

V. Chapter Two—Land Management

Forest and rangelands are the driver of a local natural resource economy that has sustained communities in the Dry Forest Zone. Working forests can provide value streams through timber production, renewable energy development, value added manufacturing, recreation, and the provision of ecosystem services. The BLM and Forest Service manage 68 percent of forestland in the zone, which makes federal policy significant for the region's socioeconomic conditions. The zone also has a substantial private industrial and nonindustrial land base (*Figure 11, page 27*). Currently, both public and private forest management across the zone must address the challenge of restoring forests that are considered highly departed from their historic conditions. There is strong interest in restoring forests, protecting communities from wildfire, finding local business opportunities in biomass and forest products, and collaborating to effectively manage landscapes. Local leaders continue to see natural resource management as an important component of economic development and ecological stewardship that can address both forest and community health. The zone has been home to innovative practices in collaboration and stewardship contracting, and emerging developments in management for ecosystem services. On public lands, active management relies on the scope of social agreement that collaboration can help to mobilize; the continued growth of stewardship contracting authority; and the capacity of a skilled contracting workforce to carry out sustainable stewardship work. Although these factors are common to the entire zone, there is local variation in the overall degree of collaborative mobilization and availability of skilled workers. On private lands, restoration is also important to nonindustrial private and private timberlands owners. However, the private landbase of the zone is undergoing significant transformation as investment and real estate companies have begun to acquire private industrial forestland. Intergenerational transfer is a concern to family landowners, but there is also interest in increasing stewardship capacity and capture of alternative value streams on nonindustrial forests. This chapter will discuss these trends in public and private forest management across the zone in light of the regional importance of restoration, timberland divestment, and nonindustrial private management.

RESTORATION AND LAND MANAGEMENT

Restoration is the management of ecosystems to create biological structure, function, and composition that is productive, diverse, and resilient to disturbances and other external pressures. Watershed, rangeland, and forest restoration activities are underway across the zone to address waterways that have been modified from their original courses and rangelands that have lost their native grass composition. Zone forests, particularly in the Southern Cascades, the Modoc Plateau, and the Blue Mountains ecological regions, have departed from their historical fire regimes, leading to uncharacteristic stand conditions and greater fire hazards. The type and scale of restoration work has varied depending on local conditions including the level of collaboration, social agreement, and workforce capacity. Watershed councils, the Oregon Watershed Enhancement Board (OWEB), extension services, federal agencies, ranchers, farmers, and private landowners are among those who have worked on restoration in the zone. While our assessment does not focus on watershed and range restoration, those types of activities have been increasing in scope and coordination; an example would be where restoring historic rangelands through juniper management has been a priority, such as Crook County.

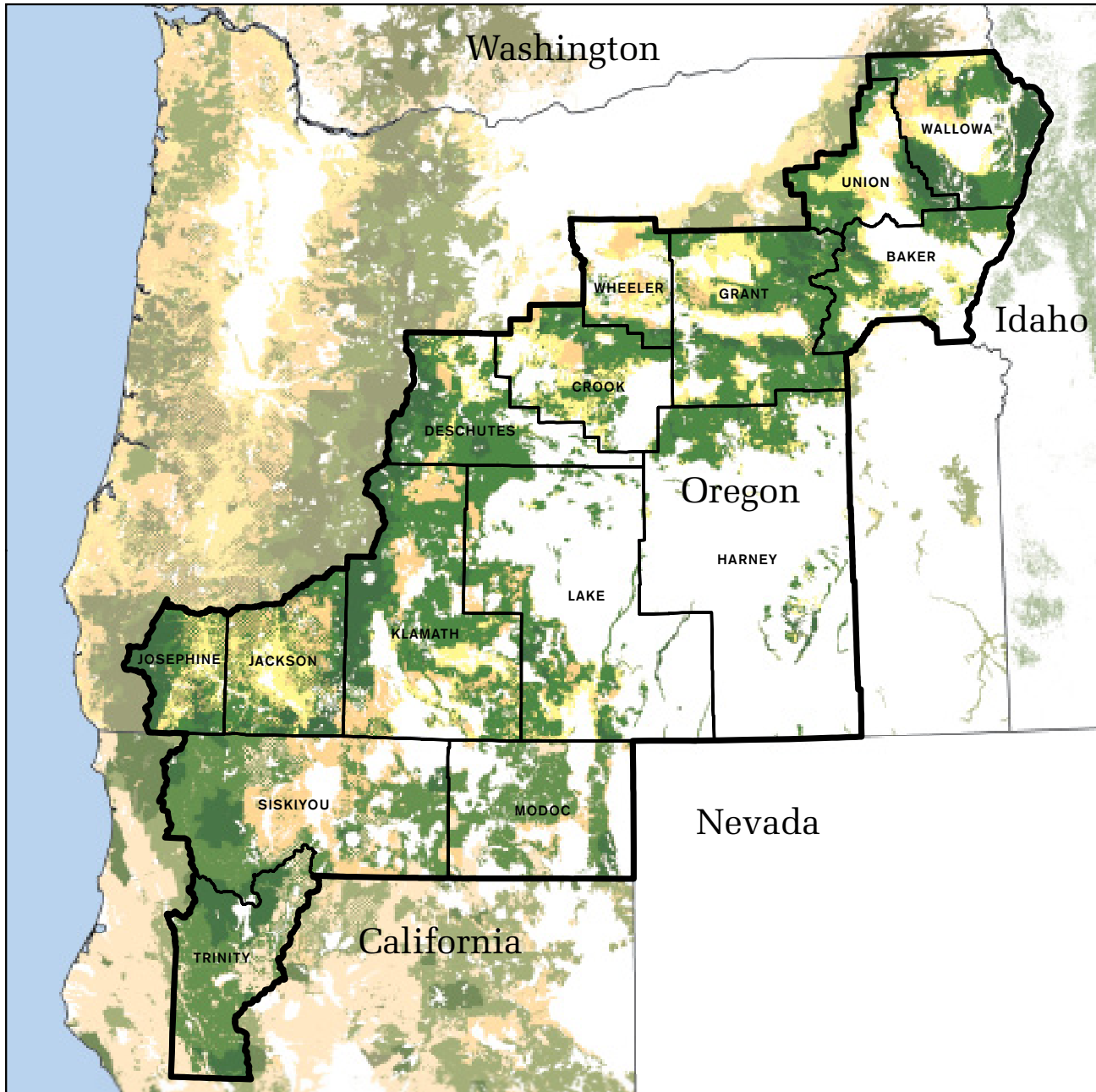
PUBLIC LAND MANAGEMENT

Although agencies and many stakeholder groups agree on the need for forest restoration, it has been difficult to achieve landscape-scale and coordinated management on public lands for several reasons. First, the allocation of resources within agency budgets and the limited capacity of agency staffing lead to funding that is piecemeal and that supports some types of restoration-related work, such as hazardous fuels reduction, but not others. Collaboration and nonprofit partnership has helped stakeholders in some areas of the zone to integrate hazardous fuels reduction with other aquatic and terrestrial restoration objectives. Second, there can be limited agreement on what restoration means, and which activities it includes. As we discuss shortly, collaborative groups can work with available science, information, and decision-making processes to develop agreement. In many areas of the zone, collaboration has begun to produce landscape-scale agreement and implementation.

FIGURE 11

Forest Ownership and Management

Dry Forest Investment Zone



Data Source: Oregon Department of Forestry, Cal-Atlas



- Private and Private Industrial (Oregon only)
- Private Non-Industrial (Oregon only)
- Public Non-Reserves
- Reserves

Funding restoration and hazardous fuels reduction

Although restoration can signify a broad suite of activities, a majority of funding for restoration on national forests has been designated for hazardous fuel reduction. Severe wildfires in the West in the early 2000s led to administrative policy and congressional legislation that prioritized community protection and expedited National Environmental Protection Act (NEPA) process requirements for fuel reduction projects. American Recovery and Reinvestment Act (ARRA) funds awarded to zone national forests and BLM lands have further supported these goals (for further discussion of policy initiatives, please see Chapter Five). Fuel reduction typically involves a combination of thinning of small diameter trees in dense stands, brushing, and mowing. Some fuel reduction projects focus on defensible space around development, while others have the objective of restoring forest structures and compositions that are resilient to future fire risks at a larger scale. Some areas of the zone, such as northeastern Oregon and Lake County, have collaborations and partnerships that have enabled use of federal funds for broader restoration objectives.

Collaboration and agreement

Second, the key to building integrated restoration approaches and maximizing forest management benefits across the landscape is collaboration among relevant stakeholders. Stakeholders can include agency personnel, environmental and conservation groups, forest industry, and local community members. Currently, there is agreement among interested stakeholders and community members regarding forest restoration in the zone. Some environmental groups do not support restoration and fuels reduction in older mixed-conifer, lodgepole pine, and juniper stands. Most stakeholders agree there on the necessity of projects in lower-elevation ponderosa pine and mixed-conifer forests where fire has been excluded over the last century, where most intensive timber harvest has occurred, and where uncharacteristic wildfire patterns threaten homes. Much of this agreement has come about through the efforts of a number of collaborative groups and nonprofit community-based organizations. Collaborations and partnerships enable the agreement for mobilization that varies from the “convening” stage to implementation of complex projects (see Chapter Four for a further discussion of the range of community-based forestry mobilization).

In Wallowa, Union, and Baker counties in north-east Oregon, stakeholders in watershed councils, the Resource Advisory Council (see Chapter Five for a discussion of RACs), and Wallowa Resources are able to implement complex projects because they have a zone of agreement around harvesting small-diameter trees in dry, overstocked stands on the Wallowa-Whitman National Forest and reducing fire risk in the wildland-urban interface. There is support for stand density management through removal of small-diameter trees as well as shade tolerant and disease-prone species. This agreement diminishes for the wetter forests and those containing larger trees. Collaborative planning has laid the foundation for more effectively planned, large-scale, integrated projects. The Upper and Lower Joseph Creek watershed assessments, facilitated by Wallowa Resources, are examples that integrate forest restoration thinning with other restoration objectives including road decommissioning and removal of fish migration barriers. Plans are currently underway in the Whitman District for a much larger stewardship contract (approximately 30,000 acres). These collaborative forums, and others like the former Union County Forest Restoration Board, help to build the agreement necessary for larger-scale ecological restoration projects. Lake County stakeholders have also achieved this landscape-scale restoration by building trust among stakeholders. In Lake County, the Lakeview Stewardship Group collaboratively manages the Lakeview Federal Stewardship Unit on the Fremont-Winema National Forest through a ten-year stewardship contract that was reauthorized in 2008. They currently help manage forest and rangelands in the unit for fuels reduction and juniper removal. The Lakeview Stewardship Group and Lake County Resources Initiative have used monitoring programs to build agreement, resulting in landscape-scale restoration including the removal of white fir over twenty-one inches and a move toward management in mixed-conifer stands.

Agreement and mobilization are not as extensive elsewhere in the zone, but collaboration has still led to restoration project implementation. In Siskiyou, Trinity, and Modoc counties in northern California, federal agencies there have made a number of agreements with collaborative, local government, nonprofit, and tribal groups including the Watershed Research and Training Center, the Northern

California Resource Center, the Mid-Klamath Watershed Council, the Trinity County Resource Conservation and Development District, and the Karuk and Hoopa Tribes to engage in restoration projects on federal lands. The most notable of these agreements is the Weaverville Community Forest Stewardship Agreement covering 15,000 acres of BLM and Forest Service lands in Trinity County. Despite ongoing tensions between forest industry objectives and environmental objectives concerning public lands management, there is broad public support for reducing hazardous fuels in the wildland urban interface, and stakeholders agree that restoration is needed in forest plantations. The complex forest types of northern California and southern Oregon can make agreement more difficult than elsewhere. In Modoc County, the BLM and the Forest Service are committed to collaboration and have worked extensively with local stakeholders including the county government, the cattlemen's association, and environmental groups to reach agreement on juniper removal and sage steppe restoration.

Moderate levels of agreement exist in Grant, Harney, and Wheeler counties on reducing stand density in lower-elevation ponderosa pine by removing small-diameter trees, but this agreement does not extend to management of the higher-elevation mixed-conifer stands, harvesting trees with diameters over twenty-one inches, harvesting old growth trees with less than twenty-one-inch diameters, or post-fire salvage logging. Two collaborative groups, the Blue Mountain Forest Partnership in Grant County and the Harney County Restoration Collaborative are building on areas of agreement to plan and implement several thousand acres of wildland-urban interface fuels reduction projects on the Malheur National Forest. In central Oregon, larger collaborative efforts including the Central Oregon Partnership for Wildfire Risk Reduction (COPWRR) provide an arena for possible agreement on the Deschutes and Ochoco National Forests and the Crooked River National Grasslands.

Despite stakeholder relations that are sometimes adversarial, agreement is high concerning management in second-growth ponderosa pine stands and in juniper, which has expanded significantly beyond its historic range of variability in the Northwest Basin, Blue Mountains Foothills and Range, and Modoc Plateau ecological regions; less so in lodgepole pine; and minimally in mixed-conifer and old growth stands. A number of stewardship projects (e.g. Glaze Meadows Fuel and Restoration Project, 1,200 acres) underway in the Deschutes National Forest have led the way for larger, landscape-scale proposals like the Rim-Paunina Vegetation Management and Wildlife Habitat proposal, which aims to reduce fire risk and promote the restoration of old-growth conditions on 39,000 acres on the Crescent Ranger District. The Pine Ridge Stewardship Project is also underway on the Crooked River National Grassland to restore over 40,000 acres of rangeland. Although stakeholders in central Oregon are starting to take restoration work "to scale," projects such as Rim-Paunina illustrate the ongoing challenges of finding agreement on treatment of mixed conifer, higher-elevation forests, and mistletoe-infested ponderosa pine stands.

Stewardship contracting and public lands workforce

Currently, the Forest Service can offer work through a timber sale (awarded to the highest bidder), a service contract (awarded to the lowest bidder with the best technical proposal), or a stewardship contract. Stewardship contracting has become an effective tool for restoration on public forestlands. Stewardship contracts are reserved for projects that have been developed through a collaborative process. They are awarded on a best value basis, permit the exchange of goods for services, allow managers to retain any receipts to pay for other needed restoration work, and can cover a scope of work over a ten year period. The Forest Service awarded a total of eighty stewardship contracts on national forests in the zone in 2009 (*Table 2, page 30*).

TABLE 2

Stewardship Contracting in Zone National Forests, 1999–2009

Zone Region	National Forest	Number of Contracts, Task Orders, Agreements	Number of Acres
Northeastern Oregon	Umatilla	18	4,780
Northeastern Oregon	Wallowa-Whitman	14	10,991
Eastern Central Oregon	Malheur	1	1,144
Central Oregon	Deschutes	7	3,365
Central Oregon	Ochoco	12	7,014
Southern Central Oregon	Fremont	7	8,824
Southern Central Oregon	Fremont-Winema	1	2,020
Southern Central Oregon	Winema	1	1,644
Southern Oregon	Rogue River	5	1,588
Northern California	Klamath	2	2,511
Northern California	Modoc	3	2,629
Northern California	Six Rivers	3	1,045
Northern California	Trinity	6	959
Total in Zone		80	48,514

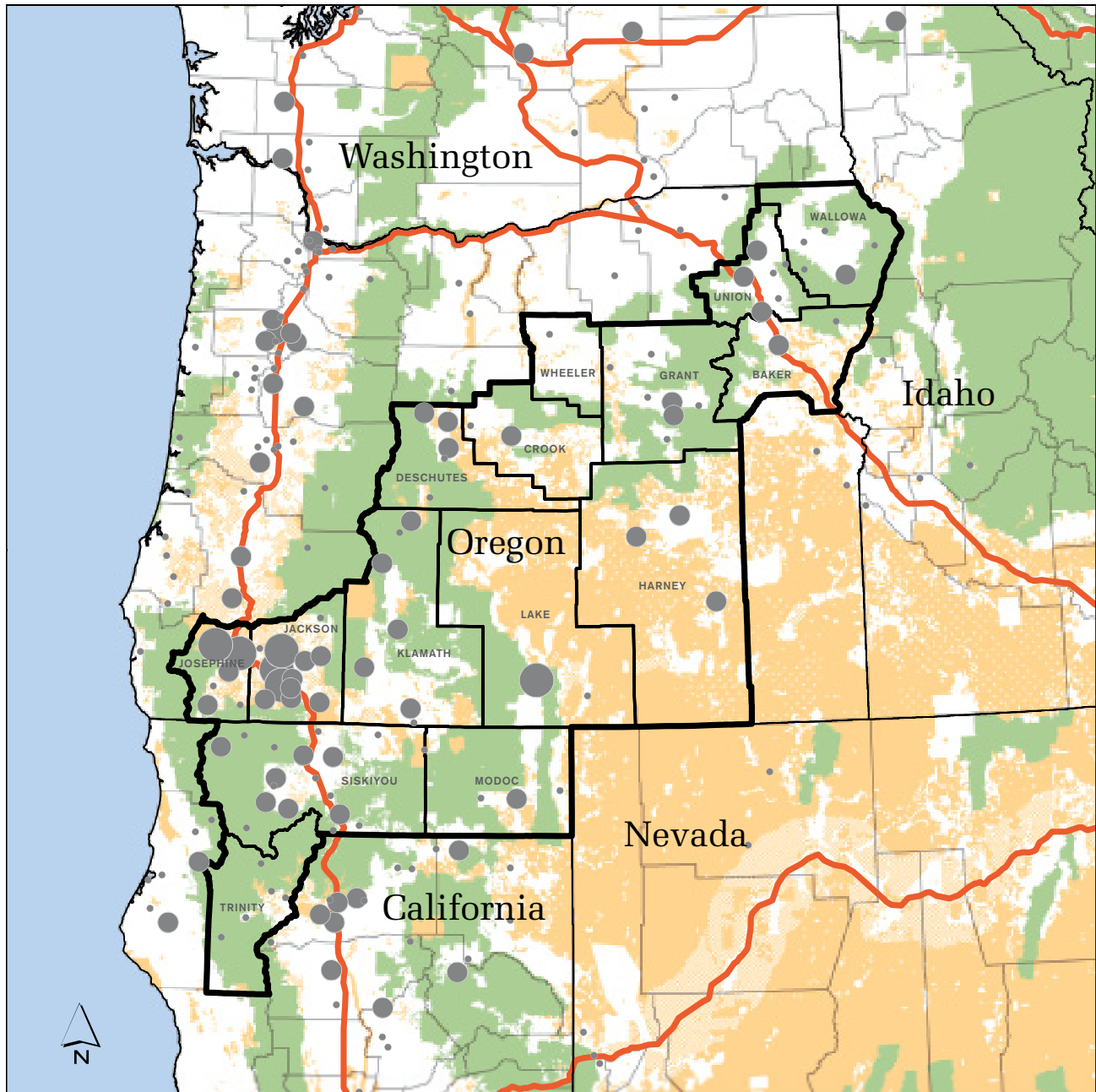
The zone holds a large number of stewardship contracts relative to other regions of the West. This has allowed local contractors to conduct work that is based on community agreement and that takes into account the health of forests and watersheds. However, there are several issues with the policies, procedures, and incentives of federal lands contracting that affect the ability of the private sector to compete for work on the public lands across the zone. Federal managers are evaluated on how many acres they treat for the lowest cost. Consideration of local benefit, how packaging complex products can exclude or prevent local businesses from competing for those contracts, and bonding requirements and other financial mechanisms designed to minimize risk and maximize efficiency to the government (and the taxpayer) make it financially challenging for smaller and local contractors to successfully compete for work on federal lands. Contractors in the zone are continuing to develop their capacity to compete, and nonprofit organizations are increasingly working to improve the accessibility of contracts and the quality of business assistance to smaller entrepreneurs.

Despite major shifts and a downward trend in forest management activities across the zone, considerable capacity to accomplish this work exists in the zone. Although contractors exist throughout the zone, business capacity to receive contracts is concentrated in the larger, more populated counties like Jackson and Josephine counties in southern Oregon and Deschutes County in central Oregon (*Figure 12, page 31*). Some of the forestry services firms in Josephine and Jackson are among the largest in the nation. Also in southern Oregon, the nonprofit Lomakatsi Restoration Project group focuses on training and employing skilled work crews to conduct fuel reduction and restoration treatments. This group has received funding under the National Fire Plan and from regional contributions to support their work on over 150 private land and stewardship contract projects. In 2009, they were awarded \$14 million in American Recovery and Reinvestment Act (ARRA) funds as part of their ten-year stewardship contract agreement. Smaller communities and businesses can have difficulty capturing contracts. For example, in Lake County local loggers have been hired for logging, resulting in some local revenue streams, but other associated restoration work has been subcontracted to out-of-county businesses.

FIGURE 12

Federal Land Management Contractors

Dry Forest Investment Zone



Data Source: Federal Procurement Data System

Total contract funding (U.S. dollars)

- 250,000 or less
- 250,001 - 10,000,000
- over 10,000,000
- Interstates
- Interior Lands
- U.S. Forest Service Lands

TRENDS IN PRIVATE INDUSTRIAL FOREST LAND OWNERSHIP AND MANAGEMENT

Poor log market conditions and the challenges of forest restoration have impacted private along with public land management. However, other trends including industrial divestment, threats of land conversion, and landowner transitions on family forests create different challenges across the zone. We discuss these trends and suggest that the future of private zone lands depends upon the protection of working forests, the capacity for a stewardship ethic among nonindustrial private landowners, and further development of alternative value streams.

Divestment and the private industrial landbase

Declines in federal forest management, loss of wood products infrastructure, and the growing recreation and development value of rural land have led to the divestment of industrial timberlands across the zone. Although several local family companies such as Ochoco Lumber still have large holdings, traditional vertically integrated timber companies have sold much of their land to timber investment management organizations (TIMOs) and real estate investment trusts (REITs). Much of the former Boise Cascade lands in northeastern Oregon and southern Oregon are now owned by Forest Capital Partners headquartered in Boston, Massachusetts. Former Crown Pacific Lands in Central Oregon and the Mazama Tree Farm in Klamath County are owned by Fidelity National Financial, headquartered in Jacksonville, Florida. Community leaders and stakeholders fear that these lands will be developed for real estate, and such a process has begun in some locations. For example, in northeastern Oregon, Forest Capital Partners has already begun a modest program of selling land focused on lightly forested, difficult to manage properties, and those with high amenity values. In many cases, these lands are subdivided into minimum lot sizes (often 240-acre parcels) and marketed as amenity real estate and private hunting retreats. In central Oregon, plans to create destination resorts in the Metolius Basin have not come to fruition, but have alarmed community members nonetheless. Other communities where development is planned, such as Crescent, are supportive because of the employment opportunities and the secondary economic benefits that could flow to their businesses.

In response to divestment, communities, tribes, and local and state governments have led emergent movements to seek ownership and protection of these lands as working forests that can continue to support local natural resource economies, open space conservation, and recreation opportunities. These new ownership trends include community and tribal forests. County government, a land trust, and the Oregon Department of Forestry (ODF) have each sought new forest ownership models in the zone. In northeastern Oregon, Forest Capital Partners proposed selling 3,700 acres of land near the town of La Grande as 240-acre parcels (the minimum parcel size allowed). Through an involved public process and with funds from a state all-terrain vehicle fund, the county was able to purchase the land and one third of the timber volume and retain public access and timber management on the site. The county plans to use revenue generated from grazing, timber management, and recreation activities on the site to fund future management. In central Oregon, the Deschutes Land Trust has been negotiating a deal to purchase 33,000 acres of forestland from Fidelity National Financial. The land trust will manage the land, called the Skyline Forest, for recreation, conservation, and forest restoration opportunities that benefit the surrounding communities. In Klamath County, the ODF is purchasing over 43,000 acres of ponderosa pine forest (the Gilchrist Tract) from Fidelity National Financial in order to conserve open space and maintain working forests. Fidelity had purchased these former Crown Pacific lands for potential real estate development. The state plans to ensure public access to these lands, restore overcrowded and heavily harvested stands, protect wildlife habitat, and provide raw materials and revenue to local communities and industry. Finally, the Klamath Tribes have entered an option agreement with Fidelity National Financial to purchase 90,000 acres of the former Mazama Tree Farm, and would thin and restore the forest and create tribal economic development opportunities.

Stewardship of nonindustrial private forestlands

Across the zone, private nonindustrial landowners also control a significant portion of working forest and rangeland. The demographics of these landowners vary; some hold lands that have been in their

families for generations, some have relocated to rural areas, and others may be absentee or vacation owners. Many landowners do continue to harvest timber and graze cattle, while others manage for recreation or leave the land unmanaged. Four significant challenges limit sustainable forest stewardship on private nonindustrial lands in the zone. First, the aging landowner base and an increase in new landowners with limited forestry knowledge and experience and/or no desire to actively manage forests create uncertainty surrounding future ownership and working capacity of these lands. Second, although some lands remain in larger holdings, others are subdivided into minimal-sized parcels during turnover, breaking up the continuity of the forested landscape's ecosystems. Third, forest management capacity and assistance infrastructure is diminishing. Although the ODF, California State Forestry, the Natural Resource Conservation Service, and small woodland associations have programs that offer technical and financial assistance to landowners, staffing and funding for these programs are limited. In Oregon, these programs are shrinking as the ODF continues to cut funding and the number of stewardship forester positions. Resources to help with fuel reduction, harvesting, restoration, and forest planning are now less readily available. Fourth, private nonindustrial forest owners have more recently faced a lack of timber markets and local processing capacity, particularly in the more remote areas of the zone.

ALTERNATIVE VALUE STREAMS

As a result of marginal timber market conditions, both private industrial and nonindustrial forest landowners in the zone are increasingly interested in alternative value streams. Alternative value streams are markets for products and services from forestland other than timber that provide additional sources of revenue while promoting active management and conservation. Examples of potential and existing alternative value streams in the zone include biomass market development, forest certification, recreation, ecosystem services such as carbon and water markets, recreation, hunting, and alternative energy production.

Several biomass utilization facilities exist, and several more projects have been proposed across the zone. Successful biomass development can provide

a market for small-diameter trees and harvest residues that come from forest restoration, fuels projects, and traditional timber harvests. Additional revenue garnered from biomass can offset restoration costs and increase the bottom line for private forest landowners. We discuss biomass utilization in Chapter Three.

There are three significant types of certification that landowners can obtain for their forest management. Many industrial landowners are certified by the Sustainable Forestry Initiative. Family forest owners in the zone have certification through the American Tree Farm system. The Forest Stewardship Council (FSC) has the highest standards for certification. Although extensive areas of forestland in the zone are currently not FSC-certified, this could provide opportunity for future revenue. Northern California and southern central Oregon have the most certified forestlands. Roseburg Forest Products holds 175,000 FSC-certified acres in Siskiyou County, and the Fort Bidwell Indian Reservation in Modoc County holds 2,286 certified acres. J-Spear Ranch Company and the Collins Company have FSC-certified land in Klamath and Lake Counties. Collins's certified holdings are 77,000 acres and add value to processing at their Lakeview sawmill. A family forest owner in Wallowa County has 500 FSC-certified acres. Although the FSC-certified lands of the Confederated Tribe of Warm Springs are north of the zone in Jefferson County, their successes in using certification as a business strategy are significant inspiration to central Oregon industry. Several wood products manufacturing businesses are certified by the FSC as chain of custody businesses, especially in southern Oregon and other higher-population areas where these facilities are concentrated. In northeastern Oregon, Community Smallwood Solutions, a for-profit post and pole company, is now able to conduct FSC forest management and chain of custody audits. This local capacity and the presence of multiple chain of custody businesses may help to facilitate growing opportunities for green wood markets across the zone.

Although payments for carbon sequestration are currently limited by the slow growth rate of dry forests and the low premium paid for voluntary carbon sequestration, landowners in northeastern and southern Oregon have expressed interest in these markets.

Resources and opportunities to assist landowners in carbon markets are emerging. The Baker County Small Woodlands Association has met with a forest carbon consultant to discuss a regional carbon market, and the Southern Oregon Extension Center is working with the Oregon Small Woodlands Association (OSWA) to educate landowners in southern Oregon about potential carbon sequestration opportunities. In 2008, OSWA created Woodlands Carbon, an organization that aggregates and trades carbon from family forest owners. The Northwest Natural Resource Group has recently conducted outreach to landowners across the zone to develop carbon offset markets through their Northwest Neutral Program. In California, the California Climate Action Regis-

try allows landowners to provide carbon credits on a voluntary market. Individual landowners in the zone have also taken initiative to better understand the potential of carbon markets. One private landowner in southern Oregon received a federal grant to study carbon sequestration and is eager to capitalize on this work by selling carbon credits and sharing this information with other interested landowners. Two local landowners have also explored carbon sequestration opportunities through studies with the Lake County Resources Initiative.

In central Oregon and Klamath County, water allocation in the Deschutes and Klamath basins have already prompted developments in water transac-



tions, which could provide another ecosystem services market. In Deschutes and Crook counties, development pressures and irrigation needs have led to instream water leasing and surface water markets. In Klamath County and parts of northern California, the future of water markets is unknown at this point, but the outcomes of the Klamath Basin Restoration Agreement may lead to new options such as wetlands banking. Although these water markets are not well developed, there are federal incentive programs that can support riparian restoration and conservation practices by compensating landowners for their stewardship. Through its restoration grant program, the Oregon Watershed Enhancement Board has also funded watershed restoration projects on both public and private lands that benefit watershed processes, fish populations, and habitat restoration. Finally, other emerging opportunities for landowners to access alternative value streams include fee hunting and fishing, and renewable energy development including wind turbines, solar panels, and small-scale hydroelectricity.

OPPORTUNITIES FOR SUSTAINABLE FOREST STEWARDSHIP IN THE ZONE

Across the zone, there is interest in integrating forest stewardship and economic development on public and private lands through timber and alternative value streams. On public lands, collaboration and strategic use of policy and funding opportunities can foster this stewardship. There is a need to support existing collaborative efforts through technical and capacity building assistance. The success of small-scale experiments across the zone can be leveraged to promote landscape-scale, collaborative comprehensive restoration project planning and implementation. Communities and agencies could capitalize on the opportunity presented by federal stimulus and other existing funding to accomplish a diversity of work on both public and private lands. This funding can be used for fuels reduction, trail maintenance, and road improvements. Where stimulus funding has been dedicated, it is important that these projects be implemented in a timely manner and used to leverage further work wherever possible. Other opportunities for landscape-scale restoration

include the Forest Land Restoration Act (FLRA), Healthy Forest Restoration Act (HFRA), and increased stewardship contracting.

There are also emerging opportunities to maintain and secure private working lands. Maintaining nonindustrial private forests throughout the zone in the future will require an integrated approach that includes: 1) adequate markets for timber and other value streams; 2) technical service provision by state foresters, extension agents, and nonprofit organizations; 3) aggregation of landowners to take advantage of market and stewardship opportunities; 4) the presence of local forestry contractors; 5) landowners who understand the values associated with working lands and manage their holdings accordingly; and 6) state and federal legislation and funding that supports sustainable forestry. To secure working landscapes, communities and landowners can promote new ownership models and alternative value streams. Opportunities exist to explore community and tribal ownership and conservation easements. For both private industrial and nonindustrial lands, immediate opportunities to create incentives for active management include biomass market development, recreation, voluntary carbon markets, federal and state conservation programs, and forest certification. Wherever possible, landowners should aggregate to take advantage of these opportunities, especially in places where landowner associations exist that can provide education and access to these markets. Experimentation with these new markets should be encouraged and innovations should be shared across the zone.

Working forestlands are important contributors to the ecological, social, and economic conditions of the zone. The successful stewardship of productive public and private lands in this region requires an integrated vision focused on collaborative landscape-scale restoration, working landscape conservation, and access to both timber and alternative value streams. This vision can reflect the diverse ecological, social, and economic dynamics across the zone and build upon local successes, existing knowledge, and capacity.