

# Committee on Resources

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## **Statement of Steven R. Thomas Assistant State Forester, Oregon Department of Forestry**

Regarding

Restoring Forests after Catastrophic Events  
House Subcommittee on Forests and Forest Health  
July 15, 2004

### INTRODUCTION

Good Morning Mr. Chair and Members of the Committee. My name is Steve Thomas and I serve as the Assistant State Forester for the Oregon Department of Forestry—based in Salem, Oregon—responsible for the management of just under 800,000 acres of Oregon's state-owned forest land.

As Representative Walden has no doubt told you, and perhaps many of you have seen, Oregon has been blessed with rich and diverse forests that blanket nearly half of our state. There are 28 million acres of forestland in Oregon—our total statewide land mass is just over 64 million acres.

I am very pleased to be here this morning to address the past, present and future of one particularly renowned piece of that 28 million acre forest landbase: the 364,000-acre Tillamook State Forest, located in the far northwest corner of Oregon.

We offer to the committee our experience with the restoration and management of the Tillamook, for over 70 years, from fire suppression to the current day management of the forest.

### FOCUS

I come before you as a person who knows the Tillamook as an Oregonian, a Forestry Department employee, and more recently as a person who has helped set policy for the future of the forest. This morning, I will highlight key chapters of the Tillamook State Forest Story:

- How the original forest was devastated by a series of wildfires in the 1930s and 1940s;
- How rehabilitation and reforestation brought communities together, while also beginning to restore the forest;
- How two generations of forest management created options for the future;
- How sustainable forest management today in the Tillamook seeks to address social, environmental and economic values.

I have submitted additional materials to staff, that will be entered into the record. In addition, we welcome members of the committee to a tour of the Tillamook State Forest should your work afford you an opportunity to visit Oregon.

### OVERVIEW AND EARLY HISTORY

To begin, I felt it would be helpful to describe where this forest is: The Tillamook State Forest is located in the northern Oregon Coast Range Mountains, about 40 miles west of Portland. The forest covers about 364,000 acres, roughly 570 square miles.

Understanding the history of this forest is crucial to understanding the challenges and opportunities we face today and in the future. For the most part, the outline of today's Tillamook State Forest follows the footprint of areas burned during the 1930s and 1940s. Prior to the fires, the entire area was privately owned. The story of the Tillamook (and really of any forest) is defined by change. Here's one interesting facet of that: The nearly complete change of property ownership in the Tillamook, from private to state ownership as a result of the fires.

Before the fires, the original forest covered the coast range with large stands of old trees, openings created

by wind, fire, disease, and many stands of vigorous young trees. By 1933 when the first fire hit, there were few roads through the area, and much of the forest had not been logged. Steam donkeys and rail lines were beginning to operate around the edges of the forest, and communities at the forest's edge were depending on the jobs, raw material and revenue that came from these private forest lands.

But then there were the fires. Four of them, burning at six year intervals, devastating the landscape and the economies of the surrounding area. Coming on the heels of the Great Depression, this was a devastating blow for all of Oregon.

The 1933 fire, like those that followed, stemmed from a logging operation. At first, the loggers thought they could contain it, but it quickly outran them. CCC firefighters, conscripts, loggers and volunteers had all they could do to stay out of the way. Hard to imagine, but the 1933 fire burned 200,000 acres in 20 hours. That's an average of 10,000 acres—or 15 square miles--per hour.

In the hard years immediately after the fires, many landowners in the burned-over area stopped paying taxes and let their lands revert to the counties. The fires left behind a landscape virtually devoid of green trees. As far as you could see, only brown, gray and black.

#### RESTORATION AND TRANSFER TO THE STATE

Despite this, a spirit of cooperation, forged in part by the fires themselves and the hard economic times, began to arise about the Tillamook Burn. Early visionaries foresaw a new forest from the ashes.

What followed was the beginning of a remarkable transformation of the landscape. Remember that this is the depression. Remember that this entire landbase is privately owned. Salvage operations began, ultimately reclaiming about 10 billion board feet of timber from the 13 billion board feet burned by the fires. Companies—former rivals—banded together to create a consolidated company that salvaged and milled the burned timber.

Put in today's terms, the Tillamook Burn salvage era produced almost three times the amount of today's total annual timber harvest from all of Oregon's forests: state, private and federal combined.

In a series of agreements begun with the 1939 State Forest Acquisition Act signed by then-Governor Charles Sprague, these burned-over lands were transferred from the counties to the state. As new state forests, these lands would be managed to provide revenue for the counties and to provide a wide range of forest values for all Oregonians. This early vision shaped the forest we know today.

Then, there was the reforestation. It started modestly at first, as an experiment really. The challenge was formidable in every way. The size of the area, the logistics required, the organization of people and equipment and funds, the need for seeds and seedlings. It was a time of great innovation. Reforestation gained speed as Oregonians passed a constitutional amendment in 1948 to fund the reforestation process.

Hundreds of thousands of volunteers and contract tree planters helped restore the Tillamook Burn. In the period between 1949 and 1972, more than 72 million seedlings were planted by hand, creating a new forest from the ashes. More than a billion seeds were dropped from helicopters. Students from across northwest Oregon helped replant the burn. Though the territory they planted was less than 1 percent of the landscape, their memory of that collective act lives on today. One teacher, reflecting on the completion of reforestation, wrote: "We have completed our mission of planting trees and growing citizens."

#### THE LEGACY OF FIRE, SALVAGE AND REPLANTING

The wildfires of the 1930s and 1940s—and the salvage operations that followed—had huge impacts on this region. The volume of green timber killed by the fire has been estimated at 13 billion board feet. Natural reseeding processes were interrupted and in some areas seed sources were destroyed. Fish and wildlife habitat was devastated. The local economies and communities suffered lost wages, lost taxes, lost jobs. Land ownership patterns and practices were significantly changed.

At the time, common practice was to plant 1,000 trees per acre. That's different from what we plant today. Today, 400 trees per acre in the Coast Range is considered fully stocked, and that's with an eye toward early thinning. Of course, at the time, there was little science or empirical evidence to suggest how to accomplish this kind of project. The other element to note was that during the 23-year reforestation process, Douglas-fir was the only species of tree planted in The Burn. We know that Doug-fir was and is the predominant tree in this region, but there were plenty of other species, very few of which were planted at

that time.

How does that legacy affect practices today and options for the future? Today we have a 570 square-mile forest of trees that are essentially all the same species and all planted about the same time. This context poses plenty of challenges for today and the future. How do you create a forest management plan for such a vast even age single species forest? How do you work to restore biodiversity? The context of today's forest—shaped by the events of the past—means we have a lot of work to do. Getting the trees in the ground, as it turns out, may have been the easy part.

We have a very densely packed, even aged, single species forest. Nearly 65 percent of the Tillamook is in this type of "forest structure," providing only a narrow niche of habitat, and very limited diversity. Biodiversity comes through having a variety of tree species, ages, and forest structure or stand types. These conditions are not prevalent in the Tillamook today and that knowledge informs our activities and plans for the future.

What would the Tillamook look like today if there had been no rehabilitation and reforestation? Certainly, some regrowth would have occurred. But due to the multiple fires, and the complete loss of seed source in some areas, it is fair to imagine a landscape still struggling to support a vigorous forest; a much higher degree of alder and brush species; and lower levels of habitat recovery, particularly in riparian areas. Thanks, however, to our predecessors, the former Tillamook Burn is a productive new forest, which grows like a sea of green across this stretch of Coast Range.

Today, we manage the forest to provide a sustainable flow of social, economic and environmental values. And at the same time we manage today to leave options available to the future. The rebirth of the Tillamook Burn into a healthy and sustainable forest is one of Oregon's most dramatic success stories. And it's a forest and a story that will continue to grow, and one that we will continue to tell. Thanks in part to strong support from the Oregon Congressional Delegation, including Representative Walden, I am proud to say that next year we will open a forest education facility known as the Tillamook Forest Center to help share this incredible story of recovery and sustainable forest management with hundreds of thousands of visitors.

The landscape of the Tillamook has witnessed dramatic change in the last century. The events that played out there have defined their times and shaped the options we have available today. The decisions we make today are thus linked to the past. And will in turn shape the future.