Western Juniper Harvest and Transport System Survey
Agency Contacts

Objective: Through a qualitative survey, evaluate systems being used by forest operators to harvest and transport western juniper material for utilization.

Format: The survey/interview questions are organized into the following five topics:

- General Information
- Business Niche
- Operating Conditions
- Work force
- Needs Assessment

Survey/Interview Questions:

I  General Information

Name of interviewee: _____Rob Jeffers_____________________________
Position:                     _____Rangeland Program Manager___________
Organization:              _____Modoc NF_______________________________
Address:                     _____800 W. 12th St., Alturas, CA  96101_____________
E-mail:                       _____rgjeffers@fs.fed.us___________________
Phone:                       ______(530) 233-8816______________________

II. Project Information: Forest Operations and External Factors that influence the loggers/contractor operations

(1) How many acres of juniper treatments is your unit implementing per year? Are you conducting projects that include utilization?

Many of the areas where the Modoc NF is removing juniper are mixed pine-juniper stands. The Forest is doing about 500 acres of this work per year. In another area
called Devils Garden where the stands are primarily juniper they are doing about 50-60 acres of work per year.

The Modoc NF is also working with the Alturas BLM to spearhead a large scale sagebrush steppe restoration EIS which would provide clearance to scale up treatments significantly.

Juniper is being utilized for personal use firewood and for biomass chips.

(2) What are the objectives of the projects?

<table>
<thead>
<tr>
<th>Objective</th>
<th>X</th>
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<tbody>
<tr>
<td>Wilfire hazard reduction</td>
<td>X</td>
</tr>
<tr>
<td>Watershed enhancement</td>
<td>X</td>
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<tr>
<td>Wildlife ecology (sage steppe and bitterbrush understory)</td>
<td>X</td>
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<tr>
<td>Biomass utilization</td>
<td></td>
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<tr>
<td>Other</td>
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(3) What type of operating constraints do you place on the operations?

<table>
<thead>
<tr>
<th>Constraint</th>
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<tbody>
<tr>
<td>Season of year for harvesting (dry or frozen ground)</td>
<td>X</td>
</tr>
<tr>
<td>Soil disturbance (compaction)</td>
<td>X</td>
</tr>
<tr>
<td>Stream protection (riparian areas)</td>
<td>X</td>
</tr>
<tr>
<td>Wildlife restrictions (goshawk, bald eagle)</td>
<td>X</td>
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<tr>
<td>Protection of sensitive plants</td>
<td></td>
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<tr>
<td>Other</td>
<td></td>
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(4) How are the operator services being contracted?

<table>
<thead>
<tr>
<th>Service</th>
<th>X</th>
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<tbody>
<tr>
<td>Stewardship contracts (Primarily)</td>
<td>X</td>
</tr>
<tr>
<td>Timber sales contracts</td>
<td>X</td>
</tr>
<tr>
<td>Combination of above</td>
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<tr>
<td>Other</td>
<td>Inmate Crews</td>
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III. Operating Conditions

(1) What is the average size of your operating units (acres)?

40-60 acres

(2) How far apart are your operating units on average (miles)?

¼ mile
(3) Please describe the typical haul road conditions in your operating units:

Roads in place (yes or no)  YES

*The primary roads are gravel and the secondary roads are dirt and red cinder. Roads used are engineered to USFS specifications.*

Construct new roads (length & road standards):

*No. Sometimes some maintenance is completed to be able to better use the existing roads*

Upgrade existing roads (describe types of upgrades):

Other description of road conditions:

(4) What is the average transport distance from your operating units to the market (miles)?

*Probably around 60 miles. Honey Lake is 100 miles away. Bieber is 60 miles away. Burney is 95 miles. When Lakeview is built it will only be 50 miles away (and maybe closer to some parts of Devil’s Garden).*

IV. Utilization

(1) What markets do you have available for Juniper and other harvested tree species?

*The major market recently has been clean chips for biomass power. Juniper is almost as high in BTUs per cord as oak (oak is 26 and juniper is 24). Some juniper also leaves the Forest as personal use firewood. There is now a local business (Mark Cannell) who is milling juniper to make flooring and is also making artisan furniture and mantle pieces.*

(a) In what form will they accept their raw material (e.g. acceptable length and diameters, delimming standards, chip quality)?

*Collins Pine has been taking clean chips from Quicksilver.*

(b) What is the standard unit of measure that contractor are paid on? $60 per BDT

(c) What are the consumers paying per unit?

(2) What are the local community development and family-wage employment?
opportunities with juniper utilization?

*Harvest, transport, power plant operations, flooring and furniture manufacturing.*

(3) Is there an adequate workforce capacity in your working area to remove and utilize junipers with available markets, or if markets were available in the future?

*So far there is adequate harvest, transport and processing capacity. If the Forest is able to increase the volume of treatments per year more workforce might be needed.*

(4) What workforce training initiatives are needed to prepare the local workforce for juniper utilization work (e.g. equipment operation & maintenance, use of chainsaws)?

V. Needs Assessment: Assessing the strengths and weaknesses of juniper harvesting operations at present and into the foreseeable future AND challenges

(1) What things do contractors do well in your operations?

*Generally satisfied with contractor performance.*

(2) What are the challenges in your operations?

*The biggest resource issue that limits juniper treatments is archaeology sites. Wanting to preserve the integrity of the ground surface leads the Forest to emphasize operating over frozen soil and snow, using rubber tires instead of tracks, and hand treatment in some areas. The Forest also might limit extraction to limit ground disturbance.*

*Another issue that makes juniper work tricky is the livestock rest periods after treatment. The Forest is looking as setting up a grass bank or to breaking up allotments into multiple pastures to address the need for rest.*

*Noxious weeds are also an issue.*

(a) What are the harvesting system limitations?

(b) What areas are presently in need of improvement?

(c) What opportunities do you see for equipment improvements?
If systems that address these resource constraints can be developed then the Forest wants to use more mechanized treatments and less fire. Fire impacts the sagebrush resource.

(d) Are there resource issues associated with the harvesting system (soils, vegetation, weeds, wildlife habitat, others)?

(e) Other challenges:

(3) How do predictable supply issues, markets and other landowner constraints challenge your operations?

(4) For the challenges that you identified above, how would you like to see the problems resolved, or the challenges met?

(5) For the above challenges, how might we get there?