

Pre-Operations Report

Operation Name: Toll Pigeon (Alternative)
County: Tillamook
Management Basin: Trask

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres ¹
1	RC	28	28
2	MC	66	61
3	RC	251	237
4	MC	118	107
5	MC	82	77
6	MC	59	59
7	MC	117	108
8	MC	102	101
9	RC	132	121
Total		955	899

¹ The net acres are based on orthophotos and GPS and exclude roads, stream buffers and reserve areas.

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

Slopes have S, E and W aspects and range from 5% to 85%. Elevations range from 950 to 2100 feet. The major soil types are Killam and Rye.

Toll Pigeon is located in the center of the Tillamook Highlands within the Coast Range Province. The underlying rocks are mostly igneous with some near source sedimentary origin rocks. There are large scale landslide deposits mapped by Wells et al., typically within the sedimentary origin rocks, usually the Yamhill Formation.

II. CURRENT STAND CONDITION:

Table 2. Stand Inventory Information⁴

Area	Prescription	Stand ID ¹	Species	Age	DBH	BA	TPA	SDI	Net Acres ²
1	RC	317	DF	45	16	125	88	31	28
		Target ³	DF		21	38	18	9	
2	MC	318	DF	45	13	134	137	33	61
3	RC	319	DF	45	16	125	88	31	237
		Target ³	DF		21	38	18	9	
4	MC	320	DF	45	15	70	57	18	107
5	MC	321	DF	45	12	70	88	20	77
6	MC	322	DF	45	14	58	53	15	59
7	MC	323	DF	45	17	139	84	33	108
8	MC	324	DF	45	15	133	104	33	101
9	RC	325	DF	45	16	130	86	33	121
		Target ³	DF		22	36	14	8	

¹ The stand inventory information is from field reconnaissance cruise plots taken in 2005 and SLI in 2002.

² The net acres are based on orthophotos and GPS and exclude roads, and stream buffers and reserve areas. Modified clear cut acres are not contiguous and do not exceed 120 acres.

³ The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

⁴ These numbers are based on plot data taken to this point and final numbers may differ significantly from the actual conditions. The directive for minor and major modifications will be followed for further review.

The sale areas burned in the 1933, 1939 and 1951 fires, and were planted with Douglas-fir from an off-site source. These areas were pre-commercially thinned in 1989-90 and fertilized in 1992. Areas 2, 3, 4, 5 and 6 were commercially thinned in 2000-01. The remaining areas have had no other stand management.

The sale areas have been inventoried using the Stand Level Inventory (SLI) procedure and the stand has been identified as UDS. This stand shows very little promise of achieving any complex structure with its current condition. The commercially thinned patches have taken 5 years to begin to respond, and the unthinned areas have low basal area as a result of SNC and aggressive PCT. In as much treatment as the stand has already received, it is still a single age, single species stand. The UDS category is based on the added amounts of snags and downed wood from repeated treatments and understory brush under thin crowns.

See Table 2 for specific stand data.

The Douglas-fir has Swiss needle cast (SNC) symptoms resulting in slowed diameter and/or height growth. The stands have been mapped by SNC aerial surveys. There is scattered alder throughout the sale. The alder components of these stands were aerially sprayed to release planted conifer in the 1970's

resulting in alder trees with short boles and many limbs. No other significant insect or disease problems have been observed at this time.

The brush component in all the sale areas is comprised primarily of vine maple in clumps and sword fern up to 4 feet tall. Salal and Oregon grape are also present.

There are some large snags in various states of decay and/or some hard snags created from bear damage. SLI estimates between 1.1 and 5 snags per acre throughout the sale, with most being over 24"dbh. Down wood consists of scattered large old logs (36"+) in Class 3 and 4 stages of decay and some PCT slash in decay classes 1 and 2 and slash from recent partial cut activity. SLI estimates between 3100 and 4500 cubic feet/acre. Less than 100 cubic feet is currently in decay class 1 or 2 over the sale area. All snags and down wood targets from the FMP are met with the exception of fresh down wood.

III. DESIRED STAND CONDITION and VISION:

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest ¹	Desired Future	Net Acres
1	317	UDS	REG	GEN	28
2	318	UDS	REG	GEN	61
3	319	UDS	REG	GEN	237
4	320	UDS	REG	GEN	107
5	321	UDS	REG	GEN	77
6	322	UDS	REG	GEN	59
7	323	UDS	REG	GEN	108
8	324	UDS	REG	GEN	101
9	325	UDS	UDS	GEN	121

¹ The stand is expected to develop into this condition in the five to ten years after this operation is completed except in REG stands which occur after harvest.

See Section IV: Proposed Management Prescription for more information on Green Tree, Down Wood, and Snag Strategies during operation. Also refer to Landscape Design in the Summary document for more information on strategies to move the district toward Desired Future Condition goals.

The prescriptions described below are based on the current stand condition such as overall tree and stand growth, lack of species mix, stand density, and stand health. By addressing the lack of growth and the susceptibility of the off-site Douglas-fir to SNC by regeneration harvests, the stand can be replanted with a mix of conifer species that would normally appear on the coast range. Future land managers will have a greater variety of options to meet multiple goals. Future management is expected to favor multiple tree species over the present monoculture.

Regeneration Harvest:

In the short term Areas 1, 3 and 9 will be cut to reduce stand density. In the long term this operation moves the stand toward more complex structure. This prescription will allow for variable densities in the stands and allow the residual trees to grow larger in diameter and crown depth. The openings will create horizontal and vertical diversity. The expectation is future density management to continue the growth of overstory trees as well as the understory trees and shrubs species initiated from this treatment.

These prescriptions will combine with adjacent stands to create a mosaic of large and small openings in the East Fork Trask Basin through gaps, variable density and edge habitat creation. Unmanaged hardwood and conifer mixes will be left in headwalls and in riparian buffers as well as scattered in the units.

As the future stands mature the residual trees from this entry will add to complexity of sizes, species and densities. These trees will also add to snags and down wood through the life of the stand.

Snags/acre and cubic feet of down wood by decay class may be measured in the future in a step of adaptive management. If the stands are deficient in either of these characteristics, the need for creating additional amounts will be evaluated.

IV. PROPOSED MANAGEMENT PRESCRIPTION AND ANTICIPATED PATHWAY:

See table 2 for prescription targets

Modified Clearcut:

In Areas 2, 4, 5, 6, 7 and 8, an average of 4 to 6 Douglas-fir trees per acre will be left. There are adequate snags and downed wood in the sale areas, so the residual trees will be allowed to grow for future recruitment. Diameter limits or marked trees may be used to reserve the appropriate trees to leave. Merchantable alder will be removed when in harvest corridors or on ground yarding slopes. All other species will be reserved.

Retention Cut:

In Areas 1, 3 and 9, merchantable Douglas-fir will be thinned to a basal area range of 33 to 50 square feet to create an even, but open, canopy. Merchantable alder will be removed. All other species will be reserved.

Understory vegetation will be initially controlled to promote reforestation. Once the new stands are free to grow, the understory vegetation will be enhanced by the additional growing space available in previously unthinned portions.

Green Tree, Down Wood and Snag Strategies

See also Section III: Desired Future Condition for long term strategies

A variety of methods will be used to achieve green tree retention requirements. These residual green trees will supplement the future stand by promoting growth of dominant/co-dominant leave trees. Small non-merchantable hardwood and conifer will also be retained where possible. These leave trees function as future source of snags and down wood recruitment across the landscape. Green trees will be left on precipitous slopes, headwalls, and those areas not reached by conventional logging methods. Many of these areas will be posted so they are outside of the timber sale boundary. Previous sales' GTR will be maintained.

Existing down wood will be left in the sale areas. Down wood recruitment is expected through mortality and windthrow of residual trees, felled snags and tops left during harvest. Tops resulting from ground yarding will be left in the unit in such a way to facilitate planting new trees.

Existing snags not determined to be a safety hazard will be retained and any felled snags will be left for down wood. Creation of snags is expected during harvest activities and over time by natural processes. Operators will be encouraged to top and leave lift trees in cable yarding areas.

In portions of the sale areas that have had commercial thinnings, efforts will be made to reuse landings and skid trails.

V. ESTIMATED TIMBER AND REVENUE INFORMATION:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	%		X
Planned Quarter:		2	

	Conifer	Hardwood*	Total
Net Volume (MBF)	7741		7741
Stumpage Value (\$/MBF)	229.29		
Estimated Gross Value	\$1,774,950		\$1,774,950
		Project Costs:	\$168,960
		Estimated Net Value:	\$1,605,990

* Alder will be removed according to prescriptions. Current estimates are negligible.

VI. HARVESTING AND ACCESS CONSIDERATIONS:

The sale areas are accessed via Toll, Toll Loop and Mesabi Roads. These are currently all weather crushed rock roads. See maps for specific road locations and conditions.

Approximately 0.5 miles of existing unsurfaced, and 0.5 miles of abandoned road will be improved which includes grading, rocking, widening, culvert replacement,

spot rocking, sidecast pullback, and adding new culverts. This work will bring all roads up to standards described in *the Forest Roads Manual*.

Approximately 2.3 miles of road will be constructed to provide access to cable yarding areas. Following harvest, roads within the sale areas will be reviewed for closure. Ground yarding roads will be closed and water-barred following harvest. See summary document for more information on this topic. An alternative to increased road construction is requiring long span yarding. This decision will be made during sale layout based on merchantability as well as resource concerns.

Other project work that will be included with this sale is: vacating Steampot Road, road brushing 7 miles off Hembre Ridge Road, core drilling Toll Pit and/or stockpile creation.

The operation will be 70% cable yarding and 30% ground yarding. Ground yarding will generally be limited to slopes less than 35%.

Table 5. Transportation Planning Summary (Miles)⁴

Activity	Mainline	Collector	Rocked Spur ¹	Dirt Spur ¹
Construct	0	0	1.7	0.6
Improve	0	0	0.8	0.2
Maintain ²	5	2.7	0	0
Close/Block ³	0	0	0	0
Vacate ³	0	0	0	1.7

¹ Additional roads may be built by the operator at the time of harvest and will be approved by the State through the Operations Plan prior to construction. These will be short dead end spurs and closed or blocked after harvest

² All roads accessing the sale area will be maintained during the life of the timber sale contract. Maintenance miles in the table are those roads not being constructed or improved.

³ Roads not closed/blocked or vacated at the end of the sale will be reviewed for closure after reforestation is established.

⁴ The numbers in this table reflect planned Project Work associated with the sale.

VII. AQUATIC RESOURCES AND WATER QUALITY:

The sale area is within the East Fork of the South Fork Trask sub-basin. This sub-basin has been identified as a Salmon Anchor Habitat (SAH) Basin. Stream buffers within or adjacent to harvest unit boundaries will be managed according to the most current SAH Basin Strategies.

Pigeon Creek, Steampot Creek and Mesabi Creek are large and medium Type F streams that are within or adjacent to the sale areas. There are additional unnamed small perennial, seasonal Type N streams within the sale areas. Oregon Department of Fish and Wildlife (ODFW) will be requested to complete

stream surveys before sale layout begins. Streams of unknown status will be treated as Type F until surveys are completed to verify fish use.

A watershed analysis has been completed for the Trask basin. Actions are being planned based on the analysis recommendations. ODFW fish biologist will work with ODF to identify possible stream enhancement project areas in Mesabi and Scotch Creeks. ODFW may also identify additional stream enhancement of Steampot Creek during vacation of Steampot Road. The lower stretches of the Steampot Creek received enhancement summer of 2005.

The sale was identified as part of the Salmon Anchor Habitat Basin Plans approved in June 2005. See Salmon Anchor Summary Table for tracking of acres managed in each basin and list of sales in Basin Plans.

In order to protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. Work in live streams will only be allowed between July 1 and September 15. Operations outside of this period will be reviewed with ODFW.

VIII. T&E SPECIES CONSIDERATIONS:

The sale has been reviewed with the ODF Northwest Oregon Area Biologist. Surveys for marbled murrelets are not required for Toll Pigeon due to the absence of potentially suitable habitat. By Policy, surveys for northern spotted owls are not required in the Tillamook Burn Monitoring Survey Area (see November, 2002 ODF Policy Guidance: *Northern Spotted Owl Surveying on State Forest Lands*).

T & E Fish species: See Sections VII, and IX for listed fish protection measures.

T & E Plant species: The sale areas were checked against the Oregon Natural Heritage Program (ONHP) database of known threatened or endangered listed plant locations as well as local records in the Land Management Classification System (LMCS). No listed plants were identified within or adjacent to the sale areas.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

The initial assessment from the geotechnical specialists is low to high. The geotechnical specialist will be consulted during sale layout.

The sale area has been identified as SAH Basin and the most current SAH Strategies will be used at the time of contract development. See the Summary Document for more information.

X. RECREATION RESOURCES:

The sale area is designated as Motorized in the *Tillamook State Forest Comprehensive Recreation Plan* (1993). This sale has been reviewed by the District Recreation Coordinator. Recreational use common to this area includes hunting, camping and OHV use.

OHV trails are present within the sale areas. Short term closure of these trails will occur to facilitate logging and public safety. The public will be advised when trails are closed. Portions of trails will be improved for logging access. Trails designated by the District Recreation Coordinator will be reestablished and trailheads improved.

XI. CULTURAL RESOURCES:

The *Tillamook State Cultural Assessment* does not list any cultural sites within or adjacent to the proposed sale boundary. The historic Toll Road accesses the sale and portions the Public Use Coordinator will be consulted during sale layout.

XII. SCENIC RESOURCES:

The sale areas have a visual classification of Level 3, low sensitivity. No scenic impact is expected.

XIII. OTHER RESOURCE CONSIDERATIONS:

Permanent inventory plot #2143066 is within the sale area. Permanent plot markings will be protected according to guidelines.

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Area 1 contains Focused Stewardship: Aquatic and Riparian Habitat, Recreation and Wildlife Habitat. See Section VII, Aquatic and Resources and Water Quality, and Section X, Recreation Resources for management guidelines to be utilized.

Area 2 contains Focused Stewardship: Aquatic and Riparian Habitat and Wildlife Habitat. See Section VII, Aquatic and Resources and Water Quality for the management guidelines to be utilized.

Areas 3, 4, 5, 6, 7, 8 and 9 contain Focused and Special Stewardship: Aquatic and Riparian Habitat and Wildlife Habitat. See Section VII, Aquatic and Resources and Water Quality for the management guidelines to be utilized.

Boundary lines depicted on Attachment C are approximate; exact locations and site specific management activities will be determined during the sale preparation process.