

# Management Plan Recommendation Ideas

2020

---



**Extension Forestry** • 32 Campus Dr. Missoula, MT 59812-0606

The Montana State University Extension Service is an ADA/EO/AA/Veteran's Preference Employer and Provider of Educational Outreach.

## **Special Sites & Social Considerations**

### **Home Fire Safety**

#### ***Recommendations:***

1. Trees and brush properly thinned and pruned within 50 feet of structure.
2. Roof and gutter free of debris.
3. Grasses and weeds cut within 10 feet of structure.
4. Firewood stacked away from house.
5. Outdoor water supply available.
6. Fire extinguisher checked and okay.
7. Good access to home site by fire truck.
8. Signs posted for identification, vehicle parking and bridge load limits.
9. Fire tools available.
10. Family fire drill and evacuation plan practiced.
11. Know your local fire protection. Is our home in a fire district?
12. Screen chimneys and incinerators
13. Plant and maintain a greenbelt or lawn around house. Mow grass and remove brush.  
Thin and pruned trees.
14. Reduce or remove plants that are highly flammable such as juniper.

### **Aesthetics and Recreation**

#### ***Considerations:***

1. View shed
2. Screens
3. Aesthetically valuable species, landforms and water
4. Types of recreation
5. Facilities and access
6. Potential and desire for commercial recreation
7. Unique cultural resources
8. Other ecosystem considerations

#### ***Considerations:***

1. Select trees to cut in order to enhance your view shed
2. Strategically plan trees or shrubs along access routes to reduce visuals, dust, and sound.
3. Plan a route on your map for your ski, hiking, or ATV trails.
4. Set up picnic locations, name them, put up signs, and a picnic table at each spot.
5. Protect any cultural resources.

### **Roads, Soil, and Water Resources**

#### ***Considerations:***

- Soil types
- Nutrient status

- Water holding capacity
- Susceptibility to compaction
- Soil stability
- Road cuts and fills
- Past erosion (concentrated flow points)
- Other ecosystem considerations

***Recommendations:***

1. Minimize roads and skid trails.
2. Communicate with neighbors to cooperate for more efficient road systems.
3. Install, clean out, repair, or replace culverts, water bars, cross ditches and other water drainage structures on roads.
4. Close roads seasonally or permanently to prevent impact, at least during wet seasons.
5. Add rock to heavily used road surfaces.
6. Seed grass, winter wheat or legumes on road cuts, skid trails and other large bare areas.
7. Plant willows or alders on bare stream banks.
8. Fence to lessen impacts from grazing and other activities.

## **Fish, Wildlife and Biodiversity**

### **Bird Habitat**

***Recommendations:***

1. Retain dead trees and create snags.
2. Plant clover and grasses.
3. Install nest boxes.
4. Retain shrubby vegetation.
5. Retain some trees without pruning.
6. Retain large live trees.
7. Plant fruits and nuts.

### **Amphibian and Reptile Habitat**

***Recommendations:***

1. Retain downed woody debris.
2. Create brush piles.
3. Retain a forested buffer around talus slopes.
4. Create rock piles.
5. Create small ponds.
6. Protect vegetation around seeps, springs, and head waters of streams.

### **Wildlife Habitat and Threatened & Endangered Species**

***Considerations:***

- Waterfowl, shore or wading birds
- Upland game birds (quail, pheasant, grouse)

- Hawks, owls, woodpeckers, or song birds
- Large mammals (deer, elk, bear)
- Small mammals (rabbit, raccoon, squirrels)
- Amphibians and reptiles
- Threatened, endangered, and sensitive species

**Recommendations: MAMMAL HABITAT**

1. Retain patches of cover.
2. Plant forage mixes along haul roads and landings.
3. Retain downed woody debris.
4. Minimize road construction, Close roads when and where necessary.
5. Use wildlife-friendly fencing.
6. Retain travel corridors.
7. Crate brush piles.
8. Reduce or minimize destruction of hardwood trees and shrubs during plantation management.

**Streams, wetlands, ponds, lakeshore**

**Considerations:**

1. Water sources
2. Water structures (streams, ponds, seeps, springs)
3. Bank-side vegetation
4. Bank stability
5. Fish species found in streams
6. Fish and wildlife uses
7. Personal and recreational uses
8. Crossings present and planned
9. Uses up and downstream
10. Adequacy of trees for future stream large organic debris
11. Adequacy of stream shade
12. Other ecosystem considerations

**Recommendations:**

1. Minimize bank disturbance.
2. Conserve vegetation.
3. Comply with stream-side management law.
4. Follow Best Management Practices (BMP).
5. Clear brush in picnic area.
6. Rehab banks by planting willows or other native species.
7. Minimize roads and skid trails. Communicate with neighbors to cooperate for more efficient road systems.
8. Install, clean out, repair or replace culverts, water bars, cross ditches and other water drainage structures on roads.

9. Close roads seasonally or permanently to prevent impact (at least during wet seasons).
10. Add rock to heavily used road surfaces.
11. Seed grass and legumes on road cuts, skid trails and other bare areas.
12. Fence to lessen impacts from grazing and other activities.
13. Plant trees which increase riparian habitat diversity.
14. Keep buildings and septic systems far from water and in good repair.
15. Retain woody debris in streams.

## **Range Resource, Water and Soil Protection**

### **Forest Understory Plants**

#### ***Considerations:***

1. Class of livestock grazing (cattle, sheep, horses, llamas, etc.)
2. AUM's (Animal Unit Month) available
3. Forage (by species)
4. Effective growing season
5. Water
6. Accessibility (slope, rock, brush, etc.)
7. Other ecosystem considerations (riparian systems, rare animals, and plants affected)

#### ***Recommendations:***

1. Fencing.
2. Water trough placement (away from riparian zones)
3. Salting placement.
4. Pasture rotation plan.
5. Livestock access improvement.
6. Weed control.
7. Forage enhancement activities (tree thinning, reseeding forage species, & livestock management).

## **Management of Forest Resources**

#### ***Considerations:***

1. Stand type
2. Habitat type
3. Stand age structure (uneven, even, all, unknown)
4. Tree species composition and dominant species
5. Tree diameter distribution
6. Topography
7. Aspect, slope inclinations and position (ridge top, riparian, mid-slope)
8. Soil type and limitations
9. Other ecosystem considerations
10. Risk of insects and diseases

**Recommendations:**

Forest Management activities will be used to:

1. Maintain or increase the biodiversity of the forest.
2. Forest management activities are directed to emulate the natural ecosystem processes.
3. Maintain habitat for all of the species of plant and animals that live in the area.
4. Keep openings from logging no larger than necessary to meet the biological requirements for regeneration.
5. Allow dominant and co-dominant trees to mature before cutting them.
6. Trees will be harvested when they are over-mature, weak, dead, dying or diseased.
7. Trees will be thinned to improve the vigor of a more desirable tree.
8. Take extreme caution to protect the soils.
9. Forest management activities are adaptive to meet the social and economic factors while taking in the concerns of the long-term productivity of the site.

**Recommendations: Treatments**

1. Traditional Harvest Methods (clearcutting, shelterwood, seed tree, group, and individual tree select system).
  2. Intermediate Treatments (thinning, fertilizing, and pruning)
  3. Wildlife corridor development, wildlife habitat conservation areas, snags, and riparian setbacks.
  4. Stash and fire hazard abatement.
  5. Regeneration: natural seeding and planting.
  6. Site preparation.
  7. Road access and landing locations.
  8. Skid trail access and landing locations.
  9. Equipment limitations: ground or cable based.
  10. Aesthetic considerations: proximity.
- 
1. Reduce the amount of soil damage, slash and disturbance to standing timber.
  2. Use of designated skid trails and proper haul road construction.
  3. Improved utilization standards and slash disposal.
  4. Use of bumper trees during harvest.
  5. Retain leave trees and snags.
  6. Maintain vegetation corridors as screens after timber harvests.
  7. Use irregular cutting boundaries when harvesting timber.

**Sample recommendations: TIMBER**

**Timber Stand Improvement:** MU #1 and #2 will need pre-commercial thinning treatments to weed, cleanse, and release the most desirable trees for the sapling and pole sized thickets and retain the most desirable tree species as future crop trees. Retaining wildlife thickets of healthy

and vigorous trees over 5-10% of the area will add to the diversity of the stand and provide ample wildlife hiding cover.

**Pre-commercial thinning** treatments should space trees at a 14-16 feet apart. This will allow a young tree to grow to and become a 6-8 inches DBH before the next entry (using the D+8 rule a 6 inch tree will need 14 feet to grow and an 8 inch tree requires 16 feet to grow). A 6-8 inch tree is considered merchantable at this time. In areas where there are commercial Christmas trees, trees should be spaced closer to allow for intermittent removal of valuable Christmas trees.

**Observing the tree crowns** can also be used to signal the timing of thinning operations. When tree crowns become crowded and the live crown ratio diminishes to a 40-60 % live crown ratio, tree should be thinned to allow ample growing space for the next 10-20 years. Using this strategy directs the optimum growth on the optimum number of trees.

**Slash disposal** should use a combination of pile and burn and lop and scatter techniques. Around the home site and in areas of heavy concentrations slash should be piled and burned. In the upland areas away from property lines and home sites thinning slash should be lopped and scattered to allow it to decompose and recycle nutrients back to the site.

**To meet the goal of managing the property on a sustained yield basis** and assuming the average rotation for the site is 80 – 100 years, 1-2 acres of the sapling and pole-sized trees should be thinned each year for the so the 150 acre tract is kept under management over the desired rotation.

## **Enhancement and Protection: Special Forest Products**

### *Considerations:*

1. Floral greens species (list the plant species in each category that are present at harvestable levels during the year).
2. Holiday ornamentals
3. Wild edible mushrooms
4. Other edibles and medicinal
5. Other ecosystem considerations
6. Christmas trees