A FORESTLIFE PUBLICATION

LEAFLET

SCIENCE, STORIES, AND PERSPECTIVES FROM THE PACIFIC FOREST TRUST

BIODIVERSITY CONSERVATION

Partnering with Private Landowners

TO EXTEND THE IMPACT OF THE CASCADE-SISKIYOU NATIONAL MONUMENT

President Clinton proclaimed the Cascade-Siskiyou National Monument (CSNM) in June 2000 as the nation's first such dedicated to protecting biodiversity. At the time, just over 52,000 of the 86,774 acres covered in the proclamation were officially protected and included in the monument. The remaining land was considered part of the CSNM planning area. These lands were privately owned and unaffected by the designation, meaning the area's natural wealth was at risk due to the extent of fragmentation in ownership.

Since 2009, we've worked with a number of private landowners to acquire and protect key portions of these lands, conveying them to the Bureau of Land Management and officially adding them to the monument. The CSNM has increased by 20% through such efforts, but there's still more to do, both inside and outside of the planning area.

With the lapse of the primary funding source for expansion, the Land and Water Conservation Fund, securing protection of additional land within the CSNM planning area has become more difficult. Fortunately, there are other effective ways to continue conserving the area, extending protection beyond those borders. We're currently working with the Parsons family to conserve their 2,065 acre forest, providing an essential connection for wildlife between the CSNM and the Rogue River National Forest.

This project and others like it are essential to protect key wildlife corridors to safe habitats between the CSNM and nearby Forest Service lands. In addition to connecting corridors, many species, like the vulnerable Pacific fisher, need more habitat than what the checker-boarded landscape of public lands provides. Protecting this region's globally outstanding biodiversity needs many tools, and private conservation efforts like Mountcrest provide a complement to overall CSNM biodiversity protection.

To learn more about the Mountcrest project and others like it, visit: pacificforest.org/conservation-projects.

The Cascade-Siskiyou National Monument is home to rare, intact old growth forest stands; more than 3,500 plant and animal species, including one of the most diverse butterfly populations in the U.S., as well as species found nowhere else in the world. We're partnering with landowners to conserve its biodiversity.

SCIENCE

The Value of Fire: Restoring a More Natural Fire Regime

NATURAL FORESTS ARE MORE LIKELY TO SURVIVE DROUGHT AND MITIGATE CLIMATE CHANGE

The following is a summary of research conducted by Malcolm North, Research Forest Ecologist for the USDA Forest Service, to identify the effects of wildfire and drought dynamics on the carbon stores of fire-suppressed forests.

With climate change, high-intensity fires and drought are increasing in frequency and severity in many western forests. Widespread fire suppression and extensive forest thinning—both the result of human policies and management—have changed forest structure and composition, exacerbating this trend. The resulting forests are more susceptible to early tree death and have a reduced ability to mitigate climate change through sequestration and long-term carbon storage.

Lower intensity burn in a mixed conifer forest. Historically, many forests were managed by eliminating fire and harvesting large, valuable trees. This shifted the structure and composition of dry forests from low densities of large fire-resistant species to high densities of fire-sensitive species, which are prone to drought stress and fire-induced mortality.

Forests are the most expandable terrestrial carbon sinks. In addition to efforts to increase carbon stores through reforestation and reducing deforestation, improving forest management to promote restoration of older, more natural forests can lead to greater net carbon stores—as well as more resilient forests. Policies and markets can influence this outcome. A key factor in achieving this is an improved understanding of the role fire plays in forests.

Historically, 26% of temperate forests were naturally shaped by fire, leading to more open forests with more large, older trees and fewer small, young trees. Forest management removed those large trees for timber, emphasized dense replanting, and sought to eliminate fire—especially in the past 75-100 years. This led to degraded forests with an over-abundance of smaller, fire-prone trees and a lack of larger, fire-resistant trees.

To identify the effects of wildfire and drought on fire-suppressed forests' ability to mitigate climate change, researchers compared two common, mixed-conifer forest types where fire was suppressed and where fire regimes were restored. Using computer models, researchers did hundreds of simulations using likely drought and fire scenarios that could occur over the next 300 years.

While fire-suppressed forest stands initially contained more live and dead wood, and thus, more stored carbon, they were less stable over time as drought and wildfire frequency increased due to their high abundance of smaller, fire-prone trees. Modeling confirmed that continued fire suppression in mixed-conifer forests resulted in forests that were less resilient and tolerant of disturbances.

By managing forests with active, low-intensity fires and selective fuels reduction, the models showed we can restore forest conditions that are tolerant of fire and drought, and provide more stable, dependable carbon sinks as changing climate conditions increase disturbance frequency.

Wildfire and drought dynamics destabilize carbon stores of fire-suppressed forests, Ecological Applications (2014), Earles, J. Mason, Malcolm P. North, and Matthew D. Hurteau. Ecological Society of America

CONSERVATION STEWARDSHIP

New Tool to Help Meet Landowners' Conservation Goals

When a landowner decides to conserve their property with Pacific Forest Trust, we want them to feel confident that we can indeed fulfill their goals of protecting and stewarding their land in perpetuity. That's a big promise and the reason why we are members of Terrafirma.

TERRAFIRMA
RRG LLC

Perpetuity is a long time and many things can happen to challenge that promise. Original easement grantors do not hold their land forever—and chances are new landowners may try to break that easement. In fact, data show that all conservation easements, regardless of how well-managed they are, will likely be challenged at some point. So, in addition to our robust stewardship programs, we now have a way to address legal challenges.

Terrafirma, a charitable "risk pool" and insurance service created by the Land Trust Alliance, helps land trusts meet those legal challenges, ensuring conservation permanence. Pacific Forest Trust and over 500 other land trusts have joined together in Terrafirma to have the means to defend conservation easements by covering legal expenses when they are challenged.

Because conservation easements stay with the land regardless of ownership, the longevity of these agreements comes into question when legal threats arise.

Common issues include:

- New landowners do not share the original grantor's conservation intent;
- Developers wishing to convert the land for other uses; and
- Dealing with trespassers' impacts.

The Land Trust Alliance launched Terrafirma in 2011. By July 2015, it had already supported the defense of 116 cases across the U.S., helping safeguard conserved lands. It also provided invaluable risk management guidance to land trusts.

Terrafirma helps us know we have the means to prevail when worst case scenarios become real and disagreements just cannot be resolved outside the courts. It is one more tool to ensure that we can uphold our promise to landowners to fulfill their conservation vision—forever.

To learn more visit: pacificforest.org/accountability.

POLICY

From California to the Globe

LEVERAGING FORESTS FOR A SAFER CLIMATE

In 1992, world leaders affirmed the global risk of climate change and their intent to address it. They created the United Nations Framework Convention on Climate Change (UNFCCC), an international environmental treaty to stabilize atmospheric greenhouse gas concentrations, limiting the rise of average global temperatures. In 1997, the Kyoto Protocol extended the UNFCCC and defined how countries would do this. A core action of the Kyoto Protocol called for protecting and enhancing forest carbon sinks, promoting conservation, sustainable management, and reduced deforestation.

Unfortunately, in the intervening years, the targeted limits to the rise of carbon dioxide emissions were all exceeded. Now, average global temperatures are expected to increase by more than four times the limits set by UNFCCC and the Kyoto Protocol. There is one major exception to this trend: California. In 2006, California undertook binding emissions reductions through its landmark climate law AB 32—the Global Warming Solutions Act. The state is on track to reduce its emissions to 20% below its 1990 emissions levels by 2020. The state is also developing the implementation pathway to reach even more impressive targets for 2030: 40% below 1990 levels.

California was the first state globally to include the protection of standing, managed forests in its climate policy and the first to develop state-sanctioned, scientifically-based, standardized, 3rd party verified protocols for forest carbon offset projects. Pacific Forest Trust pioneered that effort. Offsets now cover over 2 million acres of forests in 22 states, helping meet that 2020 goal. California is also the first state to develop broad, sector-based approaches to reducing net carbon emissions and increase net sequestration through forests and other natural lands. Forests are the pivotal mechanism that will help achieve these new 2030 emissions reduction goals.

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This December, world leaders, scientists, policymakers, and climate change activists will gather in Paris, France, for the annual UNFCCC meeting. This conference presents a historic opportunity to develop a successor approach to the Kyoto Protocol. As the safest and most expandable carbon sinks, forests will play a major role in the new approach. PFT President, Laurie Wayburn, and Board Member, Andrea Tuttle, will be in attendance to advocate for the essential role forests play to mitigate climate change.

One key topic during the climate conference will likely be the approval of the Reduced Deforestation and Forest Degradation (REDD+) plan which outlines a new mechanism to work with forests in emerging economies, especially in tropical forests. California will also likely signal its intent to open its carbon market to REDD+ projects that meet its standards for regulatory compliance offsets, expanding the role forests play in ensuring a safer climate.

Pictured above: Pacific Forest Trust President, Laurie Wayburn, and Board Member, Andrea Tuttle, accepting the Climate Action Champion Award from the Climate Action Reserve.

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