

FOREST STEWARDSHIP PLAN

for

TOM MELROSE  
6940 North Sixty-third Street  
Longmont, CO 80503  
(303) 530-0944 (H)

W1/2 NW1/4 NW1/4 NW1/4, Sec 35, T2N, R70W, S.P.M.  
(5.0 Acres)

Prepared By:

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January 2, 1997

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.

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Tom Melrose

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January 2, 1997

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## OBJECTIVE

To create a windbreak to protect the house and visual screens to block the view from nearby houses to the north and west. To create wildlife shelters and food sources and to improve the aesthetic qualities of the yard.

## DESCRIPTION

The property is located on the southeast corner of Niwot Road and North Sixty-third Street.

The site is currently occupied by a house in the southwest corner and by pasture (Adequate, permanent fencing to protect the plantings is a condition of cost-sharing if the property is to continue in use as pasture.). There is a heavy brome grass sod on the site which is level. It is located on Broadway alluvium, a gravel deposit of late Pleistocene (Pinedale) age. There are a few trees near the house. Otherwise, the site contains only grass.

Valmont cobbly clay loam<sup>1</sup>

This is a moderately-deep, well drained soil on high terraces at elevations of 4,900 to 5,500 feet. It formed in gravelly and cobbly loamy alluvium.

Typically the surface layer of this soil is very dark grayish brown light clay loam about 4 inches thick. The subsoil is brown clay loam to a depth of 24 inches. The substratum to a depth of 60 inches is pinkish-white to light-brown very gravelly loam. The surface layer is neutral but becomes moderately alkaline with increasing depth, thus limiting the choice of trees.

Permeability is moderately slow and available water capacity is moderate. The effective rooting depth is 60 inches or more. Surface runoff is medium, and the erosion hazard is slight to moderate.<sup>2</sup>

The potential native vegetation on this site is dominated by tall grasses such as sand bluestem, sand reedgrass and blue grama.

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<sup>1</sup>Crabb, James A., Soil Survey of Weld County, Colorado - Southern Part, USDA Soil Conservation Service, Denver, 1980.

<sup>2</sup>Forester's Note: This soil is subject to blowing and water erosion. Weed barrier and/or grass cover is needed.

Needleandthread, switchgrass, sideoats grama, and western wheatgrass are also prominent. As range condition deteriorates, the sand bluestem, sand reedgrass and switchgrass decrease and blue grama, sand dropseed, and sand sage increase. Annual weeds and grasses invade the site as range condition becomes poorer.

Sand bluestem, sand reedgrass, switchgrass, sideoats grama, blue grama, and pubescent wheatgrass are suitable for seeding. It can be seeded into a clean, firm sorghum stubble, or it can be drilled into a firm prepared seedbed. Seeding early in spring has proven most successful.

Windbreaks and environmental plantings are generally suited to this soil. Soil blowing, the principle hazard in establishing trees and shrubs, can be controlled by cultivating only in the tree row and by leaving a strip of vegetation between the rows. Supplemental irrigation may be needed at the time of planting and during dry periods. Trees that are best suited and have good survival are Rocky Mountain juniper, ponderosa pine, Siberian elm, Russian-olive and eastern cottonwood. The shrubs best suited are skunkbush sumac, lilac and Siberian peashrub and American plum.<sup>3</sup>

Wildlife is an important secondary use of this soil. The cropland areas provide favorable habitat for ring-necked pheasant, and mourning dove. Many nongame species can be attracted by establishing areas for nesting and escape cover. For pheasants, undisturbed nesting cover is essential and should be included in plans for habitat development, especially in areas of intensive agriculture. Rnageland wildlife, for example, the pronghorn antelope, can be attracted by developpeing livestock watering facilities, managing livestock grazing, and reseeding where needed.

Lawns, shrubs and trees grow well. Capability subclass Vs-1 irrigated, VIIs-1 nonirrigated.

#### WILDLIFE

Though not a primary purpose, wildlife use of the property is an important secondary purpose of this planting. Small game and non-game birds are desired.

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<sup>3</sup>Caragana.

## PLANTING PROJECTS

## WINDBREAK:

## Planting A:

Purpose: To protect the house from westerly winds, especially during the winter.

Description: This is a three-row planting. It is 121 feet long, 16 feet wide (36 feet with buffers), occupies 0.1 acres and benefits 1.1 acres. This component runs from the driveway on the south to the drift fence on the north. It is directly in front of the house and with components B and C will absorb the force of wind from the northwest (Due to the hole created by the driveway, the house cannot be protected from westerly winds.).

The outer row will require 30 shrubs on a four-foot spacing. Workable species include American plums, cottonasters, lilacs, three-leaf sumacs, Nanking cherries, and caraganas. These shrubs should be of a single species.

The middle row will require 20 medium-sized trees on a six-foot spacing. Workable species include Rocky Mountain juniper and eastern red-cedar for year-round protection, and caragana, and Russian-olive for summer only protection. Again, this row should consist of a single species.

The inside row will require 15 tall-growing trees on an eight-foot spacing. Suitable species include ponderosa pine, Siberian or Chinese elms, or eastern or plains cottonwoods. Again, the row should consist of a single species.

At least one of the three rows needs to be a conifer to provide winter protection.

This component will also require 360 feet of weed barrier weed barrier (6-foot width minimum, 8-foot width preferred) and 400 6-inch, 11-gauge wire staples (Square ends are easier to place.).

## STEWARDSHIP INCENTIVES PLAN

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## Cost summary for Planting A:

Seedlings:	
30 shrubs @ \$21.00/50:	\$ 12.60
20 Rocky Mtn. junipers @ \$28.20/30:	18.80
<u>15 ponderosa pines @ \$28.20/30:</u>	<u>14.10</u>
65 Sub-Total:	\$ 45.50
Bulk Discount (0%):	<u>0.00</u>
SEEDLING TOTAL:	\$ 45.50
Sales Tax (4.15%):	<u>1.89</u>
TOTAL, SEEDLINGS:	\$ 47.39
Materials:	
400 Staples @ \$54.00/1000:	\$ 21.60
360' Weed Barrier @ \$108.00/300':	<u>129.60</u>
Sub-Total:	\$ 151.20
Sales Tax (6.9%):	<u>10.43</u>
TOTAL, MATERIALS:	\$ 161.63
Labor:	
65 Seedlings planting @ \$2.00 ea.:	\$ 130.00
120 Yards weed barrier @ \$1.08/yd.:	<u>129.60</u>
TOTAL, LABOR:	\$ 259.60
GRAND TOTAL*	\$ 468.62

## Planting B:

Purpose: To protect the house northwesterly winds, especially during the winter.

Description: This is a three-row planting. It is 205 feet long, 16 feet wide (36 feet with buffers), occupies 0.2 acres and benefits 1.9 acres. This component runs from North 63rd Street on the west to 100 feet east of the house. It is on the north side of the house and on the south side of the drift fence.

The outer row will require 51 shrubs on a four-foot spacing. Workable species include American plums, cottonasters, lilacs, three-leaf sumacs, Nanking cherries, and caraganas. These shrubs should be of a single species.

The middle row will require 34 medium-sized trees on a six-foot spacing. Workable species include Rocky Mountain juniper and eastern red-cedar for year-round protection, and caragana, and Russian-olive for summer only protection. Again, this row should consist of a single species.

The inside row will require 25 tall-growing trees on an eight-foot spacing. Suitable species include ponderosa pine, Siberian or Chinese elms, or eastern or plains cottonwoods. Again, the row should consist of a single species.

At least one of the three rows needs to be a conifer to provide winter protection.

This component will also require 616 feet of weed barrier weed barrier (6-foot width minimum, 8-foot width preferred) and 700 6-inch, 11-gauge wire staples (Square ends are easier to place.).

Cost summary for Planting B:

Seedlings:

51 shrubs @ \$21.00/50:	\$ 21.42
34 Rocky Mtn. junipers @ \$28.20/30:	31.96
<u>25 ponderosa pines @ \$28.20/30:</u>	<u>23.50</u>
120 Sub-Total:	\$ 76.88
Bulk Discount (0%):	<u>0.00</u>
SEEDLING TOTAL:	\$ 76.88
Sales Tax (4.15%):	<u>3.19</u>
TOTAL, SEEDLINGS:	\$ 80.07

Materials:

700 Staples @ \$54.00/1000:	\$ 37.80
616' Weed Barrier @ \$108.00/300':	<u>221.76</u>
Sub-Total:	\$ 259.56
Sales Tax (6.9%):	<u>17.91</u>
TOTAL, MATERIALS:	\$ 277.47

Labor:

120 Seedlings planting @ \$2.00 ea.:	\$ 240.00
205 Yards weed barrier @ \$1.08/yd.:	<u>221.40</u>
TOTAL, LABOR:	\$ 461.40

GRAND TOTAL*	\$ 818.94
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Planting C:

Purpose: To protect the house and pasture from westerly and northwesterly winds, especially during the winter.

Description: This is a three-row planting. It is 331 feet long, 16 feet wide (36 feet with buffers), occupies 0.3 acres and benefits 3.0 acres. This component runs north from the drift fence to Niwot Road.

The outer row will require 82 shrubs on a four-foot spacing. Workable species include American plums, cottonasters, lilacs, three-leaf sumacs, Nanking cherries, and caraganas. These shrubs should be of a single species.

The middle row will require 54 medium-sized trees on a six-foot spacing. Workable species include Rocky Mountain juniper and eastern red-cedar for year-round protection, and caragana, and Russian-olive for summer only protection. Again, this row should consist of a single species.

The inside row will require 40 tall-growing trees on an eight-foot spacing. Suitable species include ponderosa pine, Siberian or Chinese elms, or eastern or plains cottonwoods. Again, the row should consist of a single species.

At least one of the three rows needs to be a conifer to provide winter protection.

This component will also require 979 feet of weed barrier weed barrier (6-foot width minimum, 8-foot width preferred) and 1100 6-inch, 11-gauge wire staples (Square ends are easier to place.).

#### Cost summary for Planting C:

##### Seedlings:

82 shrubs @ \$21.00/50:	\$ 34.44
54 Rocky Mtn. junipers @ \$28.20/30:	50.76
<u>40</u> ponderosa pines @ \$28.20/30:	<u>37.60</u>
176 Sub-Total:	\$ 122.80
Bulk Discount (0%):	<u>0.00</u>
SEEDLING TOTAL:	\$ 122.80
Sales Tax (4.15%):	<u>5.10</u>
TOTAL, SEEDLINGS:	\$ 127.90

##### Materials:

1100 Staples @ \$54.00/1000:	\$ 59.40
979' Weed Barrier @ \$108.00/300':	<u>352.44</u>
Sub-Total:	\$ 411.84
Sales Tax (6.9%):	<u>28.42</u>
TOTAL, MATERIALS:	\$ 440.26

##### Labor:

176 Seedlings planting @ \$2.00 ea.:	\$ 352.00
326 Yards weed barrier @ \$1.08/yd.:	<u>352.08</u>
TOTAL, LABOR:	\$ 704.08

GRAND TOTAL*	\$1272.24
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## Planting D:

Purpose: To protect the pasture from northwesterly and northly winds, especially during the winter.

Description: This is a three-row planting. It is 292 feet long, 16 feet wide (36 feet with buffers), occupies 0.3 acres and benefits 2.7 acres. This component runs along Niwot Road.

The outer row will require 73 shrubs on a four-foot spacing. Workable species include American plums, cottonasters, lilacs, three-leaf sumacs, Nanking cherries, and caraganas. These shrubs should be of a single species.

The middle row will require 48 medium-sized trees on a six-foot spacing. Workable species include Rocky Mountain juniper and eastern red-cedar for year-round protection, and caragana, and Russian-olive for summer only protection. Again, this row should consist of a single species.

The inside row will require 35 tall-growing trees on an eight-foot spacing. Suitable species include ponderosa pine, Siberian or Chinese elms, or eastern or plains cottonwoods. Again, the row should consist of a single species.

At least one of the three rows needs to be a conifer to provide winter protection.

This component will also require 864 feet of weed barrier weed barrier (6-foot width minimum, 8-foot width preferred) and 1000 6-inch, 11-gauge wire staples (Square ends are easier to place.).

## Cost summary for Planting D:

## Seedlings:

73 shrubs @ \$21.00/50:	\$ 30.66
48 Rocky Mtn. junipers @ \$28.20/30:	45.12
<u>35</u> ponderosa pines @ \$28.20/30:	<u>32.90</u>
156 Sub-Total:	\$ 108.68
Bulk Discount (0%):	<u>0.00</u>
SEEDLING TOTAL:	\$ 108.68
Sales Tax (4.15%):	<u>4.51</u>
TOTAL, SEEDLINGS:	\$ 113.19

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Materials:	
1000 Staples @ \$54.00/1000:	\$ 54.00
864' Weed Barrier @ \$108.00/300':	<u>311.04</u>
Sub-Total:	\$ 365.04
Sales Tax (6.9%):	<u>25.19</u>
TOTAL, MATERIALS:	\$ 390.23
Labor:	
156 Seedlings planting @ \$2.00 ea.:	\$ 312.00
288 Yards weed barrier @ \$1.08/yd.:	<u>311.04</u>
TOTAL, LABOR:	\$ 623.04
GRAND TOTAL*	\$1126.46

Ornamental (House) Planting (E):

Purpose: To provide colorful plantings for the house and yard.

Description: This is a two-row shrub planting. As shown on the drawing, it consists of two rows, each 64 feet long. In practice, any arrangement is suitable as long as a four-foot spacing is maintained (Even this could be ignored at a cost in weed barrier and labor charges.).

It contains 32 shrubs (16 Nanking cherries and 16 American plums; these were chosen for Nanking cherry's showy pink blossoms in the spring and plums orange leaves in the fall.). The planting is a total of 128 feet long and is located in front of the house.

This component will require 128 feet of weed barrier (6-foot width minimum, 8-foot width preferred) and 1000 6-inch, 11-gauge wire staples (Square ends are easier to place.).

Cost summary for Planting E:

Seedlings:	
32 shrubs @ \$21.00/50:	\$ 13.44
Bulk Discount (0%):	<u>0.00</u>
SEEDLING TOTAL:	\$ 13.44
Sales Tax (4.15%):	<u>0.56</u>
TOTAL, SEEDLINGS:	\$ 14.00
Materials:	
150 Staples @ \$54.00/1000:	\$ 8.10
128' Weed Barrier @ \$108.00/300':	<u>46.08</u>
Sub-Total:	\$ 54.18
Sales Tax (6.9%):	<u>3.74</u>
TOTAL, MATERIALS:	\$ 57.92

## STEWARDSHIP INCENTIVES PLAN

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Labor:		
32 Seedlings planting @ \$2.00 ea.:		\$ 64.00
43 Yards weed barrier @ \$1.08/yd.:		<u>46.44</u>
TOTAL, LABOR:		\$ 110.44
GRAND TOTAL*		\$ 182.36

## Thicket Plantings:

## Purpose:

To provide cover and a food source for non-game wildlife.

Description: There will be two thickets: one in the northwest corner of the windbreak and one along North 63rd at the south end of the property. The north one is triangular in shape and extends 93 feet along the roads; it is 135 feet along the diagonal.

The northwest planting will be an American plum thicket, containing 272 seedlings on a 4'X4' spacing. It will require 4800 square feet of weed barrier (2.67 6'X300' rolls) and 900 6" staples.

The southwest planting will be a ponderosa pine thicket, containing 68 seedlings on an 8'X8' spacing. It will be a rectangle, 135'X32'. It will also require 4800 square feet of weed barrier and 900 6" staples.

Costs are shown for each thicket separately:

## Northwest (Plum) Thicket (F):

## Seedlings:

272 American plums @ \$21.00/50:	\$ 114.24
Sales Tax (4.15%):	<u>4.74</u>
TOTAL, SEEDLINGS:	\$ 118.98

## Materials:

900 Staples @ \$54.00/1000:	\$ 48.60
800' Weed Barrier @ \$108.00/300':	<u>288.00</u>
Sub-Total:	\$ 336.60
Sales Tax (6.9%):	<u>23.23</u>
TOTAL, MATERIALS:	\$ 359.83

## Labor:

272 Seedlings Planting @ \$2.00 ea.:	\$ 544.00
266 Yards weed barrier @ \$1.08 ea.:	<u>287.28</u>
TOTAL, LABOR:	\$ 831.28

GRAND TOTAL*	\$1310.09
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## Southwest (Pine) Thicket (G):

## Seedlings:

68 ponderosa pines @ \$28.20/30:	\$ 63.92
Sales Tax (4.15%):	<u>2.65</u>
TOTAL, SEEDLINGS:	\$ 66.57

## Materials:

900 Staples @ \$54.00/1000:	\$ 48.60
800' Weed Barrier @ \$108.00/300':	<u>288.00</u>
Sub-Total:	\$ 336.60
Sales Tax (6.9%):	<u>23.23</u>
TOTAL, MATERIALS:	\$ 359.83

## Labor:

68 Seedlings Planting @ \$2.00 ea.:	\$ 136.00
266 Yards weed barrier @ \$1.08 ea.:	<u>287.28</u>
TOTAL, LABOR:	\$ 423.28

GRAND TOTAL*	\$ 849.68
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\*Based on 1996 prices. Prices are approximate and subject to change. Bulk rates are available if you do several projects at once and order enough trees. If two or three projects are done at the same time, the leftovers from each can be consolidated and the order reduced slightly.

## Fencing:

Fences will be needed to protect the plantings from being trampled by animals (This is a condition of cost-sharing unless the other fences are removed so that the site cannot be grazed.).

If you want CSFS to build fences, a separate cost estimate will be needed.

## MAINTENANCE

The use of weed barrier just about eliminates the need for maintenance, if it can be placed by mid-June (preferably June 1st). The only thing needed is an occasional inspection tour to re-anchor weed barrier that comes loose. Watering will increase survival and growth, but it is not needed.

You can expect about 15% loss during the first year a planting is in the ground. One year after planting, seedlings usually look terrible, but are recovering from shock by the end of the third year. Rabbit guards may be needed to protect the seedlings from

our furry friends. By the third year, transplant losses should no longer be a problem. A seedling is considered established after surviving five years.

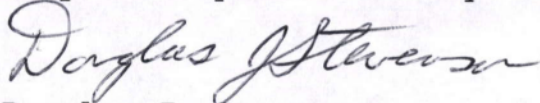
The wall-to-wall weed barrier approach will minimize grasshopper problems, but to be sure, you should mow the grass and weeds around the plantings during the early part of each season. After mid-July, quit mowing so that weeds can come up and provide some protection from winter winds.

Grass is a vigorous competitor with tree seedlings. It drinks up water and adds compounds to soil to poison competition. Seedlings grow much better if they don't have to fight it.

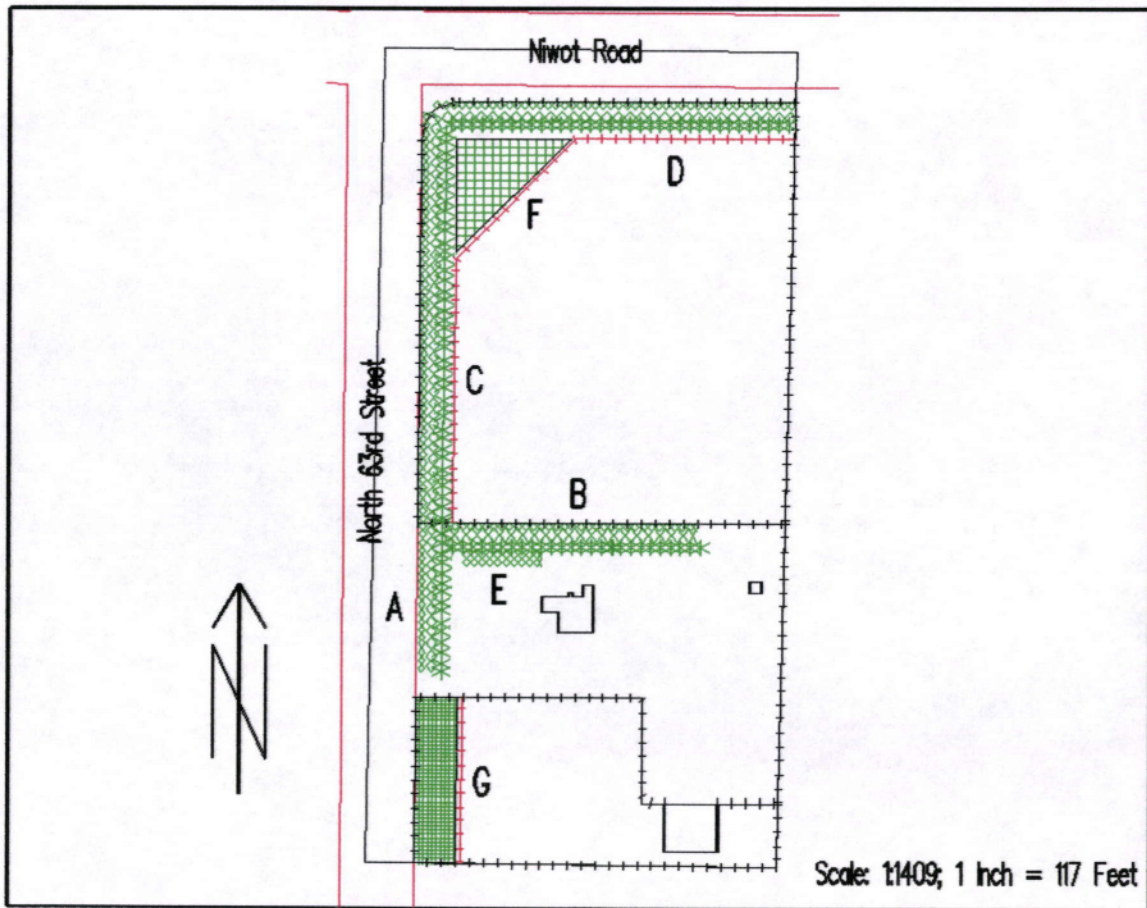
Weed barrier is a woven plastic cloth. It kills grass. Laid around tree seedlings, it provides needed relief from competition.

Maintenance is the landowner's responsibility. The above prices do not include things like re-anchoring weed barrier after a storm, or watering seedlings should drought threaten the planting during the first summer (Although, this can be arranged.).

Respectfully Submitted By:



Douglas J. Stevenson  
Assistant District Forester



# Tom Melrose

W1/2 NW1/4 NW1/4 NW1/4, Sec 35, T2N, R70W, S.P.M.

- |       |               |         |              |
|-------|---------------|---------|--------------|
| —     | Property Line | ~~~~~   | Shrubs       |
| ==    | Road          | ◇◇◇◇◇   | Junipers     |
| □     | House         | *~*~*~* | Trees        |
| +++++ | Current Fence | ■       | Plum Thicket |
| +++++ | New Fence     | ▣       | Pine Thicket |

Drawn By: Douglas J. Stevenson on PC ARC/INFO

January 3, 1997