates.

Table 1 - Forest Service Contract Spending by Service Code

Code	Service code description	Total contract spending
<i>Research, Analysis, and Studies</i>		
AP91	Other Natural Resources, Basic Research	\$54,000
B503	Archeological/Paleontological Studies	\$1,032,907
B504	Chemical/Biological Studies and Analyses	\$63,085
B510	Environmental Studies and Assessments	\$920,812
B516	Animal and Fisheries Studies	\$142,957
B534	Wildlife Studies	\$114,079
B599	Other Special Studies and Analyses	\$34,000
R404	Land Surveys, Cadastral Services	\$102,000
F999	Other Environmental Services, Studies, and Analytical Support	\$766,028
	SUBTOTAL	\$3,229,868
<i>Natural Resource Management</i>		
F002	Aerial Seeding Services	\$96,900
F004	Forest-Range Fire Rehabilitation	\$384,903
F005	Forest Tree Planting Services	\$239,628
F006	Land Treatment Practices	\$44,826
F008	Recreation Site Maint/Non-Constr	\$8,738
F010	Seedling Production-Transplanting	\$160,572
F014	Tree Thinning Services	\$11,348,465
F016	Other Range-Forest Improv/Non-Construction	\$22,675
F018	Wildhorse/Burro Control Services	\$142,131
F019	Other Wildlife Management Services	\$47,000
F099	Other Natural Resources and Conservation Services	\$2,313,737
	SUBTOTAL	\$14,809,575
<i>Construction and Maintenance</i>		
Y219	Construction of Conservation and Development Facilities	\$223,522
Y222	Construction of Highways, Roads, Streets, Bridges and Railways	\$651,532
Y291	Construction of Recreation Facilities (non-building)	\$1,552,068
Z222	Maintenance, Repair, or Alteration of Highways, Roads, Streets, Bridges and Railways	\$3,840,125
Z299	Maintenance, Repair, or Alteration of Other Non-building Facilities	\$113,749
Z300	Maintenance, Repair	\$166,377
	SUBTOTAL	\$6,547,374
	TOTAL	\$24,586,816

Table 2 - Total Contract Spending by National Forest

National forest	Dollars
Carson	1,285,083
Cibola	3,665,089
Gila	2,177,338
Lincoln	10,657,130
Santa Fe	6,802,177

Contractor Locations

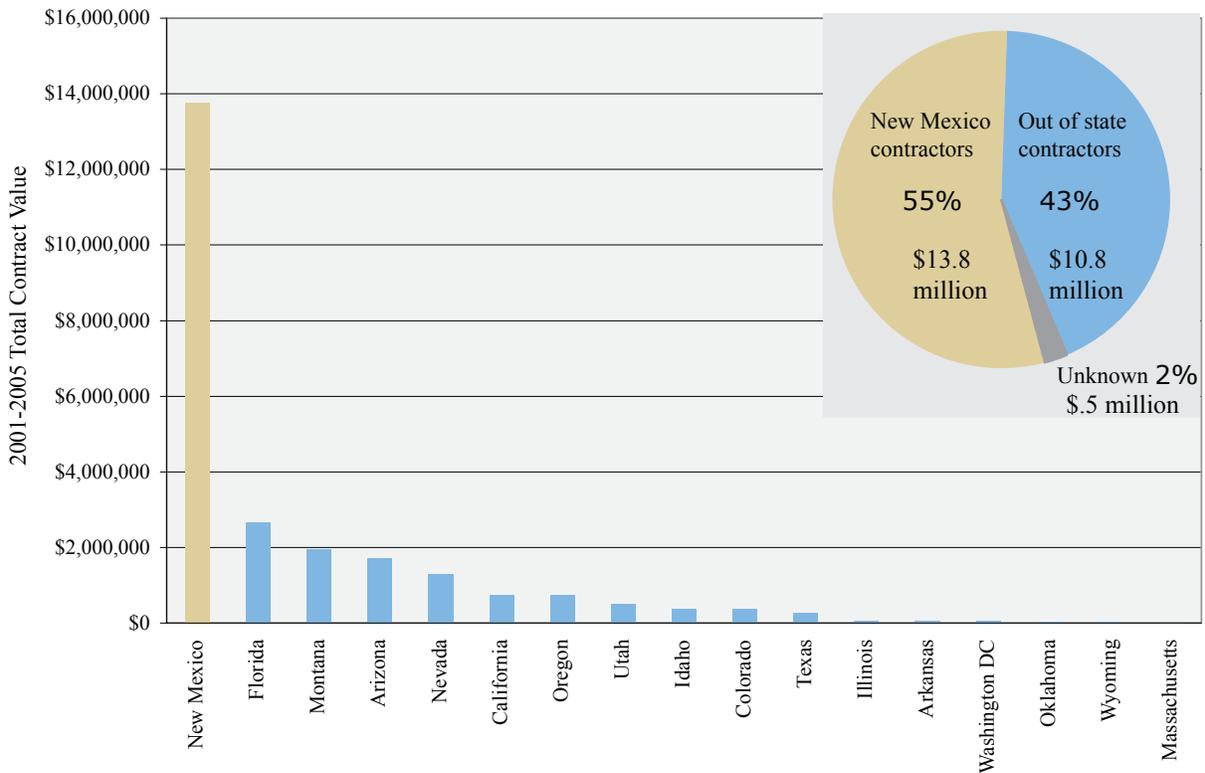
Of the approximately \$24 million spent on forest management contracting in New Mexico, the Forest Service awarded fifty-five percent of contract value to contractors located in the State of New Mexico. Forty-two percent of contract value was awarded to contrac-

tors located in 16 other states. Two percent of contract value was awarded to contractors whose addresses were unknown. After New Mexico, the Forest Service awarded the most total contract value during the study period to contractors located in Florida, Montana, and Arizona (Fig. 2).

The remainder of this study includes only contractors whose locations could be identified.

We were able to locate 140 contractors that worked on the national forests in New Mexico between 2001 and 2005. Of those, 100 were from New Mexico and 40 were from out of state. After New Mexico, the next most common locations were the adjacent states of Arizona and Colorado (Fig. 3). A few states have large total awards and a small number of contractors. For example, Florida

All contractors



Out-of-state contractors

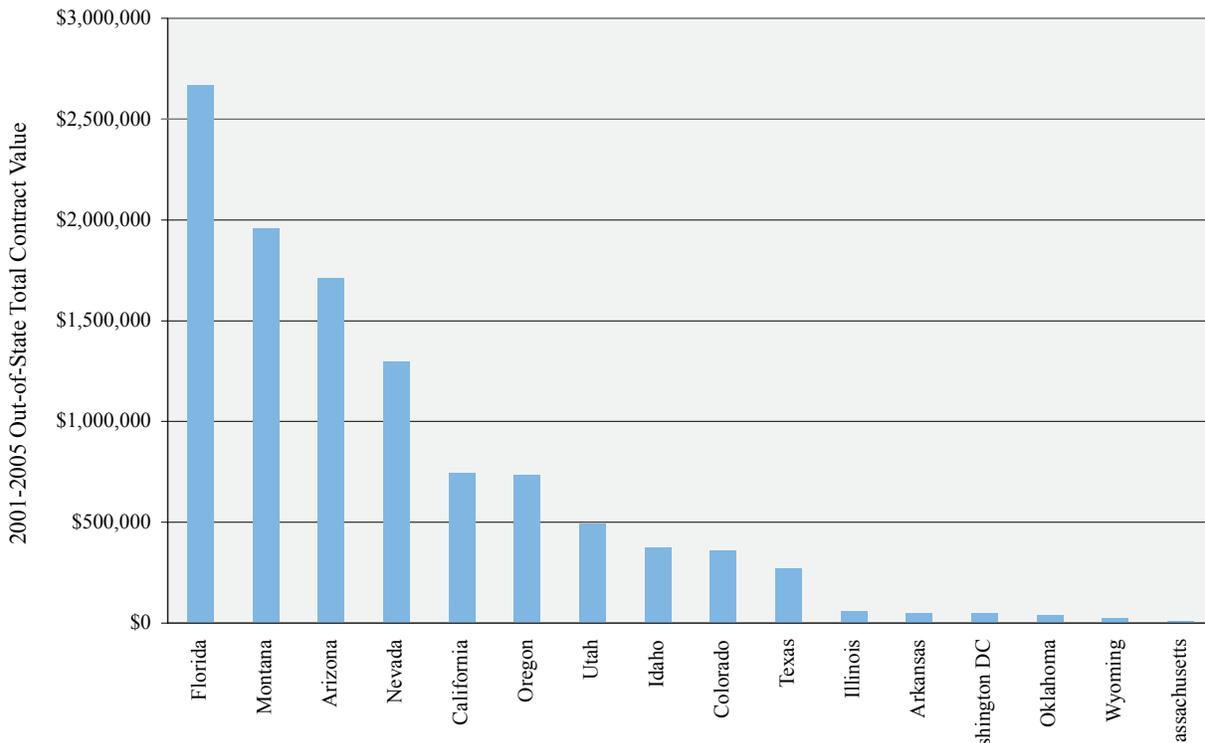


Figure 2 –Total Contract Value by Contractor State

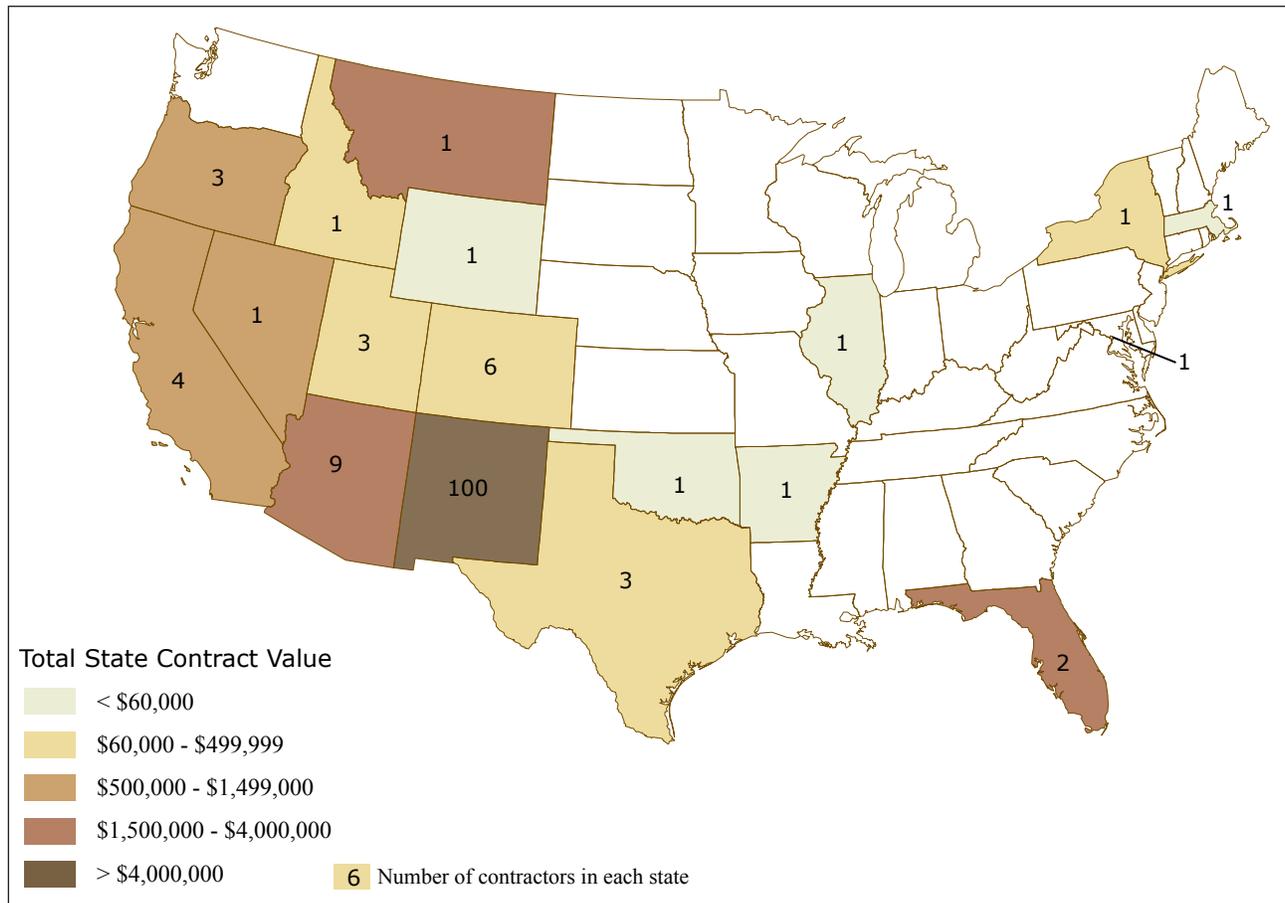


Figure 3 – Number of Contractors by State

ranks second highest in contract value, but there are only two contractors from that state. Similarly, Montana was ranked third in value, but all awards were to a single contractor.

Although there are fewer out-of-state contractors than in-state contractors, the out-of-state contractors tended to capture more value than in-state contractors. The total amount of money awarded to each in-state contractor during the study period averaged approximately \$13,500 whereas the total award to each out-of-state of contractor averaged approximately \$27,500.

Beyond comparing in-state and out-of-state contractors, one central question is the extent of awards to contractors located near the national forests where the work was performed. One challenge of understanding the extent of awards to “local contractors” is defining local. How people define a “local contractor” varies considerably, depending on the context as well as the particular perspective of the person creating the definition. Rather than defining what constitutes a local contractor for New Mexico’s national forests, we performed two kinds of analysis. First, we created maps that show total award

amounts by contractor locations. Second, we measured the distance between the contractor’s office and the national forest where the work was performed (See Appendix A for a discussion how distances were calculated). This way, we can talk about closer contractors and more distant contractors on a continuous scale rather than making an arbitrary distinction between local and non-local contractors. One note of caution: distances are measured in *air miles*, which can be considerably different than road miles or travel times depending on the terrain or quality of roads.

Looking town by town across the country, it is apparent that contractors are concentrated in the Southwest, with a secondary concentration in other western states. Outside of the West, most contracts awarded to contractors in one or two communities in each state (Fig 4).

Within New Mexico, we see a concentration of contractors in two locations. First, there appears to be a concentration of contractors in northern New Mexico, in and around Albuquerque and Santa Fe and second, in southern New Mexico, near the Lincoln National Forest (Fig 5).

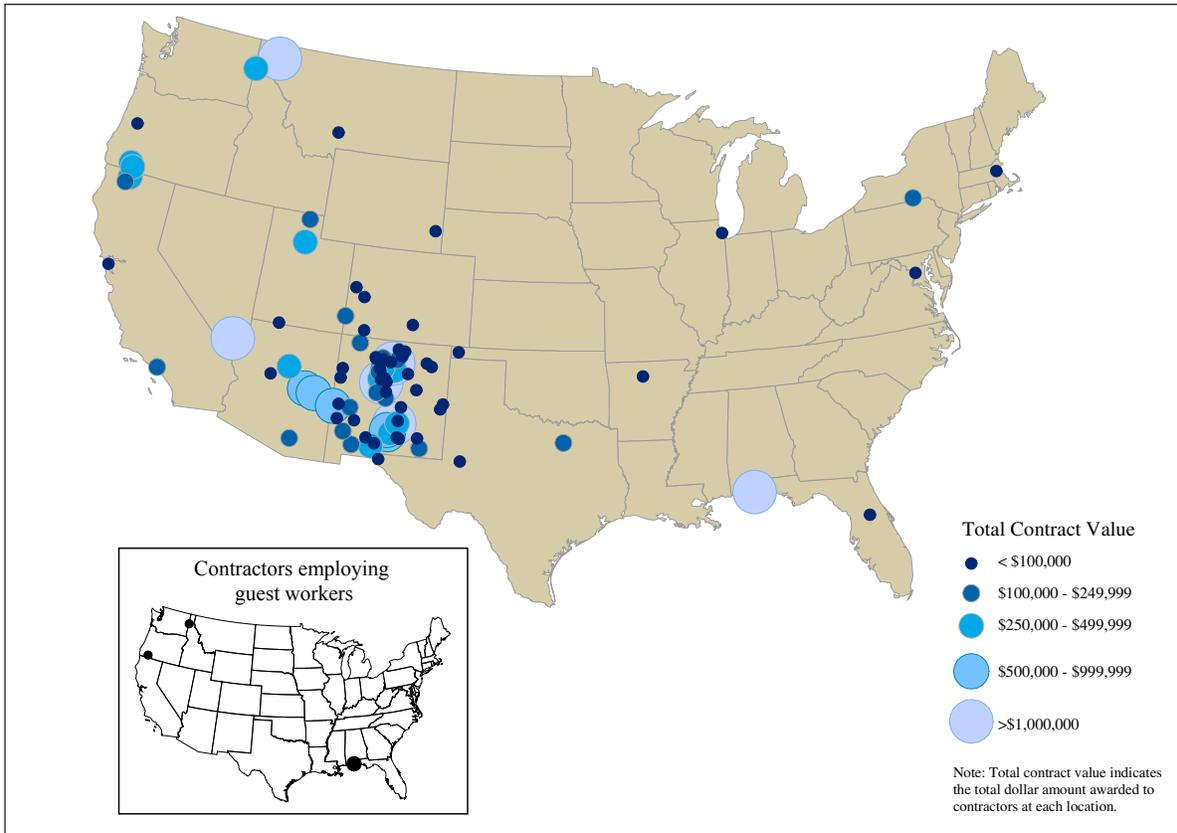


Figure 4 – Total Contract Value By Contractor Location and Guest Worker Status

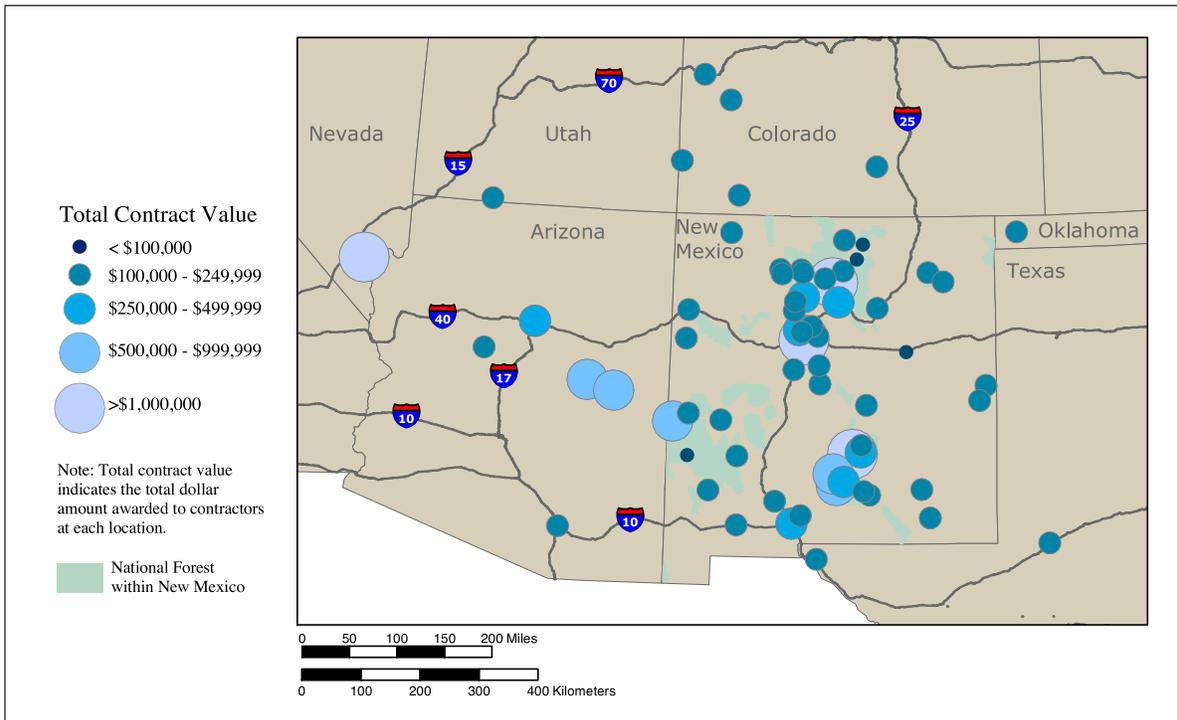


Figure 5 – Total Contract Value By Contractor Location, Southwest

Table 5 - Thinning Awards by Contractor State

National Forest	In-state		Out-of-state		All locations
	Total award	%	Total award	%	Total award
Carson	\$ 196,631	48	\$ 209,675	52	\$ 406,306
Cibola	166,632	43	218,685	57	385,317
Gila	255,643	77	77,420	23	333,063
Lincoln	815,652	15	4,790,115	85	5,605,768
Santa Fe	1,185,422	26	3,432,589	74	4,618,011
	2,619,980	23	8,728,484	77	11,348,465

Thinning contractors

As discussed above, the national forests in New Mexico spent the most money between 2001 and 2005 on thinning, approximately 46 percent. Of thinning contracts, 23 percent of the value was awarded to contractors from New Mexico and 77 percent to contractors from out-of-state (Table 5). The Gila National Forest awarded the greatest proportion (77 percent) to in-state contractors while the Lincoln and the Santa Fe awarded the smallest proportion to in-state contractors (15 and 23 percent, respectively). Although the overall proportion of in-state awards to thinning contractors is lower than in contracting more generally, the pattern of award is similar. That is, there was some value awarded to contractors quite close to national forests. At the same time, most contract value was awarded to distant contractors (Table 6).

Businesses with guest worker visas

During the study period, 40 businesses of all types were certified by the Department of Labor to hire guest workers to work in New Mexico. This number includes New Mexico-based businesses and businesses located

in other states that say that they will employ the guest workers in New Mexico. In the case of employment that involves migrant work, such as tree planting, a company need only list the state where the work will begin. Thus, there may be businesses that use guest workers to perform work in New Mexico that are not included in these numbers.

These businesses were certified to hire guest workers for a wide variety of occupations, ranging from electrical engineer and hotel housekeeper to quarry worker and stable attendant. The largest number of visas was for tree planting, forestry work, and quarry work. The companies requesting tree planter and forest worker visas were from Florida, Idaho, and California. There were no New Mexico companies requesting visas for forest-related activities.

Prevailing wages in New Mexico for guest workers ranged from \$5.60 to \$30.00 per hour. Tree planters' hourly prevailing wages were \$7.98 or \$8.29 per hour and forest workers' wages were \$10.16 per hour. Thirty-two percent of visas were authorized for activities paying less than the lowest paid tree planters and six percent of visas were authorized for jobs paying more than forest workers (Table 7).

Turning specifically to Forest Service contractors, we found that during the study period, the Forest Service awarded contracts to three companies employing guest workers. These contractors were located in Florida, Oregon, and Idaho (see insert on Fig. 3). Combined, they were awarded 14 percent of the forest management contract value in New Mexico. These three companies performed thinning contracts, and together they were awarded 29 percent of the thinning contract value.

Table 6 - Thinning Contract Value by Distance from National Forest

Distance (air miles)	Total value	
<50	\$ 1,888,978	17%
50-124	402,569	4
125-300	1,082,624	10
>300	7,974,293	70
All Distances	11,348,465	

Table 7 - Prevailing Wages for New Mexico Guest Worker Visas, 2001-2005, All Occupations

Hourly Wage Range	Visas authorized	
	Number	Percent
\$5.60 - \$7.97	354	32%
\$7.98 - 10.16	680	62
\$10.17 - \$30.00	65	6
Total visas	1,099	

Findings from Interviews

There were two objectives for the interviews with forest management contractors and Forest Service contracting personnel. The first was to gain insight into forest management contracting patterns in New Mexico, focusing on the reasons underlying the relatively low levels of in-state contracting. The second was to find out about the role of H2B guest workers in forest manage-

ment in New Mexico. Three contractors identified as employing H2B guest workers were awarded 29 percent of the thinning contract value. We wanted to determine whether the employment of guest workers gave these contractors a competitive advantage in bidding for New Mexico contracts.

We divide our findings into two parts – the first focusing on competitiveness for in-state New Mexico forest management contractors and the second providing an overview of the use of guest workers in forest management contracting.

Competitiveness

As was mentioned earlier, only fifty-five percent of contract value went to contractors located in the State of New Mexico. In addition, in-state contractors were each awarded an average total of \$13,500 over the study period whereas out-of-state contractors were each awarded an average total of \$27,500. Our interviews uncovered multiple reasons for both of these trends: (1) disincentives created by high workers' compensation rates, (2) the small number of contracts and the size of the projects offered made it difficult for contractors to retain workers, and (3) requirements for mechanization favoring large firms with larger capital outlays for thinning equipment.

Workers' Compensation

Everyone interviewed for this study mentioned the high New Mexico workers' compensation insurance rates as a problem for in-state contractors. In 2006, in-state contractors paid a rate of \$60.42 per \$100 of payroll for workers' compensation insurance. This compares to a rate of about \$28.65 for Arizona, \$21.73 for Colorado, and \$39.43 for Utah (NCCI Holdings, Inc., 2006).

A strong cycle of negative disincentives has been created in regards to workers' compensation insurance for New Mexico forest management contractors. Because of the high rates, few contractors actually carry workers' compensation insurance, and among the small pool of insured contractors there was a relatively high rate of claims. In 2005, only 19 forest management contractors were paying for workers' compensation insurance. Of these 19 contractors, two filed claims, leading to higher premiums across the board. One contractor described the situation this way – “The workers' compensation situation is out of hand. The Forest Service contracting officers know it, and they don't even ask for a certificate of insurance. Who would be dumb enough to actually pay for it?”

Contractors get around the requirement to have workers' compensation insurance by subcontracting to their crews. If a company has less than three employees,

they do not have to carry workers' compensation insurance. Many contractors with more than three employees simply break their crews up into sets of subcontractors. This works for small projects and small firms, but becomes much more difficult and complex on larger projects that require more employees. This is a primary reason for the dominance by out-of-state contractors on the larger value projects.

“The manipulation of the workers' compensation system through subcontracting obviously does not promote a safe working environment in the woods,” stated one interviewee. However, a program has been created by the New Mexico Workmen's Compensation Administration, the New Mexico State Forestry Division, and the Forest Guild to help remedy the problem through a forest safety-training program. Once contractors and their crews complete the safety training they receive an industry recognized workers' compensation rate of 30 percent. By September 2006, 166 forest workers had completed the training. One in-state contractor interviewed said that he had applied to enter the training program, but was told that all of the seats were filled. He is eager to go through the training because “the WC rates are killing me. I have paid as high as 78% over the past three years. Those training programs need to be expanded.” The same contractor said that the high workers' compensation rates were a primary reason they started focusing on mechanized thinning work so they would not have to rely so much on hand labor.

Contracting Opportunities

The amount and size of contracts offered by the Forest Service is also a problem. Even Forest Service representatives interviewed for this report said that it was not enough work to employ a large number of companies. One contracting officer said, “We are just stutter-stepping. There is not enough continuity in supply of forest management work to keep people employed. We have contractors who have drifted off to other states to work because of the spotty contracting opportunities here.” The contractors agreed, and said that most New Mexico forest management contractors have to work in other states and in other industries to keep a steady stream of income. The result is that a declining number of companies are available in-state to do the work. A contracting officer told us that they have had such difficulty even finding contractors to bid on their forest management projects that they have begun encouraging urban arborists from Texas to do thinning work on the Forest.

Mechanization Requirements

Another problem identified is the increasing requirements for mechanized thinning as specific aspects of

thinning and hazardous fuel reduction projects. Most of the equipment specified requires large outlays of capital for purchase. Due to the problems mentioned above with the lack of continuity in work, most in-state contractors are not willing to take out the loans necessary to acquire the equipment required for these contracts. These projects are primarily being won by a small group of in-state contractors with the necessary equipment, or more commonly, by contractors from neighboring states with the necessary equipment.

The Use of H2B Guest Workers for Forest Management in New Mexico

There were only three Forest Service forest management contractors in New Mexico that were certified to hire guest workers over the past five years. We conducted interviews with two of these contractors; the third declined to participate. The two contractors interviewed were from Oregon and Idaho, and they employed 20 and 40 employees respectively. Both had worked in New Mexico on thinning and hazardous fuels reduction contracts, but neither company had worked in New Mexico in two years.

Significant findings from the interviews were:

- Low prevailing wage rates in New Mexico make it difficult for contractors from states with relatively high prevailing wages rates, such as Oregon and Idaho, to compete with local contractors on bids.
- H2B contractors from out of state also mentioned the lack of sufficient contracting opportunities and the mechanization requirements as disincentives to working in the State.

Advantages of the H2B program

The use of H2B workers for forest management work has become common throughout the industry nationwide, and the advantages cited by these contractors are similar to those cited in previous studies and relates to the work ethic attributed to these workers and the lifestyle required to work on one of these crews. We heard things such as:

- “The workers will actually do the work. We hire locals sometimes—they think working in the woods will be fun. Well...it’s miserable, and instead of lasting all summer they give up after a week.”
- “This solves a problem for us. Our regular crews put roots down and start building families. Once that occurs, they don’t want to leave home for extended periods of time. They start looking for other types of work closer to home in construction. The H2B guys are already away from home, so they

don’t care if they are traveling all the time.”

- “Using the guest workers makes us more competitive on the larger jobs. We wouldn’t be able to keep crews together long enough to finish the work without the guest workers. We would probably have 10 employees rather than 40. Guest workers have really helped us grow.”

New Mexico’s Low Prevailing Wage Rates

The out-of-state H2B contractors did have an interesting perspective on their competitiveness in New Mexico. They felt that the low prevailing wage rates in New Mexico made them unable to compete with local contractors. The H2B contractors we interviewed worked mostly in Oregon, Washington, and Idaho where they said that prevailing wage for forest work was around \$14 to \$15 per hour depending on location. When they worked in New Mexico, prevailing wage was between \$10 and \$11 per hour. Their crews were not willing to take a pay cut when they traveled to New Mexico, so the company ended up having to pay a premium. On the other hand, New Mexico contractors were already paying lower wages. It is worth noting that the only other H2B contractor is based in Florida, and presumably does a great deal of work in the South, where prevailing wages are even lower than New Mexico. This could be one reason why he is the only H2B contractor still working in New Mexico, and the other H2B contractors have stopped.

Contracting Opportunities

The H2B contractors also mentioned the lack of continuous and small contracts in New Mexico as a primary reason why they were no longer working in the state. “It just doesn’t make any sense for us to haul all of our workers and equipment down there for these little jobs. There is a large set-up cost for us in moving from one location to another. We like to stay in one place after we get there.” These contractors also mentioned the mechanization requirements that have been a problem with the New Mexico contracts. They did not see it as a worthwhile investment to go and get the required equipment, if the amount of work would not allow them to gain a return on the investment.

The H2B contractors also mentioned some problems with the program, and these are problems we have heard from contractors in other parts of the industry as well. Both contractors said that there is a big problem with cheating on prevailing wage payments. “We need more monitoring to make sure everyone is keeping honest. I have never seen a DOL representative out in the field. They just take your word for it that you are doing everything above the board. I wish they were out there making sure everyone is playing by the rules.”

One contractor made a relatively surprising recommendation. He would like to see guest workers given the legal permission to work for other employers while under contract with his company. He says that on occasion he runs into a two to three week slack period with no work for the crews. Because the guest workers are paying for their own lodging, they worry about not having income. Occasionally, they drift off and find other types of work illegally. Many feel that they now have to remain in hiding, and he has difficulty finding them and convincing them to come back and finish out their contract with him. He would like for a mechanism to be created for the workers to temporarily transfer their visas to other employers.

They made a few other suggestions:

- Streamline the lengthy process of applying for and obtaining the visas which they have to go through every year. Timing is critical. If there are any delays in the process, they may have to default on a contract.
- Increase in the number of visas issued. With the increasing popularity of the program there are fewer visas available to each employer every year.

Conclusion

The New Mexico federal forest management contracting market is made up of contractors located relatively close to national forests that do not capture much contract value and more distant contractors—primarily from out of state—that capture more contract value.

Our interviews suggest that the New Mexico forest management contracting industry is relatively weak primarily because of two interconnected factors: (1) the low number, small size, and sporadic nature of contracting opportunities offered by the Forest Service; and (2) high workers' compensation rates that create disincentives for maintaining a large number of employees. These two conditions combine to create a negative context for the development of a more robust forest management

industry within the state. This also leads to a relatively high level of out-of-state contracting from states with a stronger industry. In-state contractors who have been able to grow their business have had to diversify the type of services they provide and some are now working outside of New Mexico.

Companies that employ guest workers are not a major part of the New Mexico federal forest contracting market. Of the three contractors that have used guest workers in New Mexico, two have not worked in New Mexico for the past two years because of the low prevailing wages, small contract sizes, and infrequency of federal contracts. We were only able to identify one contractor that is currently working in New Mexico that uses guest workers.

As the Forest Service increases the number of projects requiring mechanized thinning and fuels reduction, this means there is less demand for hand crews, which is the type of work in which H2B workers in forestry are normally found. Contractors using hand crews are finding a decreasing amount of work in New Mexico.

Labor supply problems do not appear to be threatening the viability of contracting companies as much as the availability of work opportunities. Only one of the New Mexico contractors interviewed for the study said that he had difficulty finding laborers, but all of the contractors said that they had trouble keeping crews together because of the sporadic nature of the work.

Workers' compensation rates have also been a major factor limiting the growth of the forest management industry in New Mexico. The recently-developed safety training program is a positive step, and could make a significant improvement in the current situation. However, as one contractor pointed out, the program has been limited at present, and not all contractors have had access to it. Expanding this program could not only improve safety of work in the woods, but also help to strengthen the industry as more companies could expand their workforce and begin bidding on larger projects.

Methods

To understand Forest Service contracting patterns in New Mexico, we acquired data from the Federal Procurement Data System (FPDS), which keeps information about most civilian procurement contracts (Federal Procurement Data System 2006). The database should include all Forest Service contracts more than \$25,000. In addition, we requested contract registers for contract logs so that we could include contracts valued between \$2,500 and \$25,000. Previous studies suggest that small contracts are more likely to be awarded locally (Moseley and Shankle 2001). We were unable, however, to acquire contract logs for all years for all of the forests in New Mexico (Table 8).

Table 8 - Available Contract Logs

Cibola	2001-2003
Carson	2003-2005
Gila	2003-2005
Lincoln	2001-2005
Santa Fe	None

Because contracting activity varies considerably from year-to-year, this project examined contracting over five years, from 2001 through 2005. The analysis included contracts associated with forest management (thinning, tree planting, road maintenance, trail building, stream restoration, etc.) and excluded fire suppression and activities that are not related to forest management (copier repair, roof replacement, etc.).

Contractor locations were identified using the address provided in Federal Procurement Data System. If the FPDS did not provide an address, then the address was taken from the Central Contacting Registration system, which registers all people and entities that do business with the federal government. If neither of these locations provided an address we tried the Yellow Pages and White Pages on-line as a last resort. The addresses of contractors that could not be found in these sources were declared to be unknown.

Rather than defining local and non-local contractors, this project used two approaches to describe local benefit. First, we displayed contractor locations and national forests visually on maps. Second, we measured the distance between national forests and contractors' offices using Environmental Systems Research Institute's (ESRIs) ArcInfo software. We calculated the distance between the weighted center of each national forest and the weighted center of the ZIP code (as provided by ESRI) where each contractor was located.

In addition to considering distances between national forests and contractor locations, we also examined the size of the community where contractors were located. Using Census Bureau population data, we divided communities into five categories: less than 5,000, between

5,000 and 9,999, 10,000-50,000 and greater than 50,000. The Census Bureau defines less than 5,000 as rural and greater than 50,000 as urban (US Census Bureau 2002). In this portion of the study, we considered only New Mexico contractors.

To learn about the extent to which companies employing guest workers are involved in Forest Service contracting in New Mexico, we compared the Department of Labor's list of businesses certified to hire guest workers from 2001 through 2005 with the contractors that worked on New Mexico's national forests. The Department of Labor data include the business name, the number of visas certified, the occupation and prevailing wage of the positions, and the work location. It is important to note that the data list the number of guest workers that these companies are certified to hire, not the number that they actually hire, which is often lower (Department of Labor 2006). In addition, these data do not indicate whether a contractor actually employed guest workers on Forest Service contracts in New Mexico, only that the company is certified to hire guest workers.

We conducted interviews with eleven people for the study, including seven contractors (two out-of-state contractors that employed H2B workers and six in-state contractors that did not), a contracting officer for a National Forest, the Forest Service contracting officer for the Southwest Region, and a representative from the Forest Guild who runs a training program for forest management contractors in New Mexico. Two contractors (including the only other contractor employing H2B workers) declined to participate in the interviews.

We developed a semi-structured list of questions to guide the interviews. For the interviews with contracting officers and the training specialist, we focused on contracting patterns within forest management in New Mexico. We asked about the competitiveness of local contractors in obtaining forest management contracts and obstacles for contractors to start-up and grow within the industry. Initial interviews led to a focus on the issue of worker's compensation in subsequent interviews. With the H2B contractors, we focused on the contractors' perspectives on the advantages and disadvantages of the program, their experiences working in forest management in New Mexico, and their suggestions for improving the state of forest management contracting in New Mexico.

We recognize that this is a small sample of interviewees and should not be taken as a scientific sampling of the contractor population. A systematic study would have required a methodology beyond the scope of and resources available for this study. The interviews were conducted to provide some qualitative explanation of the patterns identified in the quantitative analysis.

APPENDIX B

Forest-Level Maps

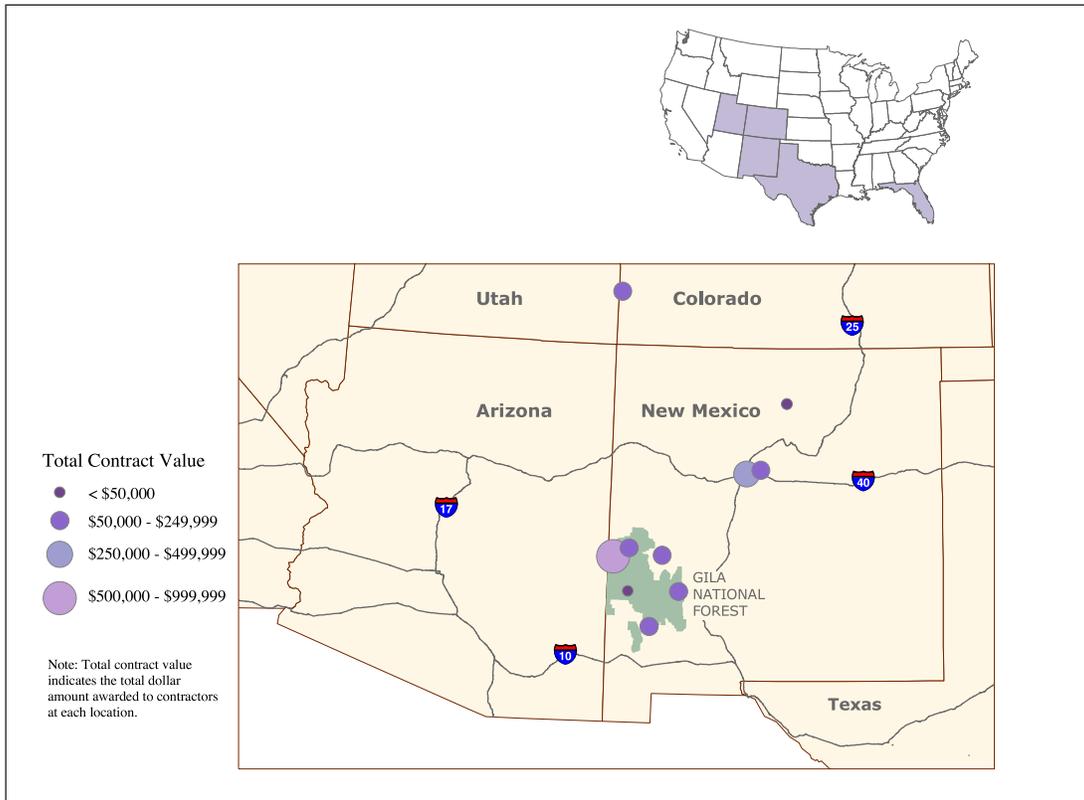


Figure 6 – Total Contract Value By Contractor Location, Gila National Forest

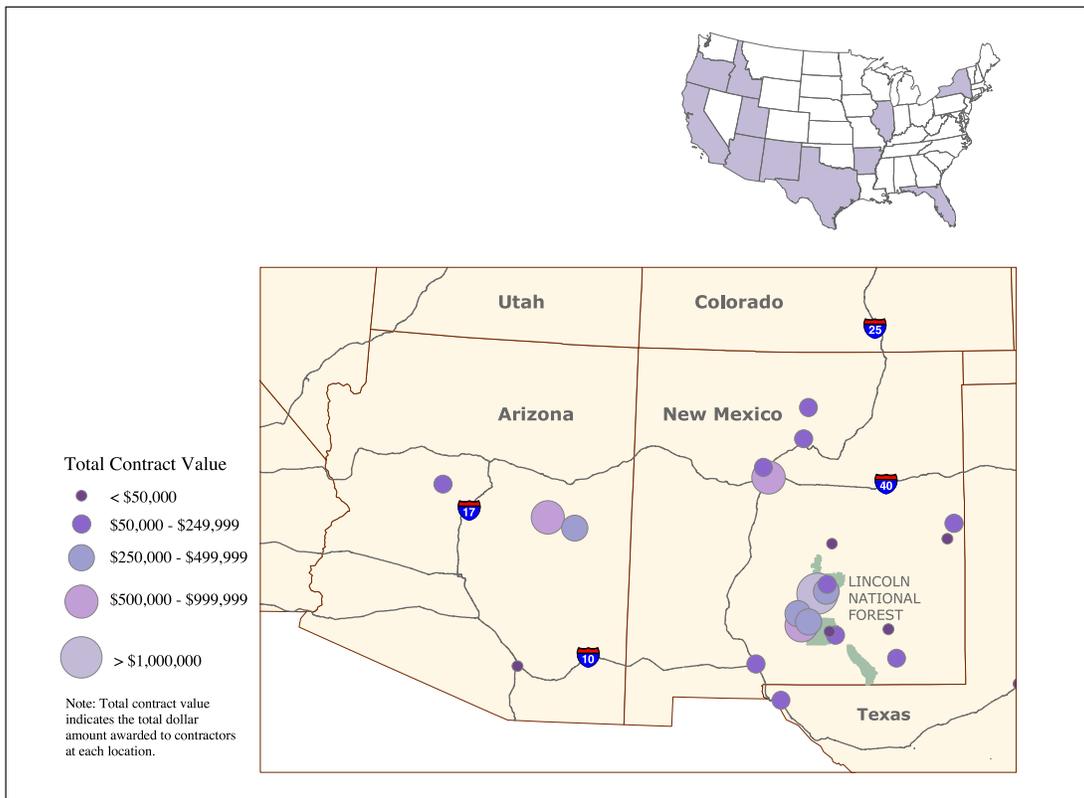


Figure 7 - Total Contract Value By Contractor Location, Lincoln National Forest

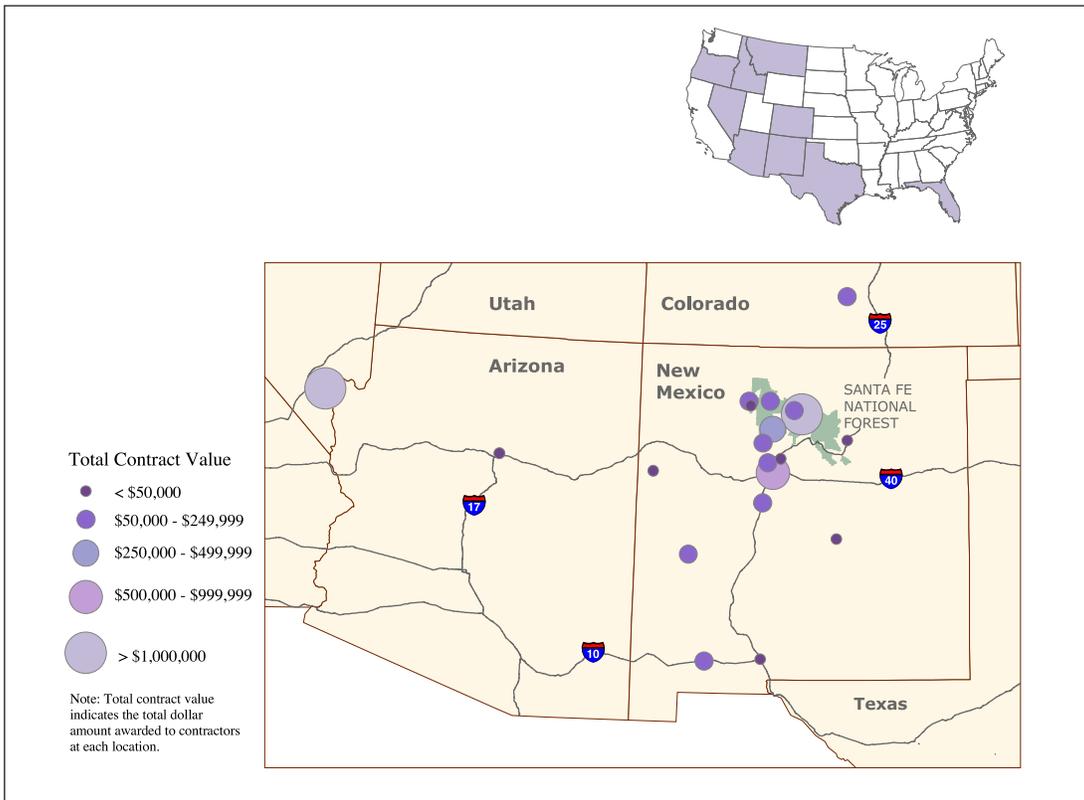


Figure 8 – Total Contract Value By Contractor Location, Santa Fe National Forest

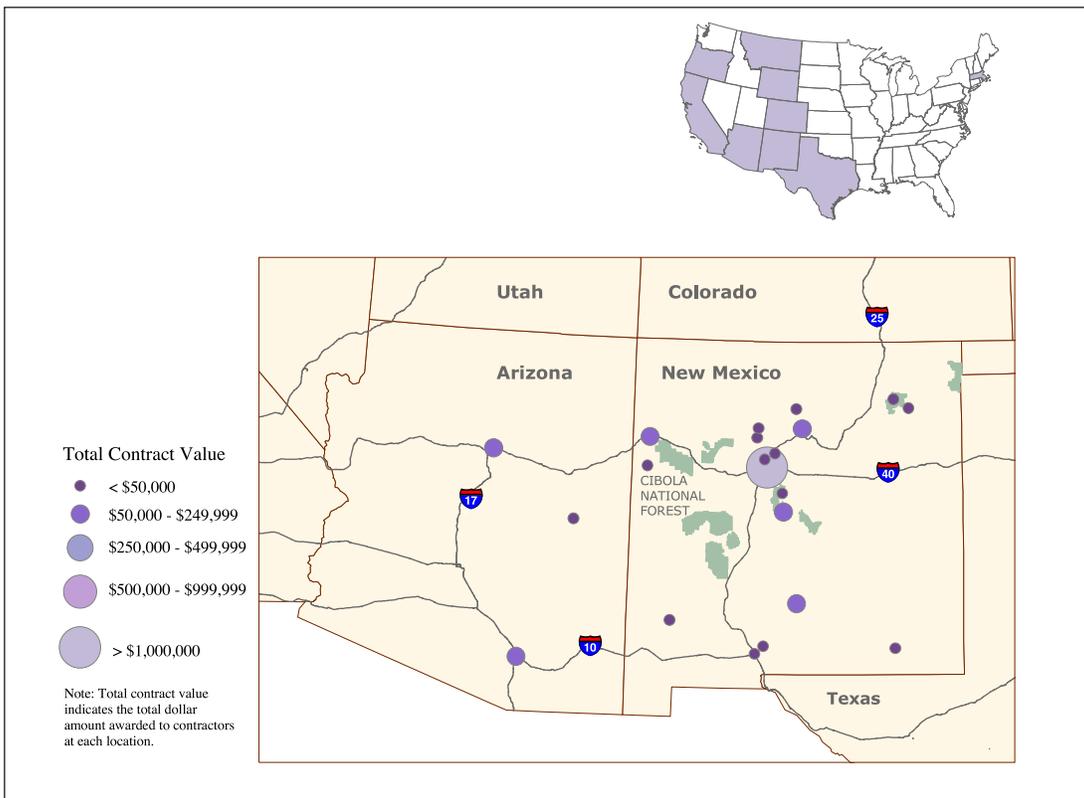


Figure 9 – Total Contract Value By Contractor Location, Cibola National Forest

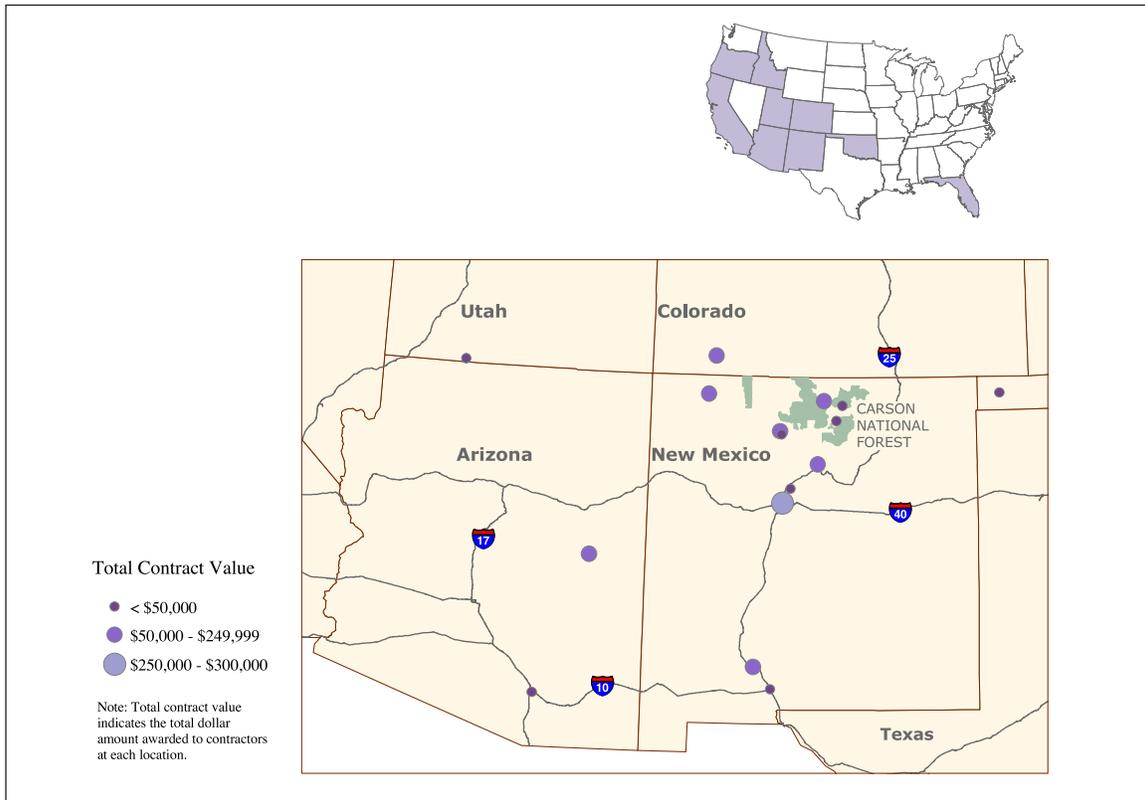


Figure 10 – Total Contract Value By Contractor Location, Carson National Forest

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