

FOREST STEWARDSHIP PLAN

For:

OWL CREEK TREE FARM

Fred Bonnett
Sugarloaf Star Route
107 Owl Creek Road
Boulder, CO 80302

Part of the NW1/4 NE1/4, Sec 36, T1N, R72W, S.P.M.
and

Part of the NE1/4 NW1/4, Sec 36, T1N, R72W, S.P.M.

Consisting of parts of the
Wild Tiger #4 (M.S. #7371A),
Florence (M.S. #17630)
and
Luzon (M.S. #17630)
mine claims.

Prepared By:

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This management plan has been prepared at my request to guide my Stewardship management activities which I voluntarily apply on my property. I believe that activities recommended in this plan are appropriate to meet my objectives and will benefit the natural resources on my property. I intend to apply the recommended practices and to maintain them for a period of at least ten years, thus helping me to be a good steward of the forest and associated resources entrusted to me on my property.

Fred Bonnett

Date

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OBJECTIVES: The forestry objectives for this property are:

1. Consistent with requirements of the Stewardship Incentives Program, to improve the health and vigor of the forest and enhance its productivity.
2. Practice silviculture and multiple use management, giving particular attention to protection of wildlife habitat.
3. Preserve the aesthetic qualities of the area.
4. Protect the soil and water resources of the property.

AREA: The property contains 5.9 acres, all of which supported a ponderosa pine forest prior to the Black Tiger Fire. Currently, less than 4.5 acres can be considered stocked. Breakdown for Stewardship Program purposes is listed below:

	4.9 acres	Ponderosa pine/Douglas-fir
House/Yard	<u>1.0</u> acres	
	5.9 acres	STEWARDSHIP ACRES

There are some problems with the plat, mostly connected with the Wild Tiger claim. First, the plat does not give a distance along the boundary where the east half of Wild Tiger No. 4 and Luzon overlap. I estimated this distance, using a ruler, at 73.33 feet, but this is subject to a 3.33-foot measuring error.

Second, the north line of Parcel III (the west half of Wild Tiger No. 4) is not a straight line, as assumed in the original survey. The discrepancy is not great ($1^{\circ} 39'$ over a distance of 49.16 feet), but it is enough to show that the property line is not as sharply defined as one would like.

Third, when the calls (using the 73.33-foot distance) are analysed using a traverse program, the closure error is 3.92%. The two discrepancies above are not enough to account for this, so there must be at least one other error in the survey (For comparison, the standard for a traverse using a hand-held compass and length of pace is 1.76%. The Boy Scouts accept closure errors less than 5.00% as qualifying eleven-year-olds for Second Class map and compass requirements.). I was unable to locate the error from data presented on the plat; I suspect one of the measurements or bearings is not correct, but finding it would require field measurements. In the end, it may not be important, anyway, unless the error adjoins other private land. The U. S. Forest Service will probably never do anything on its land in the area (It has no access.), and if it does, it will have to resurvey the

lines, anyhow.

With these problems, it is impossible to say exactly what the acreage is. I used 5.9 acres because it best fits the available data.

PROPERTY LOCATION: Owl Creek Tree Farm is located on the west side of Lost Angel Road about 100 feet northwest of the sharp bend at the southern end. Owl Creek Road passes through it.

BOUNDARY MONUMENTS: No attempt was made to locate boundary monuments; however, county records show 13 marked corners and 4 unmarked ones.

Marked corners are:

1. The corner at the intersection of the north line of the Florence and the east line of the Cash,
2. the west corner of the Zulu, which lies on the north line of the Florence,
3. the corner at the intersection of the south line of the Florence and the north line of the Luzon,
4. a corner in the south line of the Luzon (This corner is in the middle of Lost Angel Road.),
5. Florence Corner #3,
6. the midpoint in the south line of Wild Tiger No. 4,
7. Wild Tiger No. 4 Corner #1,
8. Wild Tiger No. 4 Corner #2,
9. the corner at the intersection of the north line of Wild Tiger No. 4 and the west line of Luzon,
10. Luzon Corner #2,
11. the corner at the intersection of the north line of the Luzon and the north line of the Florence,
12. the corner at the intersection of the north line of the Florence and the south line of the Cash, and
13. Cash Corner #4.

Unmarked corners are:

1. and 2. Two corners in the south line of the Luzon, both within a foot of Florence Corner #3.
3. the corner at the intersection of the south line of the Luzon and the north line of the Wild Tiger No. 4, and
4. the midpoint in the north line of Wild Tiger No. 4.

There are no fences or other indicators of property lines.

ACCESS: Access is by way of Lost Angel and Owl Creek Roads. Most of the property can be readily accessed from Owl Creek Road and/or the driveway. Wild Tiger No. 4 is not feasibly accessible because the only practical access is now occupied by the house.

TOPOGRAPHY: The property occupies a flat hilltop, dropping over the crest toward Owl Creek, a minor tributary of North Boulder Creek. Elevation ranges from about 7640 feet above sea level at the west end of Wild Tiger No. 4, to about 7700 feet above sea level along the north property line. Aspects are mostly southwest. Slopes are mostly flat and up to 30%.

GEOLOGY: Precambrian rocks about 1.8 billion years old were intruded about 1.7 billion years ago by the Boulder Creek Granodiorite Formation. This is the bedrock throughout the property.

North-northwest trending faults of Precambrian Age pass east of the property, but do not cross it. These faults have occasionally been reactivated.

Lower Paleozoic rocks (Cambrian through Mississippian) are missing in this area. It is thought that these rocks once existed, but were eroded away during Early Pennsylvanian times when the Boulder area was uplifted on the northeast flank of the Ancestral Front Range uplift, one of several northwest-trending mountain ranges that comprised the late Paleozoic Ancestral Rocky Mountains. These mountains (Ouachita Orogeny) resulted from the reactivation of Precambrian structures when Africa collided with South America and the southern edge of North America. Gravel and sediments washing off the Ancestral Front Range were deposited as the Fountain Formation which was later uplifted to form the Flatirons. By the late Paleozoic the Ancestral Front Range was eroded to a set of low hills.

In the Early Cretaceous the area began to subside and was eventually buried under almost 10,000 feet of marine sediment.

In the Late Cretaceous-Early Tertiary (about 67.5 million years ago), the Laramide Orogeny uplifted a mountain range with much the same configuration as the present day Front Range. Erosion about balanced uplift so relief was never great, much less than at present. By the Late Eocene uplift ceased, leaving a low-profile range of hills. Most of the faulting and eastward tilting that raised the Flatirons into position occurred during the Laramide Orogeny.

Intrusive volcanic activity occurred to the east during the

Paleocene, creating the Valmont Dike and some other basaltic formations in the eastern part of the county, but the activity did not involve this property.

During the Oligocene this region was reduced to a plain, similar to eastern Colorado today with an elevation of about 3000 feet. In the Miocene, thermal uplift and east-west expansion formed the Rio Grande Rift and began the rise of the modern Front Range, which continues to rise today.

This property has never been glaciated (The nearest glacier reached Nederland.). During the Pleistocene, the area alternated between spruce-fir and ponderosa pine forest, similar to today's forest. For the last 11,000-15,000 years, ponderosa pine has been the predominant species.

SOILS: Soil maps for the western part of Boulder County have not been published; Soil Conservation Service agronomists are in the process of doing this at this time.

Juget soils occur on south-facing slopes. They are dry, with only a few inches to rock. They retain water poorly and have many problems from a tree-growing standpoint. Most of the property is on Juget soil types.

HISTORICAL LAND USE: Boulder County was burned in massive fires about 1760 and 1853. The Boulder Canyon fire of 1889 burned most of the area west of Boulder. Evidence of these fires was removed from this property in the 1880s and 1890s when nearly every tree in sight was cut for firewood to fuel hoists and stamping mills. A fire history of the Sunshine drainage indicates fires within it at about two-year intervals from 1860 to 1920 when fire control started to become effective.

This property furnished wood for nearby mines, but mining was never extensive on it.

DESIRED CONDITION: Healthy, vigorous, fully-stocked stands of trees are required by the Stewardship Program. This condition need not be achieved immediately, but progress must be made in this direction.

IMPACT ON NEIGHBORS & NEARBY COMMUNITIES: Salvage of fire-killed ponderosa pines east of Owl Creek Road is the only cutting

anticipated during the life of this plan (1993-2003). This will be easily visible to your neighbors, but most people would consider this an improvement. The proposed cutting area contains 1.8 acres and is sufficient to meet the harvesting requirements of the Stewardship Incentives Program. The practice is eligible for cost sharing funds for slash cleanup in the amount of 65% of cost (including your own labor) up to \$180.00 (The entire site adjoins a public road.).

Planting and/or seeding practices can restore a forest to the site, hiding stumps and slash (if any) within seven or eight years.

Slash and existing logs could be used to build "bunny houses (See below.)." Cost-sharing could cover up to \$410 per acre (\$738) for this practice.

LOCAL MARKETS: Firewood markets are weaker than they were ten years ago, but are still readily able to handle any sales conducted under this plan (if any).

WETLAND AREAS: There are no wetlands on this property.

WILDLIFE: No evidence of wildlife was observed. Obviously, however, many species use the property.

Threatened or Endangered Species: The property is located in Block C4 (Fort Collins). Protected species in this block are:

1. the American peregrine falcon,
2. the bald eagle,
3. the interior least tern,
4. the greenback cutthroat trout,
5. the piping plover and
6. the whooping crane.

For the most part, these species do not make use of the area. The tern, plover and whooping crane are shore birds and prefer large lakes and rivers and you have no streams to support fish.

Eagles visit Boulder in winter, staying in the piedmont area with its milder weather and migrating north when weather improves. Boulder is on the extreme southern end of the eagle's summer (nesting) range. Occasionally a pair will nest in the area, but it is very unusual.

Peregrine falcons may use the property in hunting, but there are no nesting sites on the property (There are no cliffs.).

Wildlife Habitat Opportunities: There are several practices that can enhance the property's usefulness to wildlife. They are:

1. Cover is in short supply in the area. There are three ways it could be provided:
 - A. Shrub thickets. Plantings of a shrub such as American plum, could provide escape cover for small animals. The property could nicely hold one planting on the west side of Owl Creek Road. Plums are immune to the nearby dwarf-mistletoe and would easily fit in the now-open stand. This practice can be cost-shared. The Federal government can reimburse \$280 in expenses. A shrub thicket costs about \$900 to install, including labor. You can count your own labor as part of your share. If you do the work yourself, you will receive back all but about \$50.
 - B. Slash resulting from cutting the eastern 1.8 acres, could be piled in specially designed shelter piles, or "bunny huts," for small animals. These are built with larger pieces near the bottom and smaller ones on top to prevent crushing by snow. Small slash from cutting can be cleaned up this way, though that is not the primary purpose. The practice is cost-sharable at 65% of actual cost up to \$410 per acre. Most of the cost is labor.
 - C. Reforestation would provide needed cover. This could be done by planting (surer) or seeding (cheaper). Seeding can be cost-shared at 65% of cost up to \$65 per acre (Costs almost never get high enough to use the whole \$65.). Planting without site preparation can be cost-shared at 65% of cost, up to \$365 per acre. Seedlings generally cost about \$400-\$450 per acre and labor adds another \$480. In your situation, watering would be practical and would improve survival and growth.

Seeds can be purchased from CSFS, or ordered through Dean Swift Seed Company, Box B, Jaroso, CO 81138, phone: (719) 672-3739.

Cost-sharing cannot be paid for planting or seeding of ponderosa pine within 50 feet of a tree infected by dwarf-mistletoe.

In order to meet Stewardship requirements, at least one wildlife practice must be implemented. Besides those above, there are hundreds of other practices that might be applied, depending on which animal you decide to manage for.

INVENTORY: The entire property is in the ponderosa pine/Douglas-fir/Arizona fescue ecotype.

Your forest (4.9 acres) has so few surviving trees that it is considered non-forest (A forest type at climax, but not currently occupied by trees.).

A few ponderosa pines survived the fire and are heavily infected with dwarf-mistletoe. Treatment is needed, but should be limited to pruning of number one to number four trees. Removal of number five and six trees would have adverse visual effects.

Standard silvicultural practice is to salvage dead trees, reduce dwarf-mistletoe infections with pruning and reforest portions of the stand not affected by dwarf-mistletoe. Slash can be used for animal shelter. The combination can be cost-shared.

SILVICULTURAL OBJECTIVES: Sustained yield is ruled out by the small size of the property. The objective is to salvage some of the dead wood, reduce dwarf-mistletoe, use the resulting slash for wildlife shelter piles and reforest as much of the property as possible without subjecting new seedlings to dwarf-mistletoe attack.

WINDBREAK: The house is exposed to high winds. An effective windbreak is needed.

About 350 feet of windbreak along the west and north sides of the property would be needed. A three-row planting would require 100 plums, 60 medium-height trees (Rocky Mountain junipers are good, once established, but will require protection from weather for the first two or three winters.), and 60 ponderosa pines. Weed barrier should be used to conserve water and suppress grass competition. Cost-sharing will cover about 45% of the actual cost, including labor.

IMPLEMENTATION SCHEDULE:

1993:

1. Salvage dead wood east of Owl Creek Road (1.8 acres). You can do this yourself and use or sell the wood as you wish, or you can sell stumpage to a firewood contractor. You will not make much from the sale, but the wood will pay for setup and administration costs and leave enough

to take the family out to dinner. As I write this, I have a cutter looking for wood.

2. Apply for cost-sharing for the seeding practice. Funds for 1993 have already been allocated, so this application is for 1994.
3. Apply for funds for slash cleanup using practice of your choice.

1994:

1. Seed eligible area (late fall seeding).
2. Clean up slash, or convert to wildlife shelter piles.

1995:

1. Install wildlife shrub planting.
2. Check germination/survival of 1993 planting to see if seeding will need to be repeated.
3. Begin dwarf-mistletoe reduction pruning (This may be eligible for cost-sharing; check with forester-in-charge at the time.).

1996:

1. Install windbreak.
2. Repeat dwarf-mistletoe pruning (This needs to be done each year for at least three years. If infected trees remain nearby, this will become a permanent seasonal operation.).
3. Replant or reseed 1994 treatment area, as needed.

1997:

1. Replace failed windbreak trees.
2. Replace failed shrubs, if needed.
3. Prune dwarf-mistletoe trees, as needed.

1998:

1. Replace failed windbreak trees, if needed.
2. Prune dwarf-mistletoe trees, as needed.

1999 - 2002: Minor maintenance of practices already installed.

2003: Update this plan. New practices are created from time-to-time and your needs will probably change, as well. Plans need to be kept up-to-date to make use of these.

SUMMARY OF OBJECTIVES:

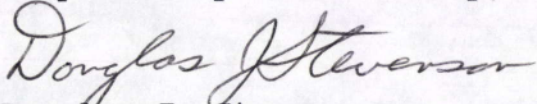
1. Salvage dead wood from eastern end of property.
2. Control dwarf-mistletoe.
3. Clean up slash and use as wildlife shelter piles.
4. Install shrub thicket for animal shelter.

Though not, strictly speaking, a silvicultural objective, a windbreak is also desired.

For many years to come, you can enjoy your forest home. With people like you taking care of our forests, their well-being is assured.

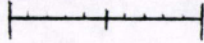
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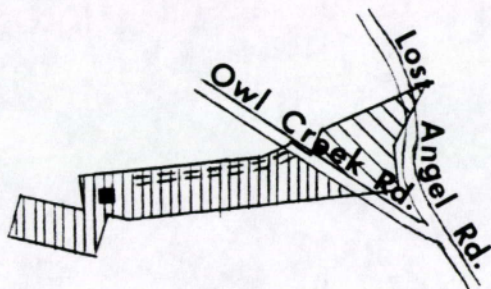
Respectfully submitted by,





Douglas J. Stevenson
Assistant District Forester

Fred Bonnett Owl Creek Tree Farm

660 Feet

10 Chains



NW1/4 NE1/4, Sec. 36, T1N, R72W, S.P.M.
NE1/4 NW1/4, Sec. 36, T1N, R72W, S.P.M.

- Property Line
- == Road, Improved
- === Road, Unimproved
- House
-  Stand A (1.8 acres)
-  Stand B (4.1 acres)

Drawn By:

Douglas Stevenson

February 27, 1993