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#### **Forest Management Experience in the United States**

Forest Service Associate Chief Sally Collins Megaflorestais 2006 Grey Towers, PA—October 17-19, 2006

#### **Birth of Conservation**



First, some background. North America was first settled by people from northern Asia who came in waves beginning about 15,000 years ago. Over thousands of years, they used fire in many places—not only for hunting and agricultural purposes, but also to create corridors and openings in forests. Together with lightning-caused fires, American Indian fire use helped to shape many forest ecosystems.



About four centuries ago, European settlers began to displace the American Indians, and they further modified forests. They cleared forests away, and by eliminating landscape-scale burning they reintroduced closed forests where grassland, savanna, or open forests had dominated landscapes for thousands of years.



By the turn of the 20th century, the settlement period was over, and part of the damage was becoming clear: In our first three hundred years, the United States lost about a quarter of its original forest estate. Most of the loss was in the eastern United States, and vast portions of the eastern woodlands were gone. Enormous fires followed, preparing the way for floods and erosion.

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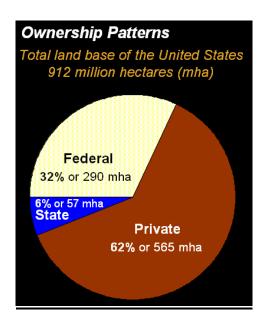
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Much of the wildlife was also disappearing—the bison, the elk, the wolf, and the grizzly bear, animals that symbolize North America—and many other species as well.

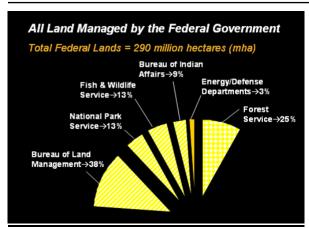
In the last part of the 19<sup>th</sup> century, people began to notice the losses—the ravaged forests, the vanishing wildlife. A conservation movement was born to protect remaining wildlife and restore forests to health.



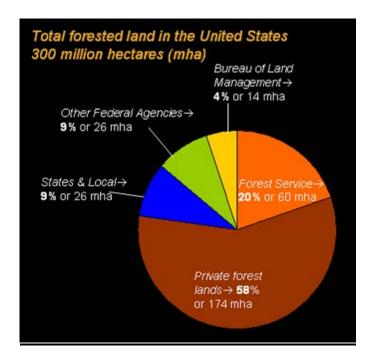
Out of the conservation movement came great systems of state and federal lands. Today, about a third of all land in the United States is owned by the federal government. Some of that is in protected national parks, some in national forests. About another 8 percent is owned by the states, with about 62 percent in private ownership.

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The major federal landowners are the Bureau of Land Management, Forest Service, National Park Service, and U.S. Fish and Wildlife Service, which all have unique missions and manage unique resources.

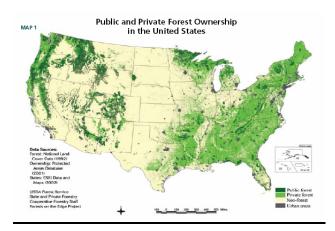


About one-third of America is covered by forest, and of that third private landowners own 58 percent, state and local governments manage 9 percent, and the federal government manages 33 percent. Of the 33 percent managed by the federal government, the Forest Service manages 20 percent, the Bureau of Land Management manages 4 percent, and the other agencies manage the remaining 9 percent.

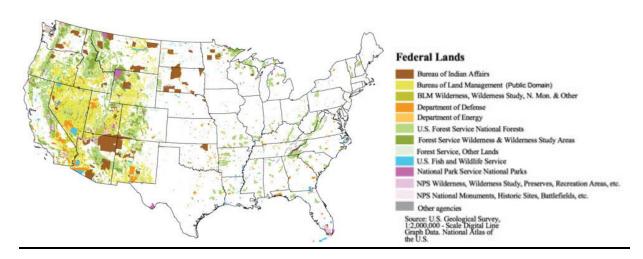
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Let me talk now about my second topic: our system of forest ownership and regulation. **System of Forest Ownership and Regulation** 



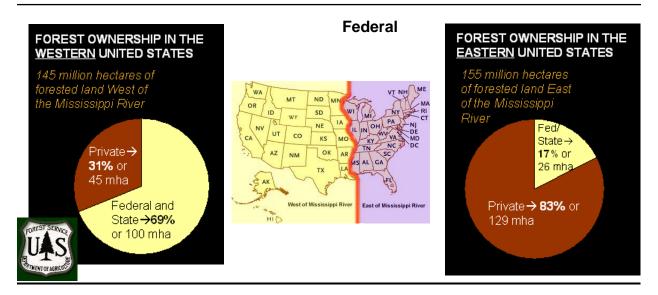
Most forests in the United States are privately owned—as I said, about 58 percent. This map shows us that there are large areas of forest in the eastern United States, and that most of them are owned by private landowners.



In this map we see that most of the federal land is owned in the western United States, with the majority under the Bureau of Land Management. Most of the land they manage is in the desert or steppe and doesn't contain much forest.

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Overall in the western United States, federal and state governments manage 69 percent of the forestland. In the East, it is only 17 percent.

#### **Federal forests**

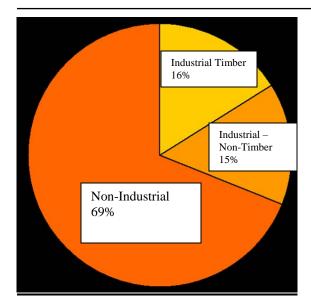
The National Forest System manages 192 million acres, both forest and grassland, owned by U.S. taxpayers.



Most Forest Service land is in the western United States as well, although we do manage forests in the East and grasslands in the central United States.

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#### A Look at Private Forestland

The timber industry owns only about 16 percent of the private forestland in the United States. The rest is owned by other industries and private landowners, including farmers, workers in small towns, and wealthy people from the cities.

In the United States, private forest owners have many rights. They are free to sell the land or change the way it is used. For example, they can clear the land and farm it, or they can sell parts of it to a developer who puts up houses. Or they can manage it for timber. Many forest owners leave the land alone to take care of itself, and, as you might imagine, that can sometimes lead to poor conservation practices.

The federal government has relatively little authority to regulate private forestland in the United States. To understand why, some context might help. The United States is a federation of states; our constitution strictly limits federal authority. Federal authorities affecting forest management on private land are very limited—and generally established to protect air and water quality, endangered species, and wetlands.

However, the United States has no single law covering forest management nationwide, and most regulatory authority lies with the 50 states. Some states have very comprehensive laws governing forest management, and others do not. No state sets annual allowable harvest levels for private forestland.

An essential role of the Forest Service is to help the states and private landowners practice voluntary conservation. We do that in three main ways:

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- First, by example—by demonstrating good conservation practices on the national forests, which are managed for multiple-uses like water, wildlife and fish, minerals, livestock forage, outdoor recreation, timber, and wilderness. The Forest Service manages the land to sustain these and other uses over time.
- Second, through forest research. The Forest Service employs a national network of scientists working on issues related to forest conservation. Their research is available to anyone.
- Third, through incentive programs that encourage good conservation. The Forest Service has
  all kinds of programs for helping private forest owners keep their lands forested and manage
  them sustainably. Working through state officials, landowners can get federal funds and
  technical assistance for a variety of purposes, like protecting their land from insects and
  disease.

As I mentioned, the states manage about 8 percent of the forestland in the United States. But whether or not they manage any land, all 50 states have a forestry organization. These organizations are responsible for promoting sustainable forestry on lands in their states and for administering related laws and regulations. Many of them also manage state forests for sustainable multiple uses. Many derive income from commercial activities on their lands to fund their schools.

That, in brief, is the U.S. system of forest ownership and regulation. Overall, it's been fairly successful, despite some serious challenges that I will get to in a minute. One measure of success is this: Over the last century, the U.S. forest estate has remained roughly stable, with little or no net loss of forests nationwide. On both private and public lands, the principles of conservation have largely taken hold. Finally, many wildlife species that were once depleted have had remarkable recoveries.



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#### **New Trends**

So we've made a lot of progress, but we also face some serious challenges. This is my 3<sup>rd</sup> major point. In the next part of my remarks, I'll describe some of the issues we are currently facing in US forestry today:

- changes in the forest products industry,
- · declining forest health, and
- growing forest fragmentation, losing private forests to urban development

#### **Changing Forest Products Industry**

The forest products industry has dramatically changed in the last 10 to 20 years. In the period following World War II, there was a boom in timber production, mainly to furnish lumber for homebuilding. A lot of that timber came from national forest land. From the 1960s to the 1980s, one major focus at the Forest Service was supplying timber. In 1968, for example, 26 percent of our domestic consumption came from our national forests.

That has changed. For one thing, the Forest Service no longer focuses on annual allowable harvest levels. The agency focuses instead on protecting and restoring forested landscapes. Of course, timber still comes from the national forests, but now it's mainly a byproduct of management to achieve healthier forest conditions or better wildlife habitat. Less than 5 percent of domestic wood consumption is now met by timber from national forests. While two-thirds of consumption still comes from our private lands, almost 25 percent comes from imports.

Timber prices are being set globally, and the American timber industry is not faring well in this global market. As mills close, hard times have fallen on many rural communities in America. Jobs have been lost, income reduced. The harvesting and milling operations that have survived and can compete are often small operations based in local communities or with Indian tribes. Many are family owned. So we're seeing a shift to more community-based kinds of industry, with a growing need and opportunity for community-based forestry.

#### **Declining Forest Health**

Another dilemma presented by the downturn in the U.S. timber industry is the loss of our ability to process wood cut to restore forest health. Our second major challenge is this: declining forest health. I talked earlier about the exclusion of fire from most of our forests. The result has been, across many forest types, dense stands of small trees on lands that historically had fewer, much larger trees. In a drought, these overcrowded stands are susceptible to huge fires that are way out of character for these fire-adapted forests. Nationwide, we estimate that almost 160 million hectares are at high to moderate risk of fires that could threaten human safety and ecosystem integrity. That's almost a third of our forested lands. After fires come invasive plants, and

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eradication can be next to impossible. Invasive species of all kinds are a huge threat to our forest's biological diversity and health.

#### Forest Fragmentation

A third challenge is what I call forest fragmentation. We are rapidly losing our open spaces to urban development. Working farms, working ranches, and working forests are being converted to homes and shopping malls. Nationwide, we lose about one-and-a-half hectares per minute. As land prices climb, forestry is becoming economically unattractive to private landowners who choose to sell their lands and take their investment elsewhere.

#### **New Emphasis Areas**

So the management of forests in the United States today is far different from what it was 30 years ago. We're facing new threats to the land, such as our forest health crisis; we're losing open, natural areas of private lands to urban development; and we're losing timber industry infrastructure to help support sustainable forestry in the future. To meet these challenges, the Forest Service is focusing on four new emphasis areas.

First, the Forest Service has shifted focus from timber production to ecological restoration. We are realigning our policies and organizational goals to reflect our focus on restoring our forests to health. To help pay for the restoration, the Forest Service is looking for new markets for biomass and other small-diameter materials. We've designed new contracts that are not simply "timber sale" contracts but are "stewardship" contracts, with an emphasis on land restoration as well as timber production.

Second, we are focusing on finding markets for ecosystem services from forests, such as delivering water, sequestering carbon, and supporting wildlife. This could help address the loss of private forest land to urban development. If a monetary value can be assigned to such ecosystem services and *added* to the value of forest products, then the economic incentive for the landowner might outweigh the incentive to sell as land prices rise. We are looking for ways to help landowners make the ecosystem services they provide payable or tradable.

Third, we need to find ways to expand the potential for community-based forestry. Our local communities know local forest conditions better than anyone else, and they have strong traditions of caring for the land—provided they have a stake in the outcome. We are developing new ways of engaging local communities in managing national forests. In fact, all of our senior leadership has attended a workshop designed to discuss the unique approach to community forestry in Mexico.

Fourth, we need new research to support all this. Forest Service scientists are focusing on ecological restoration, forest products for global markets, markets for ecosystem services, and opportunities for community-based forestry.

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Let me conclude by saying this. After 100 years of managing forests in the United States, we have concluded one thing: Forestry, like a forest, is always in transition. We have been through many challenges and experienced intense public scrutiny as we have faced each one of them. As we often say to our employees, all 35,000 of them, transitions are hard, but they also present opportunities to be creative and learn from one another's successes and failures. That is why forums like this—and many more—are so critical to our future.

Thank you so much.

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