Standard 4

PROTECTING THE AIR, WATER, AND SOIL

Performance Measure 4.1

***Landowner shall** meet or exceed practices prescribed by state forestry **best management practices (BMPs)** that are applicable to the property.*

Standard 4 addresses protection of air, water, and soils, generally through the use of the required best management practices (BMPs), a set of specific techniques and guidance that govern forestry activities in your state.

A copy of your state's BMPs is a critical resource that you will refer to again and again as you undertake activities to protect, maintain, and enhance the air, water, and soil of your woodlands. Your forester or state forestry agency can provide you with a copy or you can get one online. (See Performance Measure 4.1.)

STANDARD 4:

Air, Water, and Soil Protection

Forest-management practices maintain or enhance the environment and ecosystems, including air, water, soil, and site quality.

Three Ways to Protect Your Rivers and Streams

1. **Create riparian buffers:** These fringes of grass, shrubs, and trees planted along stream banks are one the best ways to protect a water source. Buffers improve water quality by filtering sediment and pollutants from soil runoff and providing shade to keep water cool. They combat erosion by stabilizing banks and regulating stream flow, and they offer habitats to many plant and wildlife species. Riparian buffers vary in width, depending on how the adjacent land is being used, but should be a minimum of 25 to 50 feet. Wider buffers are best for improving water quality and attracting wildlife.

2. **Remove barriers to fish migration:** Interrupting a stream's flow with bridges and culverts can damage the health of the system by changing stream conditions and preventing the migration of fish and other aquatic species. Build bridges and culverts that are at least 1.25 times the normal width of the streambed, and place them where the stream is straight and flat. You will need to get a permit to construct most stream crossings. Before you start, be sure to check with your state's natural-resource agency to learn what is required.

3. **Minimize runoff from forest roads:** Most of the sediment from forested land is due to runoff from poorly designed and maintained forest roads. When planning roads, think about how you can reduce their number, width, and length, decrease maintenance requirements, and limit your roads' visual and physical impacts. Regularly inspect and repair your roads by filling wet spots, grading to maintain proper drainage, and ensuring ditches and culverts are free of debris.

RESOURCE

Find the link to your state's **BMPs** on the ATFS website Woodland Resources page: www.treefarmsystem.org/woodland-resources

In states where forestry activities are governed by a "forest practice" act or law, the legislation, and all its associated regulations and guidance, functions as **BMPs**. To meet the ATFS Standards, you will need to implement all applicable **BMPs** on your land, even if you live in a state where they are legally voluntary. Once again, your forester and state forestry agency can guide you in understanding the requirements for sustainable forest practices in your state.

INDICATOR 4.1.1

***Landowner shall** implement specific **state forestry BMPs** that are applicable to the property.*

There are several examples of common activities undertaken by many family woodland owners which involve BMP implementation. When planting or replanting and your plan calls for preparing your land using machines or chemicals, you will need to work with your forester to ensure all relevant **BMPs** are met.

If you are not currently doing management activities, then there is no need to demonstrate use of **BMPs**, since there is no management taking place. However, there are times when water quality is impaired on your land, outside of management

activities. For example, ATV riders may be trespassing on the property and crossing streams, causing banks to erode. In cases such as this, **landowners** are strongly encouraged to work with their forester to develop a plan and repair the damage. As always, documentation is a critical step in demonstrating conformance and good-faith efforts.

Some **BMPs** (such as guidelines for attracting certain **desired species**) need to be followed only if they apply to your property and the goals that you have articulated in your **management plan**.

Be sure you are familiar with your state's **BMPs** and keep a copy with your "go to" planning documents. Your forester and your state forestry agency can help. Find state-specific resources on the American Tree Farm System® website: www.treefarmsystem.org/woodland-resources

Best Management Practices Resources

According to the U.S. Forest Service, private forested lands are essential for about two-thirds of our drinking water. That is why managing your land with water quality in mind is critical. Following the passage of the Clean Air Act in the 1970s, most states developed **best management practices (BMPs)** to help landowners safeguard water quality by controlling pollution and other threats arising from forestry activities.

Most states have BMPs covering:

- Pre-harvest planning
- Streamside management zones
- Forest wetlands protection
- Road construction and maintenance
- Timber harvesting
- Biomass harvesting
- Revegetation
- Fire management
- Forest chemical management

The U.S. Environmental Protection Agency (EPA) offers an online Watershed Training Academy to help you learn how to protect the rivers, streams, wetlands, and other water resources in your forest. Find it at: http://cfpub.epa.gov/watertrain/index.cfm. And check out the EPA's Forestry Best Management Practices in Watersheds: http://cfpub.epa.gov/watertrain/pdf/modules/Forestry.pdf

Learn what you can do to care for your streams, lakes, rivers, and ponds, as well as what you can do to protect water on your land: www.mylandplan.org/water-on-your-land and www.mylandplan.org/BMPs

INDICATOR 4.1.2

***Landowner shall** minimize road construction and other disturbances within riparian zones and wetlands.*

Road Construction

Under Standard 4, you are required to minimize the impacts of road construction in wetlands and in areas where there are lakes, rivers, or streams. Your state's BMP manual provides detailed guidance on what is required. For example, some states require a permit before you can undertake any forestry activities in a riparian zone. Mistakes can be costly; be sure to consult your forester or an expert on forest road construction and obtain any required permits before you begin any road-related project. If you are using a contractor for your road project, be sure to specify in the contract that he or she must follow all applicable **BMPs** when working on your property.

Performance Measure 4.2

Landowner *shall* *consider a range of forest-management activities to control pests, pathogens, and unwanted vegetation.*

INDICATOR 4.2.1

Landowner *should evaluate alternatives to **pesticides** for the prevention or control of pests, pathogens, and unwanted vegetation to achieve specific management objectives.*

Unwanted Species? Think Beyond Pesticides!

Insect pests, plant pathogens, and **invasive species** are challenges faced by every forest landowner. Standard 4 requires that, in addition to **pesticides**, you consider a range of other alternatives for dealing with unwanted species.

Your state forestry agency can provide information about a full spectrum of techniques you can use to address a particular pest, pathogen, plant, or **invasive species**. **Integrated pest management** (IPM) is a technique that can help you control, suppress, or prevent pests on your land by improving **forest health** and protecting your trees from being harmed by insects or disease in the first place. **Pesticide** application may be used in cases in which other measures are ineffective or are not practical to deal with the scope of your problem.

RESOURCES

- Learn more about IPM at www.mylandplan.org/IPM

INDICATOR 4.2.2

***Pesticides** used **shall** be approved by the EPA and applied, stored and disposed of in accordance with EPA-approved labels and by persons appropriately trained, licensed, and supervised.*

If you do decide to use **pesticides**, you must comply with both federal guidelines and the laws governing pesticide use in your state. The U.S. Environmental Protection Agency has very specific rules on which pesticides may be used, who **should** apply them, how they **should** be stored, and how to dispose of them. In most states, a license is required to apply forestry chemicals. Be sure you know the law and that you, or any contractors you hire to use **pesticides** on your land, are in full compliance.

RESOURCES

- Find out the laws and regulations in your state concerning **pesticide** use on the ATFS Woodland Resources website: www.treefarmsystem.org/woodland-resources
- Learn about choosing the right **pesticides**, using them properly, what to do after applying them, as well as additional resources: www.mylandplan.org/pesticides

Performance Measure 4.3

*When used, **prescribed fire** shall conform with **landowner's objectives** and pre-fire planning.*

INDICATOR 4.3.1

***Prescribed fire** **shall** conform with the **landowner's objectives** and state and local laws and regulations.*

Fire as a Forest-Management Tool

Prescribed burning, another term for **prescribed fires**, can be an important forest-management tool, but with thoughtful considerations to ensure safety. If your management objectives call for the use of prescribed burns, you may be legally required to obtain a permit from your state natural-resource agency. In some states, to receive a permit you may be required to complete a training course to learn the requirements for safely and appropriately conducting a scheduled burn. Many states do require submission of a written fire plan. Do your research and ask your forester or **qualified natural-resource professional** what is required in your state. It is your responsibility to know the law and follow it.

Before you implement a controlled burn, map the area you plan to burn, consider what weather conditions (wind direction and speed, relative humidity) you will need to conduct your planned burn in a way that protects your land and property—and that of your neighbors. Discuss your plans with everyone who might be affected and have a contingency plan, in the event weather or conditions change.

RESOURCES

- The ATFS Management Plan Addendum: www.treefarmsystem.org/atfsaddendum
- Find out more about prescribed burns, their benefits, how to do them safely, and additional resources: www.mylandplan.org/prescribed-burns
- Extension resources on **prescribed fire**: http://www.extension.org/prescribed_fire
- Prescribed Fire Councils: state and local organizations that offer information-sharing and networking opportunities for individuals, agencies, and organizations: http://www.prescribedfire.net/

Restoring longleaf with prescribed fire

Salem and Dianne Saloom
Brewton, Alabama

Salem and Dianne Saloom's 1,762-acre Tree Farm in Brewton, Alabama, is a showcase for the longleaf pine that once covered much of the southeastern United States.

Longleaf is a species that thrives with fire, so prescribed burning is a large part of the Salooms' management of their property. The Salooms burn 600 to 800 acres every year to prepare sites for planting and to remove understory in their longleaf forest acres.

"Prescribed fire is probably the least expensive tool that a land manager can use to help manage his property," Salem says. "For pine trees, especially the longleaf pine, fire maintains the ecosystem. It's a very good and very cheap tool."

He notes that fire:

- Decreases the fuel load so that if there is a wildfire it will not burn with the same duration or intensity;
- Disturbs the soil, allowing new seeds to regenerate. Those seeds, in turn, provide food for wildlife.
- Prunes the lower branches to produce quality lumber with fewer knots.
- Opens the understory. This allows quail and turkeys to find seeds and provides tender shoots for deer to eat.

There is a constant effort to construct and maintain the Salooms' 20-mile network of fire lanes and road systems on their property, with water bars and turn outs for fire equipment. Both of the Salooms are certified by the State of Alabama as prescribed burn managers, and are required to take courses and be recertified every six years.

"We need more private landowners either doing their own burning or contracting to have burns done on their land," says Salem. "We're trying to promote more prescribed burning on private lands, especially where there's longleaf. You can't just put a longleaf tree in the ground and leave it alone."

Saloom Family