

This form, which is periodically updated to address new opportunities, is available in PDF and MS Word at the following addresses:  
<http://www.cfc.umd.edu/extensionforestry> or [www.mttreefarm.org](http://www.mttreefarm.org)

Owner's Name \_\_\_\_\_

Plan Author (if not owner) \_\_\_\_\_

**Forest Stewardship Plan**

**Tree Farm Plan**

This management plan outlines sustainable forestry guidelines for the conservation of natural resources within this forest and addresses immediate needs (next 5 years) as well as long term (50+ years) objectives and actions. It is endorsed as a certifiable sustainable forest management plan by the American Forest Foundation Family Forestry Program, U.S. Forest Service, U.S. Natural Resources and Conservation Service, Montana Department of Natural Resources and Conservation, Montana Association of Conservation Districts, and Montana State University Extension Forestry



EXTENSION  
Forestry Program



## Property Ownership

Landowner(s) \_\_\_\_\_  
(and representative, if different)

Mailing Address \_\_\_\_\_

Phone \_\_\_\_\_ E-Mail \_\_\_\_\_

Date of Original Plan Completion \_\_\_\_\_ Revision dates \_\_\_\_\_

## Property Description

Legal property description \_\_\_\_\_

Nearest city or town \_\_\_\_\_ County \_\_\_\_\_

Total ownership acreage \_\_\_\_\_ Total forested acreage \_\_\_\_\_

Is there a home on the property?  Yes  No

Do you reside on the property?  Yes  No

Home Firewise Safety Implemented (defensible space around home site)  Yes  No

## Record of Verification

Reviewed by a Professional Forest Advisor

Advisor Name \_\_\_\_\_ Phone \_\_\_\_\_

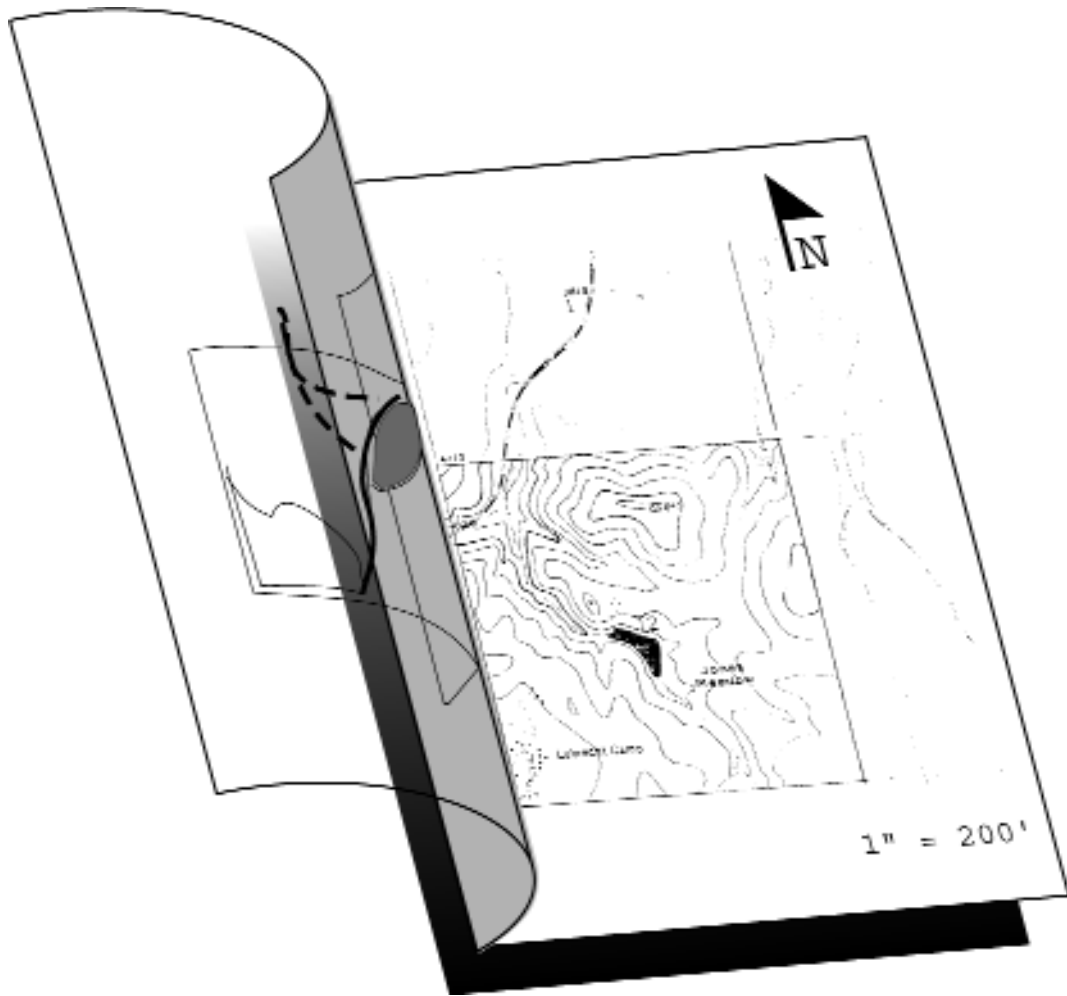
Date of Property Visit \_\_\_\_\_ MU's Verified \_\_\_\_\_ # of Acres Verified \_\_\_\_\_

Approved By \_\_\_\_\_  
(Stewardship Advisor or Tree Farm Inspector Signature)

Forest Landowner(s) Signature(s) \_\_\_\_\_



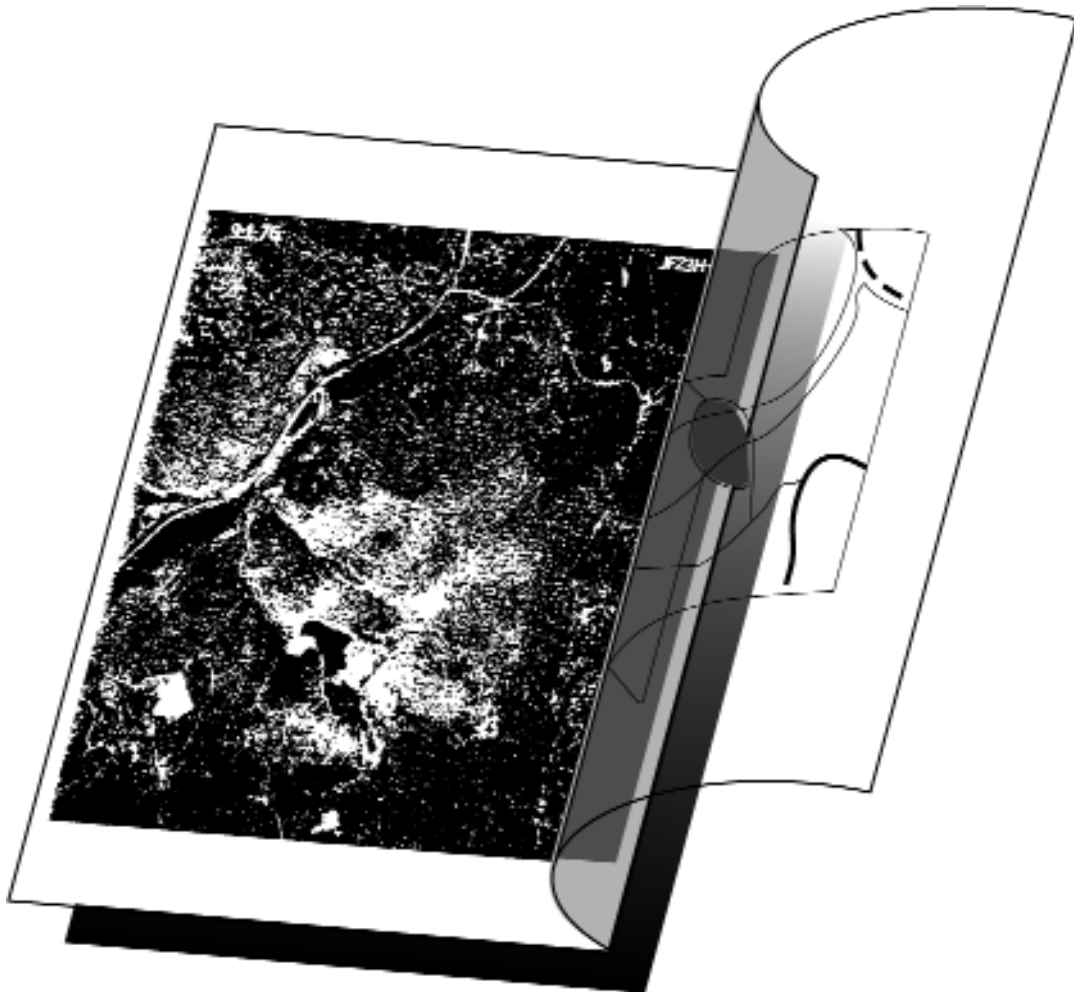
## CONTOUR MAP



**Attach property map (topographic) here.**

Identify  
Property Boundaries and Management Units  
on transparency.

Include scale (e.g. 1" = 200')  
and  
Directional arrow  
on map.



**Attach aerial photograph here.**

Identify  
Property Boundaries and Management Units  
on transparency.

Include directional arrow  
on photo.

**For free aerial photo downloads  
<http://earth.google.com/>**

## LANDSCAPE DESCRIPTION

Average aspect (check):  N  S  E  W      Average elevation \_\_\_\_\_

Topography (estimate percent of total acreage that is)

Complex topography (many steep ravines and aspects) \_\_\_\_\_

Simple topography (few ravines and changes of aspect) \_\_\_\_\_

Slope: percent of land that is      Flat (<5% grade) \_\_\_\_\_

Gentle Slope (< 20% grade) \_\_\_\_\_      Steep Slope (> 20% grade) \_\_\_\_\_

Forest Access to vehicles (check):  Excellent (80% accessible)  Good (at least 50%)  
 Fair (at least 25%)       Poor (less than 10%)

## MANAGEMENT OF RESOURCES

### CURRENT TREE RESOURCE

Mature Tree % cover ( > 9 inches diameter 4.5 ft from ground > 30 ft tall)

Species	% of Forested Area	Age
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

**PP** Ponderosa pine  
**DF** Douglas-fir  
**LP** Lodgepole pine  
**WL** Western Larch  
**GF** Grand fir  
**ES** Engelmann spruce  
**WRC** Western red cedar  
**WH** Western hemlock  
**WP** White pine  
**SAF** Subalpine fir  
**PF** Limber pine  
**RMJ** Rocky mtn. juniper  
**QA** Quaking aspen  
**CW** Cottonwood  
**Green Ash**

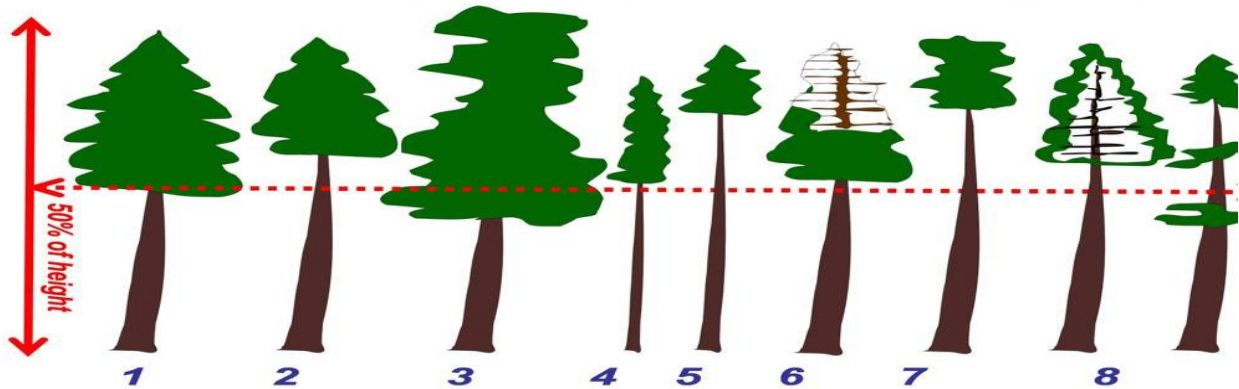
Natural Tree Regeneration – Seedlings (<4 ft tall), Saplings (4 – 12 ft tall),  
Poles( 5-9 inches diameter 4.5 ft from ground < 30 ft tall)

Species	% of Forested Area	Size
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

## Predominant Forest Tree Structure



### Tree crown shape ranking for tree growth potential, vigor, and potential for longevity



Species 1 \_\_\_\_\_ average crown class \_\_\_\_\_

Species 2 \_\_\_\_\_ average crown class \_\_\_\_\_

Species 3 \_\_\_\_\_ average crown class \_\_\_\_\_

## FUTURE DESIRED TREES

Desired tree species and expected longevity (maximum age you expect trees to reach before they die of natural causes or are harvested)

Species	Acres	Age
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

PP Ponderosa pine  
 DF Douglas-fir  
 LPP Lodgepole pine  
 WL Larch  
 GF Grand fir  
 ES Engelmann spruce  
 WRC W. Red cedar  
 WH Western hemlock  
 WP White pine  
 SAF Sub-alpine fir  
 LP Limber pine  
 RMJ rocky mtn. juniper  
 QA Aspen  
 CW Cottonwood Green ash

**Desired Tree Distribution ( bird's-eye view of forest - check one)**

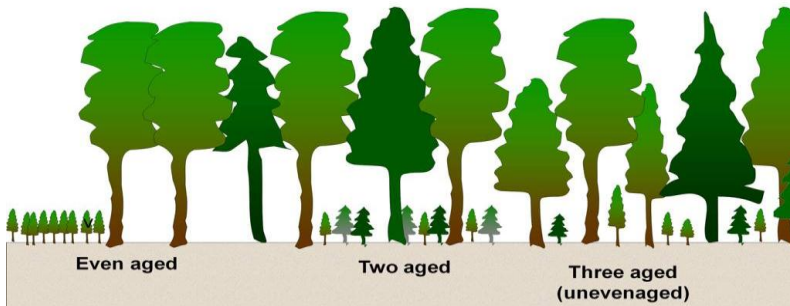
Wild stand     
  Evenly spaced     
  Evenly spaced with openings     
  Variable density spaced with openings

**Some wildlife**     
  **Maximizes growth**     
  **Growth + regeneration**     
  **Some growth + regeneration + wildlife**

**Desired tree spacing (ft)** Large trees (>9"DBH) \_\_\_\_\_ (ft)  
 Pole (5-8"DBH) \_\_\_\_\_ (ft)    Seedling (<5"DBH) \_\_\_\_\_ (ft)  
 Size and shape of any openings \_\_\_\_\_

Spacing (feet)	Trees/acre
3x3	4,840
5x5	1,742
7x7	889
10x10	436
12x12	302
14x14	222
16x16	170
18x18	134
20x20	87
25x25	70
30x30	48
40x40	27

**Desired vertical forest structure:**



One canopy layer   
  Two canopy layer   
  Three canopy

**FOREST-NATURAL RESOURCE ACTIONS** *Draw impacted areas on your map*

All of the following treatments may qualify for Natural Resources and Conservation cost-share programs.

For this section, work with Stewardship Plan Implementation Schedule and a map. Complete the Implementation Schedule and draw and label the areas of management on your map if you wish to use this plan as part of your cost-share application.

**Tree species to regenerate** (Natural regeneration or planted – 1) How will this be achieved, 2) What time of year will actions take place, 3) How large an area, 4) How many seedlings or what spacing?)

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**Protection from Insects & Diseases** (mechanical treatments, chemical applications)

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**Wildfire Hazard Reduction and Fire Resilience Treatments** (herbaceous and grassy fuels, dead woody fuels, live fuels, fire ladders, crown density, firebreaks, access, water)

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**Non-commercial thinning treatments** (spacing, species preference, time of year, debris clean-up)

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**Harvesting** (Describe type of treatment: Even-aged: clearcut, thinning; Uneven-aged: group select, single tree select, logging methods, time of year)

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**Forest debris management** (whole tree skid, leave whole logging debris in forest, compact, pile, chip, mulch, burn)

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**Post harvest activities** (monitoring, rehab and seed roads and landings, weed spray roadsides)

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**Monitoring** (how often and when do you plan on evaluating harvest units to ensure your overall forest management goals are being met?)

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**Permits** (slash hazard reduction agreement, 310 permit for stream crossings)

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**FOREST UNDERSTORY PLANTS/RANGE RESOURCE** *Draw impacted areas on your map*

**Vegetation management issues:** (grasses, forbs, brush, grazing animals, sustainable grazing guidelines, # pastures and animal rotation, water sources, salt block placement)

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**Weed management, invasive species** (inventory, control, monitoring, prevention guidelines, consider integrated pest management)

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**ROADS, SOIL AND WATER RESOURCES** *Draw impacted areas on your map*

**Estimated improved road length (bulldozed with graveled surface)** \_\_\_\_\_

**Estimated unimproved road length (bulldozed with but original parent material)** \_\_\_\_\_

**Estimated total permanent skid trail length (drivable but no earthwork)** \_\_\_\_\_

**Access recommendations** (general maintenance, erosion potential, Best Management Practices, road surface condition, road runoff, drain-dips, culverts, stream crossings, weed control, time-of-year use)

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**Soil protection** (Litter layer, understory vegetation, woody debris retention, nutrient cycling, microfauna)

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**Streams, wetlands, ponds, lakeshore**

Are any streams on Montana's Impaired Stream List?  Yes  No  Unknown

(website: <http://www.deq.mt.gov>)

Estimated cumulative stream length class I \_\_\_\_\_ class II \_\_\_\_\_ class III \_\_\_\_\_

Stream improvement actions \_\_\_\_\_

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Streamside management zones \_\_\_\_\_

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Permits needed (310 for stream/streambank disturbance or alteration) \_\_\_\_\_

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**WILDLIFE HABITAT AND THREATENED & ENDANGERED SPECIES**

*Draw impacted areas on your map*

**Fish & Wildlife – desired species** (species lists, habitat improvement or creation, animal control, den sites, nest boxes, snag retention, access, hunting)

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<b>Sources of information:</b>	<b>Property walk-through with professional</b>	<input type="checkbox"/>
	<b>Consult with state agency</b>	<input type="checkbox"/>
	<b>Researched sites using web resources</b> ( <a href="http://www.treefarmssystem.org/woodlandresources">www.treefarmssystem.org/woodlandresources</a> )	<input type="checkbox"/>

**SOCIAL & RECREATION CONSIDERATIONS** *Draw impacted areas on your map*

**Adjacent stand or ownership concerns** (how does surrounding management affect your forest and how do your actions impact your neighbors? Consider aesthetic quality, wildfire concerns, privacy, wildlife movement and habitat, noxious weeds)

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**Access** (Does your property restrict access to public lands, will you allow access across or to your lands, are the boundaries posted with appropriate contact information, have you considered Block Management with Montana Fish Wildlife and Parks)

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**Special Sites including, archeological, cultural and historic sites** (are there historical sites on your property that you wish to delineate, protect or contact anyone - universities etc. about)

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**Management activities to protect these sites** \_\_\_\_\_

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How have you made an effort to locate special sites on your property:

- Property walk-through with professional
  - Contacted local cultural heritage agency
  - Reviewed old property maps
  - Researched sites using web resources
- ([www.treefarmssystem.org/woodlandresources](http://www.treefarmssystem.org/woodlandresources))

**High conservation value forest sites** (forests of outstanding or critical importance due to their environmental, social, biodiversity or landscape values)

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### PROPERTY MANAGEMENT PLAN CONSTRAINTS

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### OTHER

**Carbon Sequestration – current tree volume + annual growth** (current estimated tons of standing carbon per acre plus growth rate–sequestration per year. Estimated tons sequestered carbon = 50% dry tons of wood)

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**Other considerations**

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Your property may have multiple management units that are either defined by unique site characteristics, management actions that you desire to implement or a combination of both. For each stand or management unit, write what your management objectives and desired future conditions are and a brief description of the forest management unit and its condition as it differs from your overall plan. Descriptors can include: slope, aspect, forest structure, tree species composition, health and appearance, % crown cover, wildlife & livestock use and potential, soil properties. For a more detailed analysis use the Management Unit Stand Analysis Form or Plot Form Summary to help with this section.

NUMBER OF MANAGEMENT UNITS \_\_\_\_\_

Unit 1 \_\_\_\_\_ Acres \_\_\_\_\_

Objectives/desired condition: \_\_\_\_\_

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Description: \_\_\_\_\_

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Unit 2 \_\_\_\_\_ Acres \_\_\_\_\_

Objectives/desired condition: \_\_\_\_\_

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Description: \_\_\_\_\_

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Unit 3 \_\_\_\_\_ Acres \_\_\_\_\_

Objectives/desired condition: \_\_\_\_\_

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Description: \_\_\_\_\_  
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\_\_\_\_\_  
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Unit 4 \_\_\_\_\_ Acres \_\_\_\_\_  
Objectives/desired condition: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Unit 5 \_\_\_\_\_ Acres \_\_\_\_\_  
Objectives/desired condition: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Unit 6 \_\_\_\_\_ Acres \_\_\_\_\_  
Objectives/desired condition: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Add more pages as needed (additional pages at end)

# Stewardship Plan Implementation Schedule

(MU or all MU's combined) \_\_\_\_\_

(Copy additional pages if needed)

\*NRCS Practice Code needed if practice will be submitted for cost share, otherwise leave blank.

	Treatment Date (Season/Year)	Treatment Activity Short Description	NRCS Practice Code*	MU#	Treatment (Acres, Feet)	Net Cash Flow	
						Cost	Income
Years 1-2							
					subtotal		
Years 3-4							
					subtotal		
Years 5-6							
					subtotal		
Years 7-8							
					subtotal		
Years 9-10							
					subtotal		
					<b>TOTAL</b>		



## Timber Sale Contract Checklist for Private Landowners and Loggers

Unless a private landowner has the ability to personally harvest trees and transport them to a sawmill or other wood processing facility, the act of logging and transporting trees will be conducted by a contracted professional. The following is a checklist of issues a private landowner and logging contractor may wish to consider on a logging contract. Each of the items should be addressed in a contract to allow for a minimum probability of a dispute. Issues can be as detailed as both parties find acceptable and economically feasible.

- \_\_\_ **Property location and legal description are clearly defined**
- \_\_\_ **Property boundaries and harvest units are clearly and accurately marked**  
(logging trespass results in a minimum cost of 3x value of trees)
- \_\_\_ **Property ownership is documented and type of ownership is specified** (Individual, partnerships, corporations, etc.)
- \_\_\_ **Insurance is documented** (Any contractor working for a landowner must have Commercial General Liability \$1 –million, Loggers Broad Form Property Damage Liability \$1-million, Workers' Compensation \$100,000 or an Independent Contractor Exemption, and Automobile Liability \$1-million. If they do not have these, the landowner will be held liable for any damage or personnel injury that may occur. Logging is a hazardous activity!)
- \_\_\_ **Access to the property/harvest unit are specified and documented** (To avoid trespass or the disturbance of sensitive areas access routes should be clearly delineated. If access across other ownerships is required, written and notarized documentation of access permission should be obtained) Insurance can be written to include owner and consulting forester.
- \_\_\_ **Type of harvest is clearly specified for each harvest unit** (Typically trees are marked both at eye level and on the stump, or harvest tree characteristics are defined by species, diameter, crown characteristic, or residual tree spacing)
- \_\_\_ **Timing of harvest is specified** (Dates when harvesting and/or other treatments need to be conducted or completed by)
- \_\_\_ **Residual property specifications should be defined** (This is as detailed as the landowner and contractor can agree upon. Issues can be the completeness of residual logging debris disposal, burn pile rehabilitation, grass seeding, skid trail rehab, noxious weed control, tree planting, noncommercial thinning)
- \_\_\_ **Hazard Reduction Permit has been acquired and responsible party designated** (Under state law a hazard reduction permit must be obtained from the DNRC and a bond posted that covers the expense for meeting the HRA specifications. Either the landowner or contractor is responsible for this)
- \_\_\_ **Best Management Practices (BMP's) and Streamside Management Zone (SMZ) responsibilities are designated**  
(Compliance to Montana BMP's is ultimately the landowners responsibility but should be specified in the contract. Similarly, compliance with SMZ's are state law and their implementation should be specified)
- \_\_\_ **Performance bond or contract penalty** clauses some provision for compensation to the landowner for harvesting activities that deviate from specifications. Having the contractor post a bond is the best protection for the landowner but imposes a risk on the contractor. Contractors already post a performance bond with the state to comply with the Hazard Reduction Agreement)
- \_\_\_ **Method of payment is clearly defined** (**Lump sum** is one payment for the entire estimated log volume, this method may over or underestimate actual value but is simple and can be demanded in advance of the actual harvesting. **Payment by unit** is where payment for logs occurs based upon the actual scaled logs at the mill. Either the contractor pays an agreed upon percentage to the landowner or the mill pays agreed upon percentages separately to the contractor and landowner. Downfall is that in cases of salvaging dead and dying trees a delayed harvesting job can result in losses of standing tree value)

\_\_\_ **Method of scaling is defined** (*Either direct scaling or weight scaling are used. Direct scaling tends to be more accurate though each mill may use different defect deductions. Weight scaling works for large volume sales that have trees of similar species and diameter. In general logs should be trucked to the mill quickly following harvest or they lose significant water weight or for most accurate conversions a continuous representative sample of logs should be check scaled and weighed*)

\_\_\_ **Notification** (*It is defined if and when the contractor or landowner needs to notify the other party about when activities are to start or end and the type of format – written, e-mail, telephone. This is to avoid issues with blocked access, noise, etc.*)

\_\_\_ **Expiration date** (*Any contract should have a defined end date after which the contract is no longer valid*)

\_\_\_ **Notarization** (*Any legally binding document should have signatures notarized*)

\*\*\* This is simply a recommended check list compiled from a variety of sources including The Montana Logging Association for a harvesting contract. Any contract can be challenged. It is always advised that a contract be reviewed by an attorney. You may also want an attorney's fees recovery statement in the document that will allow for recovery of legal fees should a dispute require legal action. \*\*\*

# **Supplemental pages for unit/stand descriptions and desired future conditions**

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

\_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

\_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

\_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

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Description: \_\_\_\_\_

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\_\_\_\_\_

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

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Description: \_\_\_\_\_

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Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

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Description: \_\_\_\_\_

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Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

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Description: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Unit \_\_\_\_\_ Acres \_\_\_\_\_

Objectives: \_\_\_\_\_

\_\_\_\_\_

Description: \_\_\_\_\_

\_\_\_\_\_

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# Desired Future Condition - Timber

MU \_\_\_\_\_

Desired mature tree species (% of forested area) and expected longevity (maximum age you expect trees to reach before they die of natural causes or are harvested)

Species	% of Forested Area	Age
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

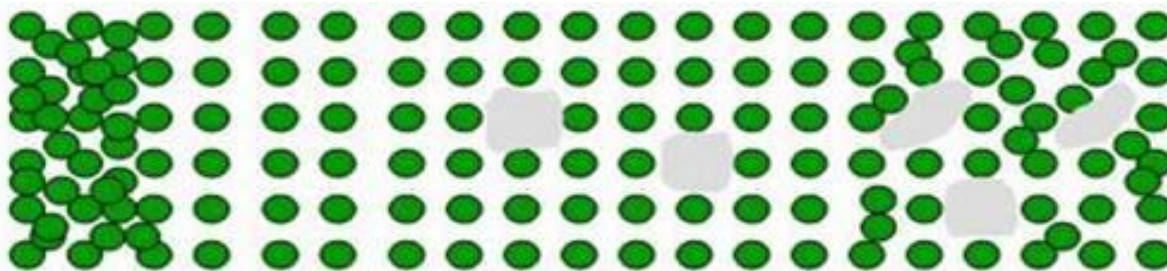
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- QA Aspen
- CW Cottonwood Green ash

Desired species to naturally regenerate \_\_\_\_\_

Desired species to plant \_\_\_\_\_

## Bird's-eye view of forest (check one)

- Wild stand     
  Evenly spaced     
  Evenly spaced with openings     
  Variable density spaced with openings



- Some wildlife     
  Maximizes growth     
  Growth + regeneration     
  Some growth + regeneration + wildlife

Desired spacing (in feet) Large (>9"DBH) \_\_\_\_\_ (ft)  
 Pole (5-8"DBH) \_\_\_\_\_ (ft)    Seedling (<5"DBH) \_\_\_\_\_ (ft)  
 Size and shape of openings \_\_\_\_\_

Spacing (feet)	Trees/acre
3x3	4,840
5x5	1,742
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16x16	170
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20x20	87
25x25	70
30x30	48
40x40	27

## Desired structure:



- One canopy layer     
  Two canopy layer     
  Three canopy

Desired Future Condition - Timber

MU       

**Desired mature tree species** (% of forested area) and **expected longevity** (maximum age you expect trees to reach before they die of natural causes or are harvested)

Species	% of Forested Area	Age
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
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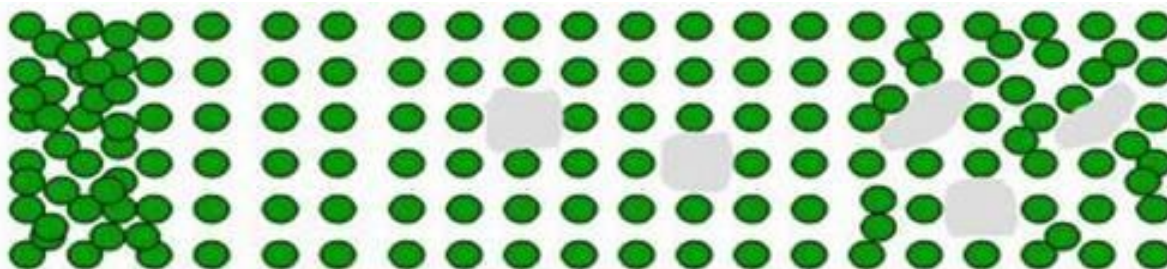
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