PILGRIM PLANTATIONS
INSECT & DISEASE PROJECT

COMMUNITY MEETING

McCloud, CA
October 2, 2014
Introductions & Meeting Objectives

2014 Farm Bill and Amendment of the Healthy Forest Restoration Act

Introduction to the Pilgrim Plantations Insect and Disease Project Area

Desired outcomes:
- Understand the authority for the project.
- Understanding of the collaborative process.
- Understand the project need for action.
- Understand the proposal to address the need.

Blackstain root disease in ponderosa pine.
2014 FARM BILL- SECTION 8204
INSECT AND DISEASE INFESTATION

- Amends HFRA, by adding sections 602 and 603 to HFRA’s Title VI.
- Has requirements for designating insect and disease areas.
- Gave Governors ability to request initial insect and disease areas.
- Chief was delegated authority to designate landscape scale areas.
- Creates a new statutory Categorical Exclusion.
- Requires projects development and implementation through collaborative process.
An area may be designated if it meets at least one of the following:

- The area is...
  - experiencing forest health decline;
  - At risk of substantially increased tree mortality; or
  - Contains hazard trees that pose an imminent risk to public infrastructure, health, or safety.

HFRA, SECTION 602, DESIGNATION OF TREATMENT AREAS

Chief Tidwell designated over 1,993,650 acres in Region 5
Chief Tidwell designated the McCloud/Pit River landscape scale area (~1,623,604 acres). Over 351,000 acres of this designation is on the Shasta-McCloud Management Unit. The McCloud/Pit encompasses the Pilgrim Plantations project area.
What are the objectives of the collaborative process?

- Participants who are interested in *engaging in a focused, results-oriented collaborative process* to develop and implement the project.

- *Transparent, non-exclusive process which includes multiple interested persons representing diverse interests.*

- Open and respectful sharing by participants will give the Responsible Official options and feedback to consider when developing the project and making the final decision.
  
  - The Responsible Official equitably values insights from each participating individual and organization and *will not rely solely on any single individual or group perspective* when making agency decisions;
  
  - The Responsible Official will *not seek a consensus decision/recommendation* from those who choose to participate.
What constrains/guides the decision space throughout the collaborative process?

- The project must be in compliance with all laws, regulations and policies, including the Forest Plan.
  - Applicable laws/regulations/policy would be covered at this initial collaboration meeting.
  - Forest interdisciplinary team members can provide clarification on the feasibility/legality of suggestions and options presented.
Under section 602(d), projects that reduce the risk or extent of insect or disease infestation may be carried out in designated areas.

Under section 603, an insect and disease project may be categorically excluded and exempt from pre-decisional objections.

In order to use this Categorical Exclusion (CE), projects must:

- Maximize old growth and large trees;
- Consider the best available science; and
- Be developed through a collaborative process.
HFRA LIMITS

- May not exceed 3,000 treated acres;
- Shall be in the WUI, or condition classes 2 or 3 in Fire Regime Groups I, II, or III; and
- May not establish permanent roads.

Excluded:
- Congressionally designated Wilderness, Wilderness Study Areas;
- Areas where the vegetation removal is restricted or prohibited; and
- If inconsistent with the Forest Plan.
Image of current aerial survey results. There is currently mortality inside the plantations and large areas outside of the plantations, < ½ mile.
Western pine beetle has caused extensive mortality since the 1960s.

Aerial survey data show that repeated bark beetle attacks in the same areas over many years.

Under such conditions, tree mortality has become a chronic problem on McCloud Flats.
PONDEROSA PINE MORTALITY
NEARBY NATURAL STAND

We have the opportunity to address insect and disease threats that weaken forests and increase the risk of forest fire before there is a wide scale loss.

Mortality exceeds 250 acres

Elk LSR Project Unit 206
PONDEROSA PINE MORTALITY ON LANDSCAPE
STANDS IN VICINITY DYING FROM SIMILAR CAUSES
THE MOST LIKELY RESULT OF NO ACTION
The project is experiencing mortality from insects and disease.

within the McCloud/Pit River designation.

in the McCloud WUI (threat zone).

is about 555 acres.

is a plantation; the few remnant large trees will be retained.

well roaded; no permanent roads are proposed for construction.

Extraordinary circumstances

Several specific resource conditions should be considered in determining whether extraordinary circumstances related to a proposed action warrant further analysis and documentation.

The mere presence of one or more of these resource conditions does not preclude use of a CE.
Current Condition

- Tree mortality from insects, disease, and/or overdense tree conditions is increasing.
- Stand densities are ~50-60% of limiting stand density index.
- Individual and groups of tree mortality are evident, induced by western pine beetle and black stain root disease combined with competition and drought.
- Growth rates have decreased especially in the last 10 years and markedly in the last three years.

Overstocked ponderosa pine plantation with tree mortality.
Blackstain root disease in recently dead ponderosa pine.

Ponderosa pine with western pine beetle and red turpentine beetle pitch tubes. A key feature to look for when looking for insect infestation.

Egg galleries characteristic of western pine beetle.
SIGNS OF BARK BEETLES AND BLACK STAIN ROOT DISEASE

Ponderosa pine with pitch tubes.

Mortality pockets.
Overstocked ponderosa pine plantation with an understory of ponderosa pine and white fir.

Overstocked ponderosa pine plantation with western pine beetle-caused mortality.

Green-infested ponderosa pine; it will be faded next year.
PILGRIM PLANTATIONS PROJECT
STAND DENSITY INDEX AND GROWTH

Oliver and Uhzo 1997

- A SDI of 365 is considering limiting.
- Tree mortality can begin at SDI 230.

Plantation management of ponderosa pine using stand density index (SDI) as a relative stocking guide. As the average diameters increase, so do SDI and mortality. The goal is to reduce the number of trees per acre so the residuals can get bigger faster and be resistant to the next major disturbance.

Increment core from a ponderosa pine showing a decrease in growth rates in the last few years (to the right).

Todd Hamilton, Forester
Shasta Lake Ranger District
Stands most susceptible to black stain root disease and bark beetle attack share many similarities

<table>
<thead>
<tr>
<th>High risk of bark beetle mortality</th>
<th>High risk of black stain infection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overstocked</td>
<td>Overstocked</td>
</tr>
<tr>
<td>High percentage of pine in overstory, diameter &gt; 8 inches</td>
<td>High percentage of pine in overstory, age &gt; 40 years</td>
</tr>
<tr>
<td>Dry site or drought conditions</td>
<td>Cool, wet, mixed conifer site</td>
</tr>
<tr>
<td>History of tree stress and insect activity</td>
<td>Site disturbance, tree stress and insect vector activity</td>
</tr>
</tbody>
</table>

Cynthia Synder, Entomologist
Northern California Shared Service Area
OBJECTIVE

INCREASE FOREST STAND RESILIENCY TO INSECTS AND DISEASE IN THE PROJECT AREA
In meeting the need, the proposed action was designed to also do the following:

- Manage forest densities for growth and yield to improve forest health and vigor, recognizing the natural role of fire, insects and disease.
- Manage for hardwoods as a stand component.
- Provide an environment in the WUI threat zone where crown fires become surface fires before reaching the defense zone.
The planning area is
- ...northeast of McCloud, CA at T40N, R2W, S13, 14, 24 MDM.
- ...~4.5 miles north along Forest Road 13 from Highway 89.
- ...comprising five units, for a total of ~555 acres.
• Area was logged around 1898 to 1905.
• Wildfire burned through project in 1924.
• Brush field in 1944 photos.
• Converted from brush to plantation in 1950s/1960s.
• Site prepared (including windrowing) and planted to pine.
• Pre-commercially thinned in the 1970s and commercially thinned in the 1990s.
Forest Plan
Management Areas 2 and 3
(McCloud Flats and Mt. Shasta)

Management Prescription (MP) VIII
Commercial Wood Products
PILGRIM PLANTATIONS PROJECT
POTENTIAL TOOLS

TOOLS
Thin, Underburn
Increase Tree Diversity

ADDRESSING BEETLES & BLACKSTAIN
Reduce root-to-root contact.
Allow the sun to forest floor.
Reduce moisture stress.
Promote a mix of species.
Reduce entry frequency/disturbance.
Minimize excessive tree ingrowth.

Overstocked ponderosa pine plantation in need of treatment
Thin from below with group selection and patch cutting.
Radial thin non-pine natural regeneration and black oak.
Apply a borax-based fungicide.
Whole tree yard to the landing.
Use existing roads/landings (construct temporary spurs, if needed).
Construct fire line along private property boundaries.
Apply prescribed fire (~3 years after treatment).
Site prepare and plant openings.

Resource protection measures will be used during implementation to protect resources as needed. For example, goshawk LOP, equipment washing, etc. It is preferred to implement after peak flights of western bark beetle or after June/July.
Proposed temporary road location. Requires minimal disturbance.

Minimizing impacts to private landowners trees is another consideration.
Surveys and/or records indicate no known extraordinary circumstance conditions present in the project area

- No known or recent occurrences of Threatened and Endangered (T&E) or Forest Service Sensitive (FSS) wildlife, aquatic or plant species in the project area; no critical habitat for T&E species in the project area
  - Nearest known Northern spotted owl activity center ~3 mi away.
  - Nearest Northern spotted owl critical habitat ~1.5 mi away.
  - Known goshawk territory (FSS) within the project analysis area (but not treatment units).

- No flood plains, wetlands, or municipal watersheds;

- No congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas;
No inventoried roadless areas or potential wilderness areas;

No research natural areas;

No American Indians/Alaska Native religious or cultural sites

- The project area does not contain any known religious or mythological sites, habitation sites, resource use areas, or place names, per Native American consultation and literature review (Theodoratus).
- Archaeological sites, or historic properties or areas; The project area does not contain any archaeological sites, historic properties or areas. This has been determined based on pre-field research and spot field checks of the plantations.
Laws such as the Endangered Species Act, Clean Water Act, National Historic Preservation Act are addressed directly in the extraordinary circumstance resource conditions.

The project must be in compliance with all laws, regulations and policies, including the Forest Plan.

Other applicable laws/regulations/policy include:
- National Forest Management Act,
- Clean Air Act...
Soil surveys were conducted and soils evaluated

<table>
<thead>
<tr>
<th>Disturbance</th>
<th>Moist Wt.</th>
<th>Dry Wt.</th>
<th>% Moist.</th>
<th>Bd (g/cm)</th>
<th>Porosity %</th>
<th>Porosity ∆</th>
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</thead>
<tbody>
<tr>
<td>SD0</td>
<td>128</td>
<td>115</td>
<td>11.56</td>
<td>0.86</td>
<td>64.98</td>
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<td>0.90</td>
<td>63.23</td>
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<td>122</td>
<td>12.48</td>
<td>0.91</td>
<td>63.00</td>
<td>3.05</td>
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<tr>
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<td>148</td>
<td>133</td>
<td>10.74</td>
<td>0.88</td>
<td>64.17</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Average Threshold Bulk Density = 1.03

Soil conclusions

- The project will not result in irreversible damage to soils - operations will be reusing pre-existing roads, skid trails and landings to decrease new disturbance.

- Soil protection measures will be implemented.

- This project will comply with the Forest Plan and SQS for long-term soil productivity. It will help us reach our goals.

- Prescribed burning will help prevent damage in the long term.
PROPOSED TIMELINE

Proposed Timeline

*This timeline is an estimate.
YOUR INVOLVEMENT

- If you have information we may not be aware of or if there are extraordinary circumstances regarding the proposed action, please provide comments by 10/29/14.
  - Comments should be as specific as possible.
- Share ideas and priorities.
- Validate the proposed actions and contribute to resource protection measures.
- Share how you can help with implementation and/or monitoring.
For more information about the project, please refer to the Forest webpage for the project

For more information about the 2014 Farm Bill, please refer to the USDA-Forest Service webpage for the Farm Bill (http://www.fs.fed.us/farmbill/).

Please contact Emelia Barnum, Project Team Leader, if you would like to provide additional feedback or have further questions. (530) 926-4511 or ebarnum@fs.fed.us

(Please include Pilgrim Plantations in the subject line when sending emails)
Photos and input courtesy of:

- Dan Dushey
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