Pre-Operations Report

Operation Name: Mombo Combo
County: Clatsop
Management Basin: Fishhawk

Table 1. Operation Areas, Types and Acres

Area	Type of Operation	Gross Acres	Net Acres
1	MC	39	35
2	MC	46	41
3	MC	64	58
4	PC-M	22	20
Total	Partial Cut	22	20
Total	Modified Clearcut	149	134
Total		171	154

I. PHYSICAL DESCRIPTION OF OPERATION AREA:

These sale areas are located within the Fishhawk Basin, about five miles northwest of the town of Birkenfeld and north of Highway 202. The Fishhawk Basin drains in a southern direction towards the Nehalem River. They are in the Douglas-fir zone, and are characterized by Douglas-fir stands, mixed with hemlock and red alder, with understory of salal, huckleberry, and ferns. Well maintained mainline roads and secondary rocked roads provide primary access to all of the sale areas. Soil types in these sale areas are mostly Bradwood and Keasey, shallow to moderately deep, well-drained, moderately fine textured soils developing from siltstones and sandstones. Elevations range from 800 to 1,200 feet.

The underlying rock is sedimentary origin, Astoria Formation, Pittsburg Bluff Formation, and Keasey Formation, mostly tuffaceous claystone, mudstone, and sandstone. Slopes on all sale areas are gentle to moderate, and all aspects are involved. Topography is generally characterized by gentle to moderate uplands, with steeper slopes into the major streams.

II. CURRENT STAND CONDITION:

Areas 1, 2, and 3 – The current stands are generally 68 to 78 years old, and are primarily Douglas-fir stands with scattered hemlock and cedar, and some small patches and stringers of alder. The hardwood component is mostly associated with riparian areas. The understory vegetation is variable, and is composed of sword ferns, huckleberry, and oxalis. Salmonberry is the primary understory vegetation in the hardwood portions. In Area 1, SLI indicates that there are approximately 3.5 snags per acre greater than 24 inches DBH are present as well as approximately 3,900 cubic feet per acre of down wood (all decay classes). Area 2 has less than 1 snag greater than 24 inches in DBH per acre and approximately 90 cubic feet per acre of down wood in decay class 1 and 2. Area 3 has less than 1 snag per acre greater than 24 inches DBH as well as approximately 1,900 cubic feet per acre of down wood (all decay classes).

A root rot infection (*Phellinus weerii*) is present at endemic levels throughout portions of the sale areas.

Area 4 - The current stands are very similar to Areas 1, 2, and 3. The stands average 76 years of age, and are moderate sized mixed conifer stands composed of primarily Douglas-fir, with minor components of hemlock, red cedar, maple, and traces of alder. The current SDI is approximately 59. The understory vegetation consists mostly of scattered sword fern, vinemaple, salmonberry, and oxalis. Area 4 has less than 1 snag per acre greater than 24 inches DBH as well as approximately 1,900 cubic feet per acre of down wood (all decay classes), 117 cubic feet per acre is within decay class 1 and 2.

Table 2. Stand Inventory Information

Area	Prescription	Stand ID [1]	Species	Age	DBH	BA	TPA	SDI	Acres [2]
1	MC	23551	DF	73	18	253	144	61	35
		Target [3]	DF, WH, WRC				7		35
2	MC	23607	DF, RA	68	15	235	182	60	41
		Target [3]	DF, WH, WRC				7		41
3	MC	23641	DF	78	20	252	117	58	58
		Target [3]	DF, WH, WRC				7		58
4	PC-M	23641	DF	78	20	252	117	58	20
		Target [3]	DF		22	160	62	35-40	20

1 The source of stand inventory information is *OSCUR Stand 2002 or SLI from 2005. Stand ages shown are as of 2008.
2 The acres are based on (orthophotos, traverse, GIS, GPS, etc) and exclude roads, streams buffers, reserve areas, etc.
3 The Target identifies expected stand characteristics (DBH, BA, TPA and SDI) after harvesting has been completed.

III. DESIRED FUTURE CONDITION/VISION:

Areas 1, 2, 3, and approximately 69 acres of Area 5 are not planned to have a complex desired future condition (DFC) on the landscape.

Area 4 and approximately 7 acres of Area 5, the DFC is Layered (LYR).

Table 3. Stand Structure Information

Area	Stand ID	Current	Post Harvest [2]	Desired Future	Acres
1	23551	UDS	REG	General	35
2	23607	UDS	REG	General	41
3	23641	LYR	REG	General	58
4	23641	LYR	LYR	LYR	20

[2] The stand is expected to develop into this condition in the five to ten years after this operation is completed.

IV. PROPOSED MANAGEMENT PRESCRIPTION:

Areas 1, 2, and 3 - are planned for regeneration harvest (modified clearcut) and will be replanted with a mixture of conifer species. Areas infected with root-rot will be marked during harvesting to allow for planting of species not impacted by root-rot, such as western red cedar and red alder. Opportunities for pre-poling these areas will be evaluated during sale preparation activities. As a result the sale may be split into two separate operations if pre-poling is pursued.

Area 4 – is a partial cut, with the objective of developing a condition of "layered". This will be a moderate level thinning prescription, approximately SDI 35-40, and will retain the "biggest and best" trees as well as a minor component of intermediate sized conifer trees to provide multiple dimensions to the stand following harvest. In addition, all cedar and hardwoods will be retained to provide further diversity and structure within the stand. It is anticipated that the thinning will allow increased diameter growth of the overstory trees while continuing the growth of the existing mid-story and understory conifer. In addition, the increase in light to the forest floor will allow for the development of another cohort of hemlock and cedar and increase growth and diversity of understory vegetation. Trees infected with *Phellinus weerii* will not be targeted for removal, as recent partial cuts in the general vicinity indicate that the root-rot is not causing significant decay or mortality. Upon completion of these activities, it is anticipated that the stand may need another entry to develop into a layered condition stands. Opportunities for pre-poling in this area will be evaluated during sale preparation activities. As a result the sale may be split into two separate operations if pre-poling is pursued.

Snags: In all areas, all existing snags will be retained unless deemed to be safety hazards. Snag retention will be emphasized during sale layout and coordinated with green tree retention marking practices to protect existing snags. In MC areas, it is anticipated that snag creation and leaving additional live green

trees will be necessary to supplement landscape snag levels as defined by the Forest Management Plan. In PC areas, it is anticipated that additional snags will develop during yarding activities by leaving, topping, or girdling damaged rub trees, tail trees, lift trees, and/or intermediate support trees.

Green Trees: In Areas 1, 2, and 3, an average of 5 to 7 green trees per acre will be retained using multiple wildlife tree strategies, including scattering and/or clumping green trees throughout the area, and not solely located in riparian areas. Minor species such as red cedar and any existing larger remnant trees will be reserved from cutting.

Downed Wood: All existing down wood will be retained. It is anticipated that normal felling and bucking practices will meet and/or exceed 600 cubic feet per acre of downed wood. Non-merchantable log segments suitable for downed wood will be bucked out prior to yarding.

Site Preparation: Treatment options will be further evaluated with the reforestation forester during sale layout. Site preparation will be provided by cable harvesting and some slash manipulation of slash near landings. Plant at 300 trees per acre with the following mixture: Douglas-fir, western hemlock, western red cedar, and possibly red alder. Mountain beaver trapping will focus on draw areas. Animal damage to seedlings is anticipated to be heavy. Paper bud caps will be installed on Douglas-fir and tubes on the Western Red Cedar at the time of initial planting.

V. ESTIMATED TIMBER AND REVENUE OUTPUTS:

Table 4. Timber and Revenue

Ownership		Sale Type	
BOF	CSL	Cash	Recovery
100%	0%		**X**
Planned Quarter:		2nd	

	Conifer	Hardwood	Total
Net Volume (MBF)	6,000	300	6,300
Stumpage Value ($/MBF)	$200	$250	
Estimated Gross Value	$1,200,000	$75,000	$1,275,000
		Project Costs:	$148,400
		Estimated Net Value:	$1,126,600

VI. HARVESTING AND ACCESS CONSIDERATIONS:

There are currently good quality forest roads accessing all of the sale areas. The proposed new roads are composed of collectors and relatively short dirt and/or rocked spurs from existing rocked roads. The roads are designed to reach ridge-tops to facilitate cable yarding.

Area 1 is completely accessed by surfaced roads, although the construction of one or two landings may be required adjacent to the Fishhawk Tie-Thru Road to facilitate cable logging. There is also a fill in need of repair and buttressing on the spur off of the Fishhawk Tie-Thru Road. This will be completed during the sale.

Roads into Area 3 will be evaluated for use of temporary dirt roads. It is anticipated that some portion of the spurs needed to access these modified-clearcut areas will be vacated upon completion of harvesting activities. These plans will be further explored and evaluated during the field layout process. Access to Area 3 will require a new road will to be constructed off the end of an existing spur extending south and then east to the boundary between Areas 3 and 4.

The construction of this road completes the transportation plan developed for this ridge system in the mid 1990's. Another short new spur road will be necessary to access the northern portion of Area 3.

Approximately 4.5 miles of road improvement is needed on portions of Fishhawk Ridge Road and the Fishhawk Tie-Thru Road.

The road rock needed will be crushed at the Viewpoint Quarry or obtained from existing stockpiles.

The project work for this sale is estimated to cost approximately $148,400.

Table 5. Transportation Management Summary (Miles).

Activity	Mainline	Collector	Rocked Spur	Dirt Spur
Construct	0.0	0.0	1.0	0.5
Improve	1.5	1.5	1.5	0.0
Maintain	2.0	2.0	2.0	0.0
Close/Block	0.0	0.0	0.0	0.0
Vacate	0.0	0.0	0.0	0.5

VII. AQUATIC RESOURCES AND WATER QUALITY:

Type F Streams:
One unnamed tributary of Fishhawk Lake (small, Type F stream) flows southeasterly along the southern boundaries of Areas 3 and 4. Warner Creek (small, Type F stream) flows South along the West portion of Area 2. Warner Creek and tributaries to Fishhwawk Lake contain Coho, a federally listed fish.

All of the streams flow in a southern direction towards the Nehalem River through the Fishhawk Basin.

Type N Streams: There are small perennial Type N streams in all sale areas. NW Oregon Forest Plan stream riparian strategies will be employed along these streams.

The current riparian vegetation is composed of a patchwork of conifer and hardwood overstories. The understory in the conifer dominated reaches is similar to the headlands, with mostly ferns, salal, and some wild rose. The understory within the alder reaches is mostly salmonberry.

All streams will be examined during sale layout to determine stream type and classification. Then, the specific RMA strategies required in the FMP will be implemented. These strategies are found in Appendix J, pages J-1 through J-16. Streams associated with the sale have a LMCS Aquatic and Riparian classification of focused. All the sale areas are located within the Fishhawk Lake Creek Salmon Anchor Habitat area (SAH). The sale shall receive all resource protection measures necessary to mitigate any slope stability hazards in accordance with the standards contained in the SAH strategies.

The Northwest Oregon Area Geotechnical Specialist will be consulted during sale layout as a precautionary measure; reviewing stream channels and slopes above Fishhawk Lake.

Stream Enhancement Opportunities: There may be opportunities for stream enhancement along a reach of Warner Creek located adjacent to Area 2. Further assessment and collaboration will be done with ODFW biologists and the Sunset Unit Forester.

Aquatic Resource Protection: For all areas, full log suspension is required when cable yarding over streams. No ground-based logging equipment operation is allowed within the stream bank zone. Adequate RMA buffers will be left where required on all streams per the FMP standards. To protect water quality during active operations, a variety of methods will be used to prevent sediment from entering live streams. These methods range from use of hay bales in road ditches, to “ditch-outs” away from streams, to complete shutdown of logging and hauling operations during times of heavy rainfall. There are no known high risk sites within the sale area. Any high-risk sites found will require at least one-end log suspension and cable logging. If any in-stream work is required with the sale, then the in-stream work will be conducted during in-stream periods established by ODFW.

VIII. WILDLIFE AND T&E SPECIES CONSIDERATIONS:

The sale areas were surveyed to protocol for Northern Spotted Owls in 2007, and 2008 with no responses. And will be resurveyed in 2009.

The ODF Northwest Area Biologist determined the sale areas do not contain suitable habitat for Marbled Murrelets.

The sale area was checked against the Oregon Natural Heritage Program database of known listed plant locations. The sale area was also checked against district knowledge for any listed plant location. No listed plant records were identified within the sale area.

IX. SLOPE STABILITY AND GEOTECHNICAL ISSUES:

This assessment is based off of USGS 1:24,000 topographic maps and available geologic maps. There are a few isolated high landslide hazard locations in Areas 1, 2, 3, and 4. Area 1 drains to an unnamed tributary to Fishhawk Creek. The risk of landslides delivering directly to this unnamed tributary from the sale area is low. Area 2 drains to Warner Creek. The risk of landslides delivering directly to Warner Creek from Area 2 is low to moderate. Areas 3 and 4 drain to an unnamed tributary that flows into Fishhawk Lake. The risk of landslides delivering directly to this unnamed tributary from Areas 3 and 4 is low to moderate. The geotechnical specialist will be consulted if evidence of recent landslide activity is identified during sale layout.

X. RECREATION RESOURCES:

Due to its proximity to Fishhawk Lake, this area receives dispersed recreation, which includes hunting, fishing, camping, target shooting, and driving forest roads. There are no established recreation sites within the operation areas. The planned operations will only temporarily impact recreational road use.

XI. CULTURAL RESOURCES:

There are historic railroad grades within the vicinity of the sale area. Additional reconnaissance will be conducted to determine adequate protection measures, if any, during final sale preparations.

XII. SCENIC RESOURCES:

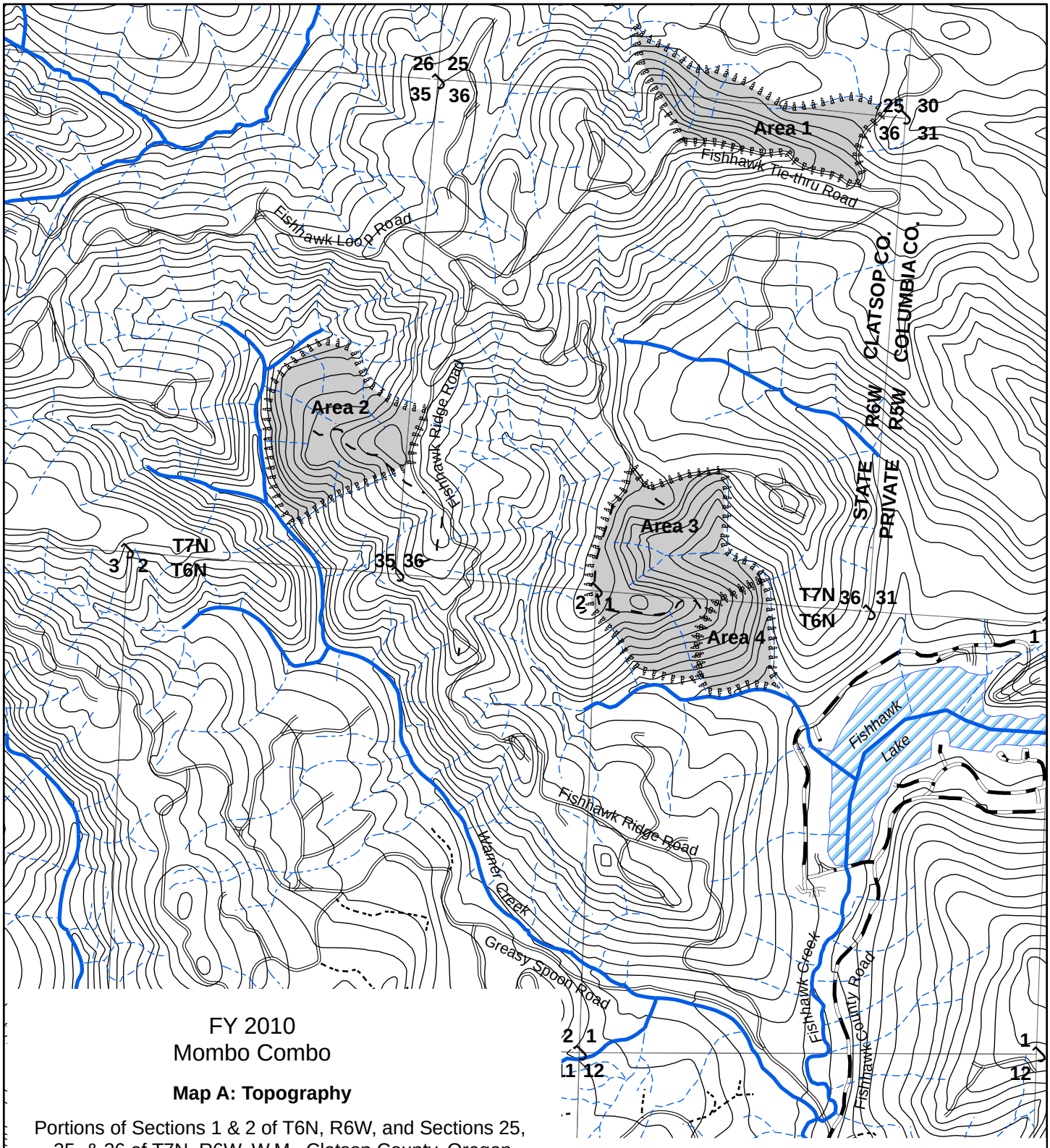
Approximately 8 acres of Area 4 has been designated “Level 2 Visual”, as it may be visible from Fishhawk Lake. The planned operation is thinning and therefore should minimize visual impact.

XIII. OTHER RESOURCE CONSIDERATIONS:

Four survey corners to protect within the sale area. (See Survey Plan located at District office)

XIV. LAND MANAGEMENT CLASSIFICATION SUMMARY:

Areas 1, 2, and 3 are classified as Focused – Wildlife for the Upper North Fork Nehalem Salmon Anchor Habitat area. Within this overlay approximately 8 acres of Area 4 is of "focused" Visual classification for its proximity to Fishhawk Lake.



FY 2010
Mombo Combo

Map A: Topography

Portions of Sections 1 & 2 of T6N, R6W, and Sections 25, 35, & 36 of T7N, R6W, W.M., Clatsop County, Oregon

3

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	35	
Area 2 (MC) -	41	
Area 3 (MC) -	58	
Area 4 (PC) -		20
Total =	134	20

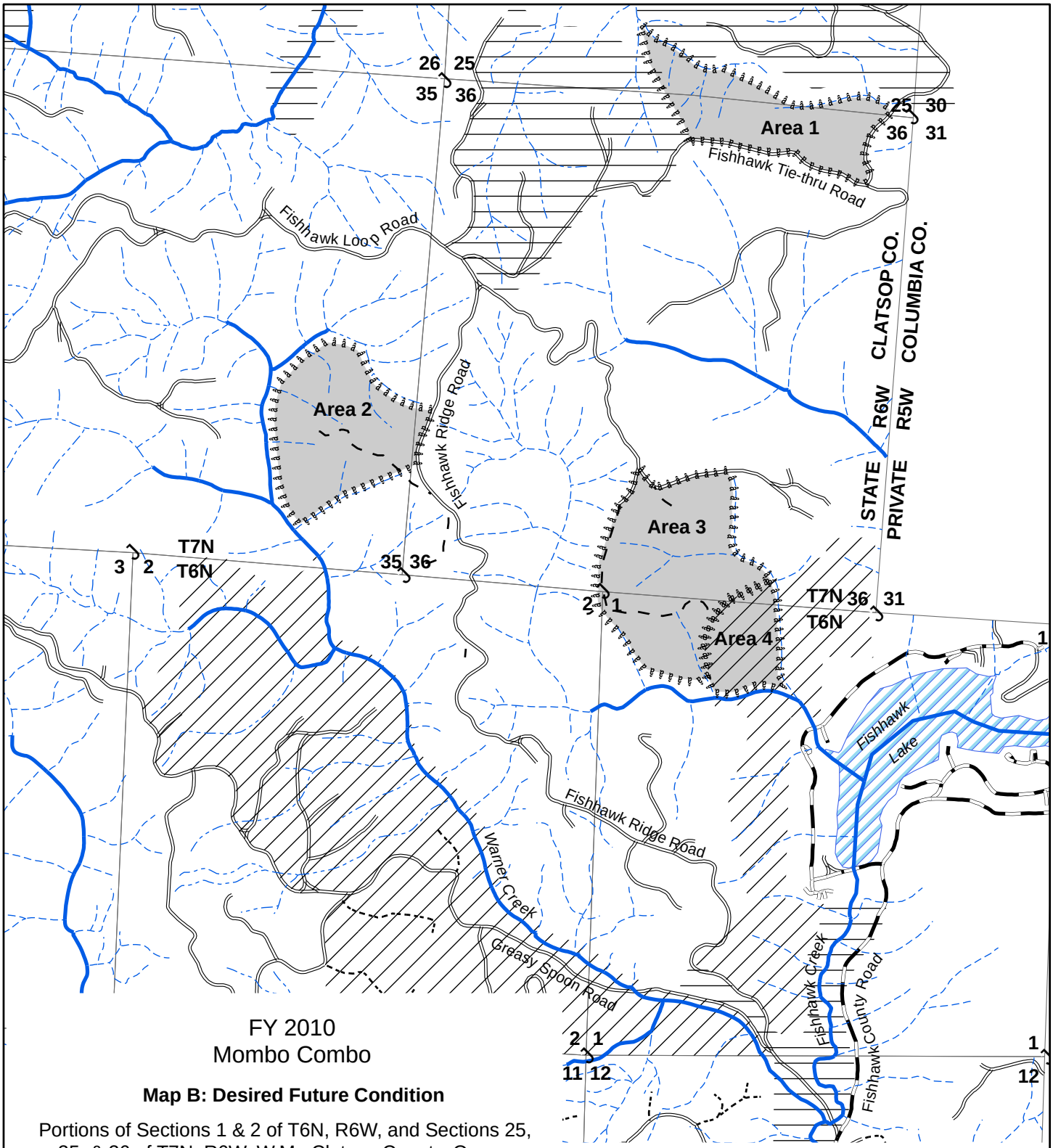
Total Sale Acreage = 154

LEGEND

- Timber Sale Boundary
- Ownership Boundary
- Fish Stream
- Non-fish Stream
- Unknown Stream
- Vacated Road
- Paved Road
- Rocked Road
- New Road Construction

Approximate Scale
1:18,000

1,000 0 1,000 2,000
Feet



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Map B: Desired Future Condition

Portions of Sections 1 & 2 of T6N, R6W, and Sections 25, 35, & 36 of T7N, R6W, W.M., Clatsop County, Oregon

3

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	35	
Area 2 (MC) -	41	
Area 3 (MC) -	58	
Area 4 (PC) -		20
Total =	134	20

Total Sale Acreage = 154

Approximate Scale
1:18,000

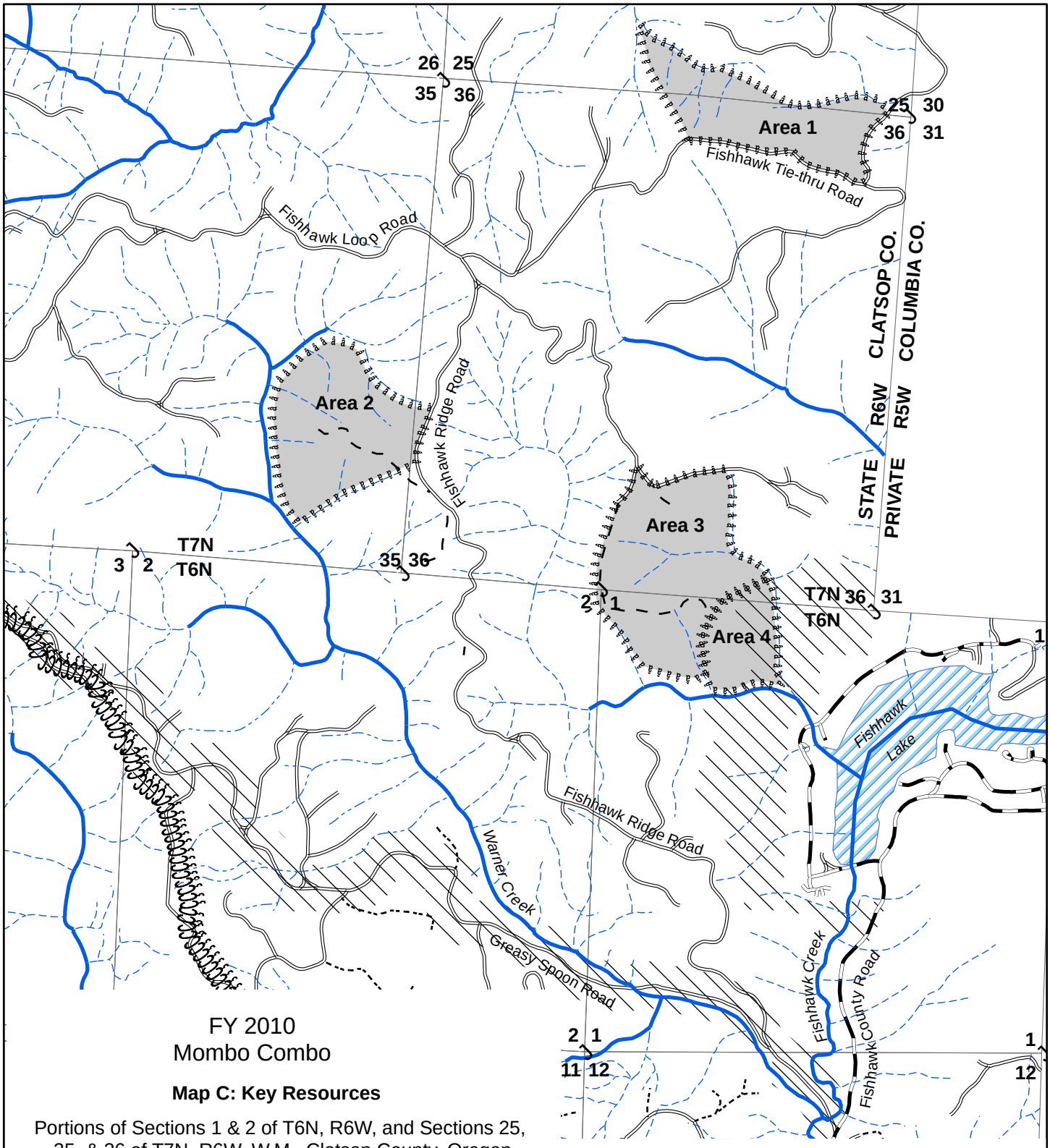
1,000 0 1,000 2,000
Feet

LEGEND

- Timber Sale Boundary
- New Road Construction
- Fish Stream
- Non-fish Stream
- Unknown Stream
- Vacated Road
- Paved Road
- Rocked Road
- Ownership Boundary
- Resevoir

Desired Future Condition

- Layered
- Older Forest Structure



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Map C: Key Resources

Portions of Sections 1 & 2 of T6N, R6W, and Sections 25, 35, & 36 of T7N, R6W, W.M., Clatsop County, Oregon

3

Approximate Net Acreage	MC Acres	PC Acres
Area 1 (MC) -	35	
Area 2 (MC) -	41	
Area 3 (MC) -	58	
Area 4 (PC) -		20
Total =	134	20

Total Sale Acreage = 154

1,000 0 1,000 2,000 Feet

Approximate Scale

1:18,000

LEGEND

- Timber Sale Boundary
- Ownership Boundary
- Fish Stream
- Non-fish Stream
- Unknown Stream
- Vacated Road
- Paved Road
- Rocked Road
- New Road Construction
- Salmon Anchor Habitat Boundary
- Focused Visual