



## Vegetation Management Plan Outline For Recreation Areas

This outline is intended to help land managers develop the required vegetation management plan to compete for Forest Health Protection funding for thinning treatments in recreation areas. However, the information is appropriate for the development of any recreation or administrative area vegetation management plan and such use is highly encouraged. Land managers should consider developing plans for areas such as campgrounds, scenic overlooks, day use areas, administrative sites, summer home tracts, ski areas, interpretive sites and trailheads.

Many Forest Service recreation areas in California are currently in a state of declining forest health due to high stand densities, high numbers of diseased trees and continuous mortality caused by bark beetles. The reasons for these conditions are many; a lack of funding, the desire to maintain the status quo, concerns about public opposition to vegetation management treatments, or a lack of understanding about the role of forest dynamics, forest insects and diseases and visitor use on tree health.

Most of these recreational and administrative areas have long been managed by simply removing dead and dying trees. While this is an important task for public safety, it accomplishes few long-term forest health objectives. High stand density, reduced species diversity, elevated levels of insect and disease activity and high fuel loads have put many of these areas at risk to high levels of tree mortality and/or destructive wildfire. Many of these areas also contain high numbers of hazard trees and lack healthy regeneration of shade intolerant tree species such as pines, aspen and oaks. In addition, high pedestrian traffic has effectively removed a variety of shrubs, forbs and grasses and reduced site quality through soil compaction.

Healthy vegetation within recreation areas makes them more attractive, useful and valuable. Proper planning and careful management of this natural resource is critical to achieving long-term forest health objectives such as minimizing hazard trees, providing shade, screening, visual aesthetics, wildlife habitat, and resilience to disturbance such as insects, diseases, fire and drought.

This outline will help land managers explain the need for action, describe their recreational or administrative area, discuss current vegetation conditions, identify management goals and long-term objectives, and develop specific management actions, mitigation measures and monitoring plans. The level of detail will often be determined by the scope of each plan. Plans for vegetation management activities in large, high-use recreation areas such as major campgrounds and lakes will often require more detailed plans. Smaller sites with similar issues could be combined into a single vegetation management plan to save time and avoid redundancy. A comprehensive plan will provide the necessary guidance for future staff, support NEPA documentation and funding for specific projects, and ensure that the desired future conditions are achieved. As always, Forest Health Protection staff is available to assist in this process.

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# Resources for Vegetation Management Planning

Region 5, Forest Health Protection, Hazard Tree Guide (Update scheduled for 2022 and will be located on the FHP publication webpage)

[https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/?cid=fsbdev3\\_046701](https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/?cid=fsbdev3_046701)

Long-Range Planning for Developed Sites in the Pacific Northwest

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fsbdev2\\_026108.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev2_026108.pdf)

Field Guide for Danger Tree Identification and Response

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd512960.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd512960.pdf)

Bark Beetles and Vegetation Management in California

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fsbdev3\\_045320.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_045320.pdf)

Bark Beetles: Are Your Trees Susceptible?

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb5384837.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5384837.pdf)

California Forest Insect and Disease Training Manual

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fsbdev3\\_046410.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_046410.pdf)

Using insecticides to protect individual trees in California

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd528534.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd528534.pdf)

Fuels and Vegetation Treatments: A Natural Combination

[https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fseprd879249.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd879249.pdf)

Heterobasidion Root Disease Information

<https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/insects-diseases/?cid=stelprdb5329386>

Forest Health Protection Treatment Priority Mapping

<https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/?cid=fseprd583997>

# HEALTHY TREE NATIONAL FOREST

## PROACTIVE RANGER DISTRICT

### Healthy Forest Recreation Area Vegetation Management Plan

January 27, 2011



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**Figures (examples)**

- Project Area
- Dense Tree Thickets
- View of Mountains and/or Lake
- Campsite Map
- Interpretive Sign Examples

**Appendices (examples)**

Hazard tree guidelines, land management plan direction, FS manual direction, silviculture report, campground site maps, Forest Health Protection evaluations, R5 direction for heterobasidion root disease treatments (including product information and pesticide safety), concessionaire’s contract.

**Purpose and Need for a Vegetation Management Plan**

*Why here, why now. Include and expand on relevant topics such as:*

- Enhance, restore, and maintain healthy forest vegetation
- Provide for public safety (e.g. abate hazard trees)
- Minimize user impacts to vegetation (e.g. compaction, injuries inflicted on trees, etc)
- Enhance visual qualities
- Reduce the negative impacts from forests insects and diseases
- Reduce overstocked stand conditions
- Decrease fuels and fire potential
- Maintain canopy cover and screening
- Preserve and enhance large trees
- Minimize tree mortality
- Increase and protect regeneration
- Reduce the use of imported firewood
- Prevent the introduction of noxious weeds
- Control vehicle and pedestrian movement
- NEPA documentation support for proposed management actions
- Highlight the need for funding

### **The Project Area**

*Provide some details about the area including some of the following items:*

- Human and natural history
- Season of use and number visitors
- Map with defined boundary and acreage
- Number, types and locations of campgrounds, campsites, and facilities (plus level of use)
- Special features (e.g. lakes, streams, rivers, meadows, etc)
- Condition of facilities
- Location and priority of proposed vegetation treatment units
- Cultural resources
- Current management issues and budget
- Proximity to other points of interest

### **Goals of the Vegetation Management Plan (can be divided into long- and short-term)**

*What are your objectives, your desired future conditions? Examples include:*

- Restore, maintain and enhance the native vegetative character of the area
- Manage vegetation so that health and vigor is maintained over the long-term
- Reforest denuded areas and eliminate stumps
- Maintain shade and screening for campsites to provide privacy and noise reduction
- Dust and site impact reduction
- Retain “unique or character” trees
- Maintain and enhance scenic quality
- Improve area aesthetics through use of natural products produced on site
- Create open space for picnics and play
- Identify and treat root disease centers and reforest with appropriate non-host tree species
- Prevent bark beetle caused mortality through density reduction and/or chemical sprays
- Reduce the levels of true and/or dwarf mistletoe infections
- Consolidate high traffic areas to reduce impacts to soils and vegetation
- Protect other resource values within and surrounding campgrounds
- Protect and improve emphasis species habitat
- Protect soil and water quality
- Protect sensitive plant populations and environments
- Prevent the establishment and spread of invasive plant species
- Incorporate interpretation and environmental education
- Provide additional interpretive sites throughout the recreation area
- Develop messages that encourage stewardship, partnership and support
- Reduce the occurrence of hazard trees
- Develop a strategy to reduce the importation of firewood into the campground
- Provide a baseline document for use in future plan revisions

### **Management Direction**

*How does this plan fit with other land and recreation management standards and guidelines?*

- Describe consistency with other management direction
- Demonstrate how the recreation area fits within the land and resource management plan
- Explain applicable standards and guidelines such as visual and cultural resources, wildlife and developed sites
- Identify limited operating periods for wildlife such as goshawk, spotted owl or bald eagle

- Discuss the requirement for stump treatments to prevent the introduction and spread of heterobasidion root disease

### **Forest Management History**

*What has occurred on this site that may influence future management objectives?*

- Past timber harvests
- Recent issues with insects and diseases (e.g. root disease and bark beetles)
- Windthrow events and other tree failures
- Fire (prescribed and wildland)
- Semi-primitive recreational use that may have resulted in excessive compaction
- Change from historical stand conditions (density, species composition, size class)
- Loss of hardwood species due to competition from conifers
- Loss of understory vegetation including shrubs from high visitor traffic
- Presence of invasive plant species

### **Vegetation Environment**

*Describe the current vegetation conditions and site characteristics:*

- Forest cover types present
- Tree species present and their relative abundance
- Current stand conditions (density, size class, species composition, canopy cover, mortality)
- Presence of forest insect and disease pests
- Status of tree regeneration
- Average annual precipitation and winter/summer temperatures
- Elevation range, terrain, soils, and hydrology
- Site quality and compaction potential
- High wind potential
- Fuels including the amount of large woody debris
- Wildlife habitat and the presences of sensitive plants
- Presence of hazard trees

### **Management Strategy**



*Describe the general management strategies you will use to meet plan objectives:*

- Implement a hazard tree monitoring and abatement plan
- Facilitate density reduction, fuels reduction and the creation of defensible space
- Manipulate species composition through biomass thinning and timber harvest
- Create and maintain heterogeneity of forest stands (species, structure, spacing, age)
- Plant native shrubs and trees
- Use prescribed fire to reduce fuels and enhance native vegetation
- Invest in public education and interpretation
- Develop policies to reduce the amount of imported firewood
- Increase views of lake, mountains or other natural features through tree removal
- Create special structures such as nesting platforms or cavities out of dead trees
- Thin dense stands to accentuate desired characteristics of irregular edges, openings and special vegetation such as hardwoods
- Thin and prune trees and shrubs for scenery management
- Use groupings of trees or shrubs to help frame views
- Limit harvest entries to minimize site impact
- Utilize shade tolerant shrubs and trees for screening
- Emphasize the use of drought tolerant trees and shrubs for drier locations
- Plant non-host species in root disease centers
- Utilize materials (e.g. wood chips, branches and logs) left after hazard tree removal and thinning for other restoration activities and firewood use

### **Management Actions**

*Specific details on who, what, where, when and how:*

- List what you are going to do and when (e.g. remove tree hazards immediately, reduce stocking levels over the next five years, plant root disease openings in FY12, distribute firewood created from vegetation management activities this season, etc)
- List silvicultural prescriptions and any other specific guidelines
- List potential funding sources (e.g. timber management, KV, Forest Health Protection, salvage, recreation, etc)
- Identify responsible group or person for each action (e.g. silviculturist, botanist, entomologist, plant pathologist, wildlife biologist, facilities engineer, etc)
- Provide maps and descriptions for additional site direction

*More examples of detailed management actions:*

- Remove hazard trees and replant with a mixture of pine and black oak near kiosk
- Thin and prune lodgepole pine surrounding the perimeter of the boat ramp parking lot
- Prune dwarf mistletoe infections from lower crowns of infected pines (broom removal)
- Reconfigure the picnic sites so they are off the parking lot with trail accesses
- Obliterate and rehabilitate old skid road from campground
- Plant dogwoods and shrubs to create layered effect and screening between sites
- Integrate a formal network of trails for internal circulation within campgrounds and day use areas

### **Mitigation Measures**

*Describe how the plan will deal with other resource conflicts:*

- Flag and avoid archaeological sites
- Coordinate with the concessionaire for campground closures
- Apply limited operating periods for wildlife
- Avoid or minimize disturbance to springs or stream crossings
- Retain felled large trees to meet standards and guidelines for large woody material
- Avoid creating and leaving green pine slash to prevent the buildup of Ips bark beetles
- Protect improvements from logging operations with temporary fencing

### **Monitoring**

*Describe the types of monitoring that will be implemented and who is responsible:*

- Establishment of permanent photo points
- Develop a hazard tree monitoring plan to document changes in individual tree condition
- Survey for bark beetles and diseases to provide for early detection and mitigation
- Monitor survival of planted trees and shrubs
- Conduct surveys to obtain feedback from visitors regarding management activities

### **Future Facility Development and/or Maintenance of Existing Facilities**

*Identify planned construction activities that may impact vegetation and other resources:*

- Expansion of existing campsites for RV parking
- Development of new campsites

- Adding utilities to campsites that require trenching
- New bathrooms, kiosks, visitor centers, etc.
- Paving or repaving of roads and trails
- Creation of new trails

*Examples of mitigation measures to avoid tree injury during construction activities include:*

- Trees that will directly interfere with structures or that will be seriously damaged during construction or excavation should be removed
- Fence off individual or groups of trees before construction to negate or minimize root damage by soil compaction or trunk and root damage by equipment
- Impose penalties for damaging trees should be incorporated into tree removal or construction contracts
- Minimize road or lot grade changes as little as possible
- Trenches should always be dug away from tree roots and avoid back filling with earth or rocks around the trunks of trees
- Avoid paving with either concrete or asphalt over root systems, or close to the trunks of trees

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**Specialists involved:**

Bird Watchers, Fishheads, Timber Beasts, Campsitters, Pump Kickers, Bug Geeks, Fungus Sniffers, Daisy Pickers

**References**

- Expert, T.H.E. 2011. *Almost everything you need to know about vegetation management plans*. Journal of Vegetation Management Planning. pgs. 1 – 3.

**Appendices**