Writing Management Plans

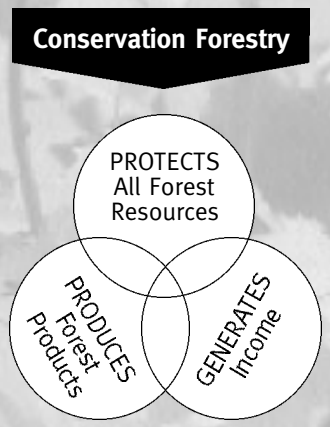
7

Forest Operations Manual

The Conservation Forestry Program

Writing Management Plans

CHAPTER 7



7.1 The Nature Conservancy Philosophy

The first five chapters of this Operations Manual outline strategies for environmental stewardship in a number of key areas, including biodiversity, water quality, soils, and social concerns. By taking each of these areas into account for every property, The Nature Conservancy seeks to:

- Protect and enhance soil quality, water quality, rare species and communities, and other forest resources
- Produce valuable forest products including high-quality sawtimber
- Generate regular income for properties under management and contribute to the overall economic health of local communities

In addition to these overall goals, landowners often have their own goals, such as increasing aesthetic or recreational opportunities or fostering certain wildlife habitats. Meeting all of those goals effectively demands careful planning from forest managers who are dedicated to gathering accurate information on the ground, researching the necessary background information, and balancing the wide variety of concerns at work for all of the local stakeholders.

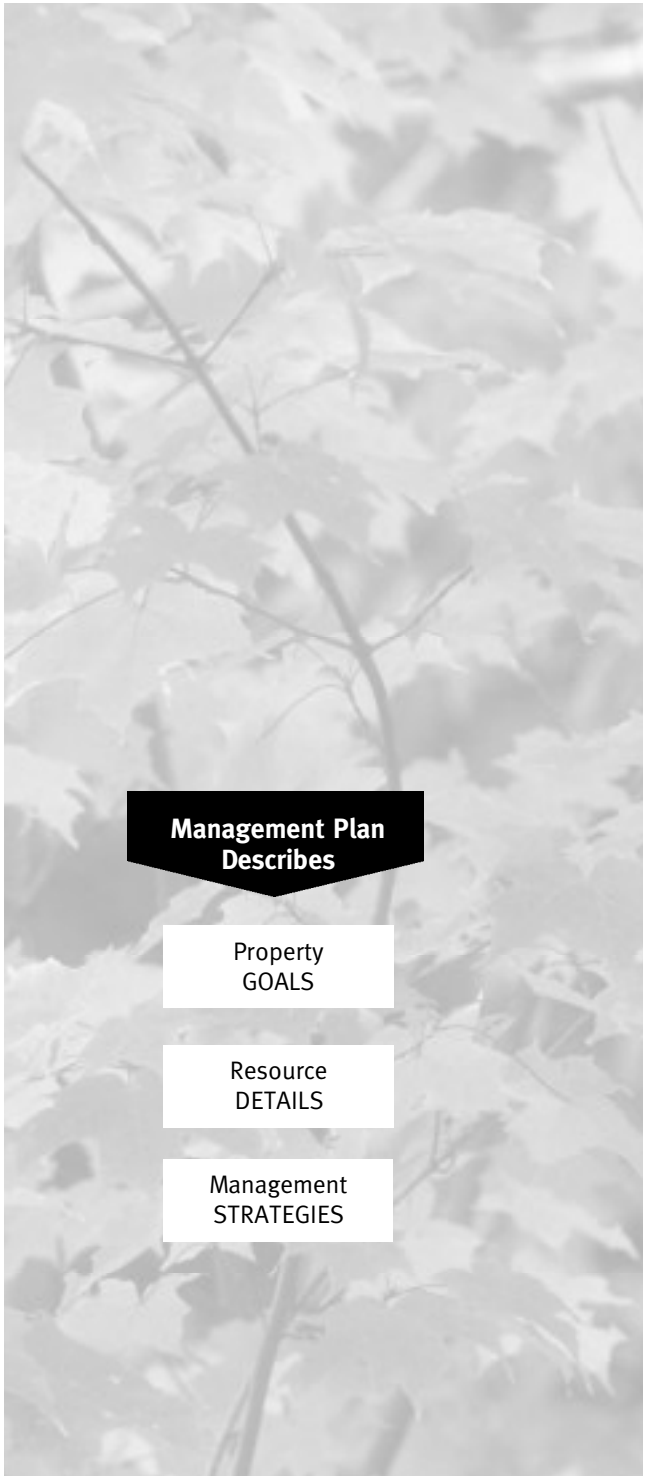
At the heart of this process is each property's **Management Plan**, which describes the existing resources and the long-term goals for the property in detail, then provides specific, concrete recommendations for conserving and restoring the forest and for appropriately harvesting timber.

The Management Plan helps everyone involved–landowners, forest managers, loggers, and observers–better understand the management policies, and insure consistency in these policies even when the personnel involved change. A clearly written, well-thought-out plan helps anchor management activities to the overall ethic of environmental stewardship at the heart of conservation forestry.

7.2 Management Plan Contents

Each property will have its own comprehensive Management Plan that describes the goals for the property, details all of its natural and cultural resources, and provides clear strategies for land management and timber harvesting, including related maps and schedules.

The Nature Conservancy will review each Management Plan periodically, revising it as needed to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.



At a minimum, the plan will include six sections:

1. PROPERTY MANAGEMENT GOALS

The management goals should ADDRESS the long-term vision for the property, describing its desired future condition based on the interests of The Nature Conservancy and the landowner, as well as on the resources, potential, and limitations of the property.

2. PROPERTY DESCRIPTION

The plan should provide a complete description of the property, including

❑ **Resources:** Describe the forests, open land, and aquatic habitats, fisheries, wildlife, soils, timber and non-timber forest products, aesthetic, and other resources and features listed in *Appendix 1: The Planning Process*, using scales appropriate to each resource.

❑ **Current and past ownership and land use:**
Include a legal description of ownership (location and size), a general description of the landowner(s), other interests in the property (hunting or conservation easements), and plans to change ownership status or size of forest management area. In addition, attempt to determine the tract's land-use history, including past farming, harvesting, sawmilling, and mining practices, as described in *Section 3.3*, and include this information in the plan when known.

❑ **Profile of adjacent lands**:
Provide a general description of significant neighboring properties, forest cover, and land use, as well as a broad overview of the forest resources over an appropriate landscape area.

❑ **Socio-economic conditions**:
Include a brief description of the local communities and ownerships to provide a sense of the local social values and economic conditions.

❑ **Aesthetic values**:
Assess the scenic beauty of the property, including particular features or areas worthy of note to the landowner as well as ways in which this particular property fits into the entire landscape view.

❑ **Environmental limitations and special management considerations**:
Include *limitations* and *constraints* imposed by

- ✓ Soil
- ✓ Topography (including karst)
- ✓ Rare species and communities
- ✓ Riparian areas
- ✓ Biodiversity goals
- ✓ Cultural resources
- ✓ Aesthetic appraisals

3. MANAGEMENT INFORMATION

The plan should describe all proposed forestry activities and strategies, including:

❑ **Forest management strategy:**

Summarize the overall forest management strategy, including the rationale.

❑ **Management objectives:**

Define the objectives for each stand, management area, and/or resource.

❑ **Silvicultural prescriptions:**

Provide a detailed silvicultural prescription for all timber production stands, including criteria for crop trees or other specific tree selection criteria. State the goals for regeneration and how the silvicultural prescription will meet those goals.

❑ **Other management recommendations:**

Describe management recommendations such as conservation plans for no-cut riparian management zones, or restoration plans for sites with damaged soil structure, polluted water, or other types of degradation. Include enough detail to successfully complete each action (e.g. species recommendations and planting specifications for restoring an old field to forest).

❑ **Timber management and harvesting recommendations:**

Provide details on the timber resources to be harvested, and the method of harvest.

✓ **Timber harvesting summary:** Summarize expected harvests, methods and rationales for calculating the annual allowable cut, and species and size selections for removal and retention. Explain, as well, how the allowable harvest, rotation length, felling cycles and harvesting sizes insure the long-term health of the forest based on regeneration and growth predictions.

✓ **Pre-harvest plans:** Describe any additional activities that will occur before a timber harvest can begin.

✓ **Harvesting plans, techniques and equipment:** Explain and justify the specific harvesting system and equipment selected for use in a harvest area. Describe any additional plans to minimize damage to the residual stand.

✓ **Post-harvest activities:** Describe any additional activities that will occur after harvesting ends, but before the job is considered closed.

❑ **Environmental safeguards**: When appropriate, include

✓ Fire prevention, containment and suppression plans, including use, desired results, and safeguards for prescribed burning, if used

✓ Integrated Pest Management plans describing strategies to decrease stands' vulnerability to disease or attack and plans to promote resistant species or foster stand structures that support natural controls

✓ Chemical use and handling plan including oil and fuel spill abatement

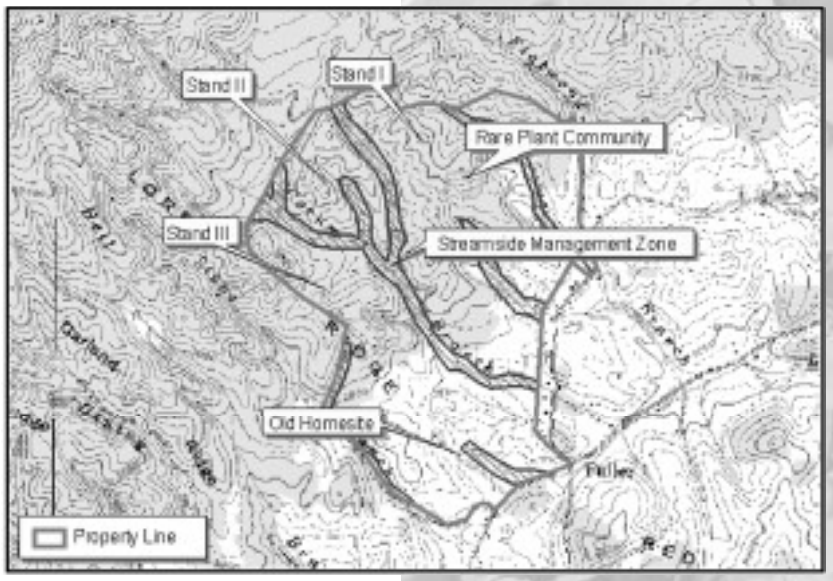
✓ Plans to address landscape level issues such as biodiversity (e.g. wildlife corridors) and water quality (e.g. watershed management)

❑ **Plans to protect identified rare species and communities**: Describe appropriate conservation zones and protection areas, and present conservation plans detailing the necessary management activities for rare species and their habitats. Cite all relevant sources.

❑ **Plans to protect aesthetic and cultural resources**.

4. MAPS

Each plan should include maps showing production forests, riparian zones, wetlands, slopes, ecologically significant areas (e.g. rare species habitats, springs and seeps), protected areas (including forest reserves), topography, unique features, soils, cultural resources, and other significant management areas. Depending on the size and complexity of the property and its resources, all this information may appear on a single topographic map or on a series of specialized maps. It is recommended that at least one map of the property should be at a scale of 1:24,000.



5. FOREST MONITORING PLANS

To track changes in natural resources over time and assess the effects of management activities (including harvest operations), each plan should include a detailed strategy for monitoring the property's resources. Monitoring may be as simple as maintaining and analyzing records of timber sale volumes, or as complex as using scientific protocol to determine environmental changes in water quality. At a minimum, The Nature Conservancy will establish base-line data for the items listed below, then monitor each item either on a regular basis or following a significant management activity, as appropriate:

- ✓ Composition and condition of all levels of forest vegetation–herbaceous, shrub, tree regeneration, growing stock, mature stems, and residual trees
- ✓ Growth rates of timber stems
- ✓ Observed changes in wildlife and fisheries populations
- ✓ Water quality and watershed function
- ✓ Soil health
- ✓ Status of rare species and communities
- ✓ Status of ecosystems and biodiversity
- ✓ Social impacts of management activities
- ✓ Yields of all forest products harvested
- ✓ Costs and efficiency of all management activities

6. TIMELINE

For each planned management activity, the timeline should include start and end times, rotation cycles, monitoring schedule, reviews of the plan itself, and other appropriate scheduling information.

7.3 The Process for Writing Management Plans

A detailed description of the process for gathering the requisite information and forming it into a management plan for a given property can be found in *Appendix 1*

7.4 Related Activities

When creating specific prescriptions and recommendations for each Management Plan, refer to the following chapters and appendices for details:

- *Chapter 4*: Maintaining Biodiversity
- *Chapter 8*: Writing Silvicultural Prescriptions
- *Chapter 10*: Timber Harvesting and Marketing
- *Appendix 1* The Planning Process