

Appendix I

Timber Timelines

This appendix provides detailed information about the timber rotations that will be used on matrix lands under the habitat conservation plan. The charts on the following pages show in detail how the rotations would actually be implemented.

Each timeline is described from two perspectives. One perspective focuses on a high level of wood production, with a moderate focus on creating forest structure and managing wildlife habitat. This perspective will favor wildlife species that prefer younger forests, although some habitat and structure will be provided for species that prefer older forests. The other perspective focuses on a high level of creating and maintaining forest structure and wildlife habitat, with a moderate level of wood production. This perspective will favor species that prefer older forests, although habitat will still be provided for species that prefer younger forests. Both perspectives will be used in managing the Elliott.

The timber timelines are based on the guiding principles and timber resource goals from the Elliott State Forest Management Plan. The guiding principles are in Section II of the Forest Plan, and the timber resource goals are in Section IV. Also, Appendix J of the Forest Plan provides a detailed description of the silvicultural tools that will be used to implement the timber timelines. In addition, the timelines, strategies, and tools are based on the concepts listed below.

- A healthy, productive forest provides the foundation for the long-term generation of revenue. Forest health and productivity must be maintained in order to accomplish other goals for the forest.
- The desired future condition for the Elliott State Forest will be created through active forest management. Our actions today will create the future forest. With that in mind, we will implement appropriate strategies using appropriate tools.
- Basic science, our knowledge of silvicultural principles, and our experience with forest management are the basis of our application of the tools. When new approaches or techniques are suggested, they will be implemented on the foundation of our current knowledge. In most cases, new approaches will be tried first in trial applications and implemented widely only after their effects are known. Underplanting and group selection harvesting are examples of new approaches we are trying.

We do not plan to abandon sound techniques and principles that have served well over the years in favor of wholesale application of untested, speculative approaches. We also cannot wait until all data is in on new techniques. We will use a common sense approach, combining new techniques with tested practices, monitoring the results, and changing our techniques as we learn.

- In the broadest sense, sound silvicultural and timber management practices neither create nor destroy wildlife habitat. What is usable habitat for one species may or may not be usable for another species. Forestry practices alter forest ecosystems and thus change the mix and composition of species comprising that ecosystem, but do not destroy ecosystems (Hunter 1990).
- High quality, intensive tree regeneration is an absolute imperative on the Elliott, for all harvest timelines and for both wood production and wildlife habitat perspectives.
- All forest operations are completed in compliance with the Oregon Forest Practices Act. These requirements are a minimum standard, and in most cases are exceeded to achieve goals and desired future conditions.
- The forest plan and the habitat conservation plan are long-range forest planning documents. The actual application of the timber timelines and silvicultural tools will be established at the next two levels of forest planning: block or basin planning and annual operations planning.

Table I-1. Timeline for 75 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	<p>Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris.</p> <p>Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.</p>	
0-2 years	<p>Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.</p>	<p>Where feasible, do low cost, low intensity burns. Plant more minor species than under wood production focus. When planting minor species with Douglas-fir, increase planting density over the density used with pure Douglas-fir.</p>
2-12 years	<p>Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.</p>	
12-20 years	<p>Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.</p>	<p>When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.</p>
23-28 years	<p>Monitor stands to determine the suitability and timing of thinning.</p>	
25-30 years	<p>Units suitable for thinning are proposed for sale.</p>	

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Table I-1. Timeline for 75 Year Rotation (continued)

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
27-35 years	Stands are thinned with snag creation, group selection, and underplanting. Stands are evaluated for fertilization. Prescription is designed to maintain high use of the site by the trees.	Prescription is designed to develop stand structure and produce wood.
38-45 years	Stands are monitored for suitability for a second thinning.	
40-50 years	Stands are re-thinned with snag creation, group selection, and underplanting. Prescription is designed to maintain high use of the site by trees.	Prescription is designed to develop stand structure and produce wood.
75 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	

Table I-2. Timeline for 105 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	<p>Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris.</p> <p>Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.</p>	
0-2 years	<p>Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.</p>	<p>Where feasible, do low cost, low intensity burns. Plant more minor species than under wood production focus. When planting minor species with Douglas-fir, increase planting density over the density used with pure Douglas-fir.</p>
2-12 years	<p>Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.</p>	
12-20 years	<p>Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.</p>	<p>When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.</p>
23-30 years	<p>Monitor stands to determine the suitability and timing of thinning.</p>	
25-30 years	<p>Units suitable for thinning are proposed for sale.</p>	

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Table I-2. Timeline for 105 Year Rotation (continued)

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
27-35 years	Stands are thinned with snag creation, group selection, and underplanting. Stands are evaluated for fertilization. Prescription is designed to maintain high use of the site by the trees.	
38-45 years	Stands are monitored for suitability for a second thinning.	
40-50 years	Stands are re-thinned with snag creation, group selection, and underplanting. Prescription is designed to maintain high use of the site by trees.	Prescription is designed to develop stand structure and produce wood.
70-80 years	Stands are monitored for suitability for a third thinning.	
75-85 years	Selected stands are thinned with snag creation.	Underplanting is done in thinned stands.
105 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	

Table I-3. Timeline for 135 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris. Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.	
0-2 years	Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.	Where feasible, do low cost, low intensity burns.
2-12 years	Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.	
12-20 years	Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.	When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.
23-30 years	Monitor stands to determine the suitability and timing of thinning.	
25-30 years	Units suitable for thinning are proposed for sale.	
27-35 years	Stands are thinned with snag creation, group selection, and underplanting. Stands are evaluated for fertilization. Prescription is designed to maintain high use of the site by the trees.	

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Table I-3. Timeline for 135 Year Rotation (continued)

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
38-45 years	Stands are monitored for suitability for a second thinning.	
40-50 years	Stands are re-thinned with snag creation, group selection, and underplanting. Prescription is designed to maintain high use of the site by trees.	Prescription is designed to develop stand structure and produce wood.
70-80 years	Stands are monitored for suitability for a third thinning.	
75-85 years	Selected stands are thinned with snag creation, group selection, and underplanting.	The stand will be re-thinned to variable densities in areas where understory trees have not been planted. Areas well-stocked with understory trees will not be thinned.
135 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	

Table I-4. Timeline for 160 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	<p>Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris.</p> <p>Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.</p>	
0-2 years	<p>Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.</p> <p>Where feasible, do low cost, low intensity burns.</p>	
2-12 years	<p>Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.</p>	
12-20 years	<p>Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.</p> <p>When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.</p>	
23-30 years	<p>Monitor stands to determine the suitability and timing of thinning.</p>	
25-30 years	<p>Units suitable for thinning are proposed for sale.</p>	
27-35 years	<p>Stands are thinned with snag creation, group selection, and underplanting. Stands are evaluated for fertilization. Prescription is designed to maintain high use of the site by the trees.</p>	

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Table I-4. Timeline for 160 Year Rotation (continued)		
Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
38-45 years	Stands are monitored for suitability for a second thinning.	
40-50 years	Stands are re-thinned with snag creation, group selection, and underplanting. Prescription is designed to maintain high use of the site by trees.	Prescription is designed to develop stand structure and produce wood.
70-80 years	Stands are monitored for suitability for a third thinning.	
75-85 years	Selected stands are thinned with snag creation, group selection, and underplanting.	The stand will be re-thinned to variable densities in areas where understory trees have not been planted. Areas well-stocked with understory trees will not be thinned.
110-130 years	Stands are monitored for suitability for a fourth thinning.	
110-130 years	Stands suitable for thinning will be thinned with snag creation.	
105-145 years		Stands will be monitored for their health and structural development. Additional partial harvesting may be done to promote stand health and structure.
160 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	

Table I-5. Timeline for 200 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	<p>Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris.</p> <p>Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.</p>	
0-2 years	<p>Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.</p> <p>Where feasible, do low cost, low intensity burns.</p>	
2-12 years	<p>Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.</p>	
12-20 years	<p>Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.</p> <p>When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.</p>	
23-30 years	<p>Monitor stands to determine the suitability and timing of thinning.</p>	
25-30 years	<p>Units suitable for thinning are proposed for sale.</p>	
27-35 years	<p>Stands are thinned with snag creation, group selection, and underplanting. Stands are evaluated for fertilization. Prescription is designed to maintain high use of the site by the trees.</p>	
38-45 years	<p>Stands are monitored for suitability for a second thinning.</p>	

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Table I-5. Timeline for 200 Year Rotation (continued)

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
40-50 years	Stands are re-thinned with snag creation, group selection, and underplanting. Prescription is designed to maintain high use of the site by trees.	Prescription is designed to develop stand structure and produce wood.
70-80 years	Stands are monitored for suitability for a third thinning.	
75-85 years	Selected stands are thinned with snag creation, group selection, and underplanting.	The stand will be re-thinned to variable densities in areas where understory trees have not been planted. Areas well-stocked with understory trees will not be thinned.
110-130 years	Stands are monitored for suitability for a fourth thinning.	
110-130 years	Stands suitable for thinning will be thinned with snag creation.	
140-170 years	Stands will be monitored and re-thinned if needed to maintain tree and stand vigor.	
105-185 years		Stands will be monitored for their health and structural development. Additional partial harvesting may be done to promote stand health and structure.
200 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	

Table I-6. Timeline for 240 Year Rotation

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
5 years before harvest — timber harvest	Identify sale area, complete presale reforestation plans, survey for and monitor T&E species. Prepare and sell timber. During harvest, protect soils and streams. Retain green trees, retain or create snags, and retain large woody debris. Consider a variety of practices on a small scale, trial basis, including but not limited to: group selection, underplanting, and establishing natural regeneration by heavy thinning.	
0-2 years	Complete site preparation, do animal damage control, plant genetically improved Douglas-fir and minor species.	Where feasible, do low cost, low intensity burns.
2-12 years	Monitor. Complete vegetation control, manage animal damage, and interplant as necessary.	
12-20 years	Monitor. Complete vegetation control, control animal damage, and complete precommercial thinning and pruning.	When thinning stands with Douglas-fir/minor species mixtures, thin to narrower spacing than with pure stands of Douglas-fir, and favor minor species.
23-30 years	Monitor stands to determine the suitability and timing of thinning.	
25-30 years	Units suitable for thinning are proposed for sale.	
27-35 years	Stands are thinned to a relatively uniform density. Stands are evaluated for fertilization.	Stands are thinned to a variable density with snag creation. Shade-tolerant species such as hemlock may be underplanted on a trial basis in low density areas. Stands are evaluated for fertilization.
38-42 years	Stands will be reviewed for suitability for a second thinning.	
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Table I-6. Timeline for 240 Year Rotation (continued)

Stand Age	Wood Production Focus Activities	Wildlife Habitat Focus Activities
See the respective columns.	40-45 years Stands are re-thinned with snag creation.	40-50 years Stands are re-thinned keeping a variable density, with snag creation and protection of multi-layer canopy formation. Additional understory planting may be done.
65-70 years	Stands will be reviewed for suitability for a third thinning.	
65-80 years	Suitable stands are thinned with snag creation.	Stands may be re-thinned to variable densities in areas where understory trees have not been planted. Stands will be thinned to low densities to permit additional development of understory conifers. Areas with understory trees will not be thinned. No further thinning will be done.
105-120 years	Stands will be reviewed for suitability for a fourth thinning.	
110-125 years	Suitable stands will be thinned to a lower level of stocking and underplanted with shade-tolerant species.	
145-220 years	Stands will be monitored and re-thinned according to density management criteria, with snag creation and possibly underplanting if trees will attain merchantable diameter by final harvest.	
240 years	Regeneration harvest with green tree retention, large woody debris retention, and snag creation.	