TESTIMONY
OF
COMMISSIONER DENNIS C.W. SMITH
CHAIR, JACKSON COUNTY OREGON
BEFORE
THE COMMITTEE ON NATURAL RESOURCES
UNITED STATES HOUSE OF REPRESENTATIVES

MARCH 1, 2011

Thank you for the opportunity to comment on Secretarial Order 3310. I am a Commissioner in Jackson County, located in Southwest Oregon. I am here to express opposition to Order 3310, and disappointment, even anger, concerning the federal government's failed forest management.

The federal government owns more than half of the land in Oregon, so federal land policies have a profound effect on my State. Jackson County has an even greater proportion of federal lands. In my County lie the Cascade-Siskiyou National Monument and large parts of Crater Lake National Park, the Klamath National Forest, Rogue-Siskiyou National Forest, and Umpqua National Forest. Most importantly for my comments today, Jackson County also contains most of the BLM's Medford District. Nearly all of these federal lands are heavily forested, and, except for Crater Lake Park, they once supported a thriving timber and wood products industry. Not any more.

Federal policies have pulled the rug out from under us in Southwestern Oregon by shutting virtually all productive economic activity out of the woods. Jackson County once had 35 mills employing thousands of men and women. The last of the mills operating in my county closed within the last two years. This tremendous loss is largely due to the federal government's decision to prevent timber harvests, to "save" the forest from even the most benign, sustainable, well planned management activities. This federally caused economic loss in Southwest Oregon is part of the reason my county routinely has unemployment rates 50 percent higher than the national average. Currently Jackson and surrounding Counties have unemployment in the 15 to 20 percent range.

Secretarial Order 3310 promises to make an intolerable situation even worse, by locking up even more BLM land, creating de facto wilderness areas without Congressional action or oversight, and without the support of local communities that will be adversely impacted. This Order will not only prevent consideration of normal forestry, it will eliminate recreational uses such as snowmobiling, trail biking, motorcycling and other motorized access. The elderly and handicapped will be shut out entirely. Order 3310 is elitist and exclusive, rather than inclusive.

This can only lead to more unemployment, and more economic misery where we already have more than our share. The saddest of all, these federal land lockups do not benefit the forest. The experts are nearly unanimous that abdication of management responsibility by the federal government is resulting in forests that are unhealthy, insect ridden, and increasingly subject to catastrophic wildfires.

Secretarial Order 3310 should be reversed in its entirety. If not reversed altogether, then most of the lands managed by the BLM in Western Oregon should be exempted from it. The Department of Interior's solicitor has already concluded that most of the BLM lands in 18 Counties in

Western Oregon are not legally eligible for wilderness consideration. Order 3310 overlooks that Solicitor's opinion, and I ask this Committee to remind Secretary Salazar of his legal obligations. Let me explain:

The BLM manages about 2.1 million acres in Western Oregon under a unique statute applicable to no other lands in the United States. The "O&C lands" are located in a checkerboard pattern of mostly small parcels spread across 18 counties in Western Oregon. The O&C Act requires that, on all O&C lands suitable for growing timber, the timber shall be "sold cut and removed" in conformity with the principle of sustained yield. The O&C Act requires 50% of revenues generated from timber sales be paid to the 18 O&C counties. The 9th Circuit Court of Appeals in the Headwaters v. BLM case recognized that the O&C Act is a "dominant use" statute, giving timber production priority over all other possible uses.

The O&C lands were transferred to private ownership in exchange for construction of a railroad in the late 1800's, but the lands reverted back to federal ownership in 1915 because the railroad violated the grant terms. In 1916 and again in 1926 Congress attempted to make things right with local communities for the adverse financial impacts that resulted from having taken the lands out of private ownership and off the tax rolls. In its third attempt to correct the injury, Congress passed the O&C Act of 1937, dedicating the O&C lands to permanent forest production to provide revenue for county government services.

The O&C lands are not governed by FLPMA's multiple use directive. Section 701(b) of FLPMA specifically recognizes the dominance of the O&C Act's timber production mandate with the following "savings" clause:

> " Notwithstanding any provision of this Act [FLPMA], in the event of conflict or inconsistency between this Act [FLPMA] and the Act's of August 28, 1937 [O&C Act]. . . and May 24, 1939 . . . insofar as they relate to management of timber resources, and disposition of revenues from lands and resources, the latter Acts shall prevail."

O&C lands that are suitable for growing timber are not eligible for wilderness designation and should be excluded from further consideration under Secretarial Order 3310. Such lands were excluded from the wilderness review process under FLPMA, and should be excluded again. An Interior Solicitor's Opinion dated September 5, 1978, recognized that the dominant use mandate of the O&C Act requires timber production where the lands are capable of growing crops of timber, thus preventing preservation of such lands as wilderness. The Solicitor's Opinion (p. 11) states that the only O&C lands that can be considered further for wilderness preservation are "roadless areas unsuitable for commercial forest management," if, in fact, there are any such parcels of O&C land. Virtually all of the O&C lands are capable of growing timber and therefore must be used for sustained yield timber production.

There are those who will try to tell you that the economic benefits of land withdrawals under Order 3310 outweigh the benefits of developed economic activity on our public lands. To those who make such arguments, I say two things: First, show us the money. How are Counties to pay for sheriff patrols, search and rescue, prosecute and incarcerate criminals and provide the expected services for the users of the public lands? Second how do we replace the family wage jobs with the seasonal, low wage employment in tourist-related businesses? Some say tourist businesses contribute hundreds of billions of dollars annually to our economies, but I assure you we do not see anything like these claimed values. We are awash with literally millions of acres

of lands in Western Oregon already reserved from timber management and other economic uses. Our tourist industry does not suffer from lack reserved public lands. Locking up even more lands under Order 3310 will produce no tourist industry benefits at all. If we are to benefit economically from these land lockups, it will be necessary for Congress to review policies regarding sharing of receipts from the public lands. If the O&C lands are now to be used for "ecosystem services" instead of timber production, it will be necessary to monetize those non-consumptive uses and compensate the Counties accordingly. For your consideration we are enclosing a copy of a paper by Professor Norman Johnson of Oregon State University, arguing that the O&C Counties should be compensated for "ecosystem services" produced by the O&C lands.

I am here to ask you to bring rationality back to federal forest management. The current legal structure is badly broken—a Gordian knot, if you will—and those of us who live in forested communities are desperate for some sign that the federal government can be a capable land manager. Rolling back Order 3310 would be a small but meaningful first step.

Monetizing Ecosystem Services from BLM O&C Forests

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Executive Summary

In legislation passed in 1937, management of the BLM O&C lands was directed, in part, to provide economic benefits to the counties in which they reside through sustained timber production. Historically this economic contribution occurred largely through in lieu payments and employment associated with timber harvest. In recent years, harvest has been sharply curtailed due to mandates to protect endangered species and other fish and wildlife. These lands, though, continue to provide many ecosystem services, including clean water, outdoor recreation, carbon sequestration, and old growth. In this paper, we describe the results of our work with the OSU senior forest management class in monetizing (estimating the monetary value of) two of these services—carbon sequestration and outdoor recreation---from which the counties receive little or no revenue through in lieu payments. In this assessment, we used 72,000 acres of O&C forests southwest of Corvallis. To monetize carbon benefits, we first estimated a "baseline" from which to measure increased carbon sequestration. We argue that a fair baseline for carbon analysis would be continuance of the O&C sustained yield management that would have occurred without adoption of the Northwest Forest Plan (NWFP)---the Plan that was adopted in 1994 to address biodiversity concerns. We then estimated the carbon that has been sequestered, and will be sequestered, under the NWFP. We also estimated the carbon that would be sequestered under a plausible alternative to current management---an ecological forestry strategy based on the Western Oregon Plan Revision land allocations (WOPR-EF). We monetized the difference in the carbon that has been and will be sequestered under these two plans compared to continuation of historical O&C management. We found that tens of millions of dollars of additional carbon benefits have accrued and will continue to accrue under either of these two plans, with slightly more under the NWFP than WOPR-EF because of a higher harvest level associated with the latter plan. To monetize recreation, we used recent recreation use levels for different

types of recreation activities in the study area, and willingness-to-pay values from various studies across the West for these activities. We found that more than ten million dollars of annual recreation benefits were associated with use of these lands by the public. We argue that the value of these ecosystem services from the O&C lands should enter into the discussion about how to compensate the counties for the inability of these lands to achieve fully the goals of the 1937 Act.

Introduction

In Spring, 2010, Dr. K. Norman Johnson taught the senior forest management "capstone" course with the assistance of Debbie Johnson. In that course, students developed management options for approximately 72,000 acres of BLM O&C lands located about 25 miles southwest of Corvallis (Figure A1 found in the Appendix). Most of the acreage is less than 100 years of age (Figure A2). These lands have been managed under the Northwest Forest Plan since 1994. As part of their assignment, the students estimated the monetary value of two ecosystem services associated with these lands: 1) carbon sequestration and 2) outdoor recreation. We summarize the results from these analyses in this paper.

Monetizing Carbon Sequestration

Monetizing carbon sequestration from forest management generally involves three steps:

1. Estimating the amount of carbon that would be stored over time under a "base-line" management strategy. Often this baseline is called "business as usual." This baseline represents the idea that people in carbon markets will pay for carbon storage over that which would occur anyway-- they pay for the "extra" carbon stored.
2. Estimating the amount of carbon stored under an approach to forest management that increases the amount of carbon sequestered. We consider two options here: 1) Continued implementation of the Northwest Forest Plan and 2) A sustainable forestry option based on the Western Oregon Plan Revision allocations.
3. Multiplying the difference in carbon storage between the two approaches in each time period by the value/unit stored. The value/unit generally comes from domestic or foreign carbon markets.

The Baseline: O&C Sustained Yield Management

We argue that the baseline for comparison should reflect the carbon storage that would occur if the BLM had continued the management approach it had historically used before the Northwest Forest Plan was adopted. O&C management was set up to benefit the 18 counties within which the lands lie through the income to the counties and associated employment in the timber industry from timber harvest. The 1937

"Organic" Act states that the O&C lands "**…** shall be managed…. for permanent forest production, and the timber thereon shall be sold, cut, and removed in conformity with the principal of sustained yield for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, contributing to the economic stability of local communities and industries, and providing recreational facilities." Toward that end, the O&C forests were devoted to sustained timber production for many decades.

National biodiversity and related environmental concerns have greatly reduced the ability of these lands to meet this goal. Issues surrounding conservation of species associated with late successional forests, especially the Northern Spotted Owl, and habitat for salmonids led to protests, lawsuits, and eventually the creation of the Northwest Forest Plan (NWFP) in 1994 utilizing the authorities in more recent laws such as the National Environmental Policy Act, Endangered Species Act, and the National Forest Management Act. This Plan applies to national forests and BLM-administered Oregon and California Railroad (O&C) forests of western Oregon, along with other federal lands, within the range of the northern spotted owl. It shifted the overarching objective of these lands from sustained timber production to protection of biodiversity focused on species associated with late successional forests and aquatic systems, especially species listed as threatened and endangered. In the process, the allowable cut for the O&C lands were reduced by over 75%. In 2008, the BLM proposed an alternative plan for the O&C lands in the Western Oregon Plan Revision that would significantly increase harvest, but that plan was subsequently withdrawn by the Obama Administration, leaving management of these lands under the Northwest Forest Plan.

The 1937 O&C Act, though, is still on the books and still applies, although its meaning in the context of these other laws remains unsettled. We argue that a fair baseline for carbon analysis would be continuance of the O&C sustained yield management that would have occurred without adoption of the Northwest Forest Plan. To meet emerging environmental concerns, the O&C lands have had their management redirected to other purposes which often provide little direct economic benefit to the counties in which they reside, thus preventing management of these lands from meeting one of the key goals of the 1937 Act. To be equitable, the counties should be credited with the increase in carbon sequestration associated with that redirection. Thus, we argue for continuance of historical O&C management as the baseline for measuring an increase in carbon sequestration.

To meet the goal stated in the1937 Act of permanent timber production under sustained yield, we made the following assumptions: 1) 85% of the forest available for timber production, with some of the forest withdrawn for unstable slopes and areas near streams; 2) an 80-year rotation---a rotation near culmination

of mean annual increment; 3) yields associated with a moderate level of management; and 4) acres and volume harvested each decade equivalent to that from a regulated forest on an 80-year rotation.

Increased Carbon Sequestration Option 1: The Northwest Forest Plan

We assumed that implementation of the Northwest Forest Plan would follow the current approach that focuses on thinning in plantations. Most of that thinning occurs in reserves, as they dominate the landscape (Figure A3). Over time that thinning will gradually decline as will harvest. While regeneration harvest has been allowed under the Northwest Forest Plan in the Matrix, little has occurred due to protest and litigation, and little is forecast. Beyond initial thinning, the stands most likely will be allowed to mature without intervention except to suppress fire. Even if some regeneration harvest were to occur in the Matrix, it would not alter this analysis significantly as the Matrix acreage is relatively small.

Increased Carbon Sequestration Option 2: A Sustainable Forestry Model based on the Western Oregon Plan Revision

While the WOPR has been withdrawn, it still provides a valuable data set for carbon analysis. The land allocation in the WOPR proposed plan would approximately double the acreage in the Matrix in the study area by shrinking the Riparian Reserves (Figure A4). An approach to long-term forest management using the principles of ecological forestry (Franklin et al. 2007) was applied to this Matrix landbase, augmenting the thinning that would occur in the Reserves. No stands over 150 years of age were considered for harvest. This option would sequester somewhat less carbon than the first option due to the continued harvest over time in the Matrix.

Carbon Calculation Methodology

In forested areas, carbon is stored in many"pools." We recognize three pools here: 1) live trees, 2) other forest carbon (snags, downed wood, slash, soil organic matter and other), and 3) residue from harvests. Carbon sequestered in live trees was derived by using standing tree volumes from forest inventory data and site specific growth and yield curves. See USDI BLM 2008 Appendix C for more detail. Estimates of other forest carbon also came from this source . We made the calculations of carbon effects of logging debris. Total carbon was estimated as the sum of the three pools in metric tons (tonnes) that weigh 2200 pounds

Results[1]

Difference in carbon sequestered between the two alternatives

The NWFP shows a higher level of carbon storage than the baseline in each period. The difference in period 1 of 3.7 million tonnes in the first period reflects the effects of divergent management strategies for the last 20 years and the difference in periods 2-5 reflects the continuing effects of this divergence (Table 1 and Figure 1).

Table 1. Tonnes of carbon sequestered in each of the first five ten-year periods under the two alternatives on the 72,000 acre study area.

	Carbon Sequestered (Million Tonnes)			Additional Carbon (Million Tonnes)	
Period	Baseline	Option 1: NWFP	Option 2: WOPR+EF	Option 1: NWFP	Option 2: WOPR+EF
1	14.1	17.8	17.7	3.7	3.6
2	14.5	19.4	19.2	4.9	4.7
3	14.9	21.1	20.4	6.2	5.5
4	15.2	22.7	22.0	7.5	6.8
5	15.5	24.2	23.0	8.7	7.5

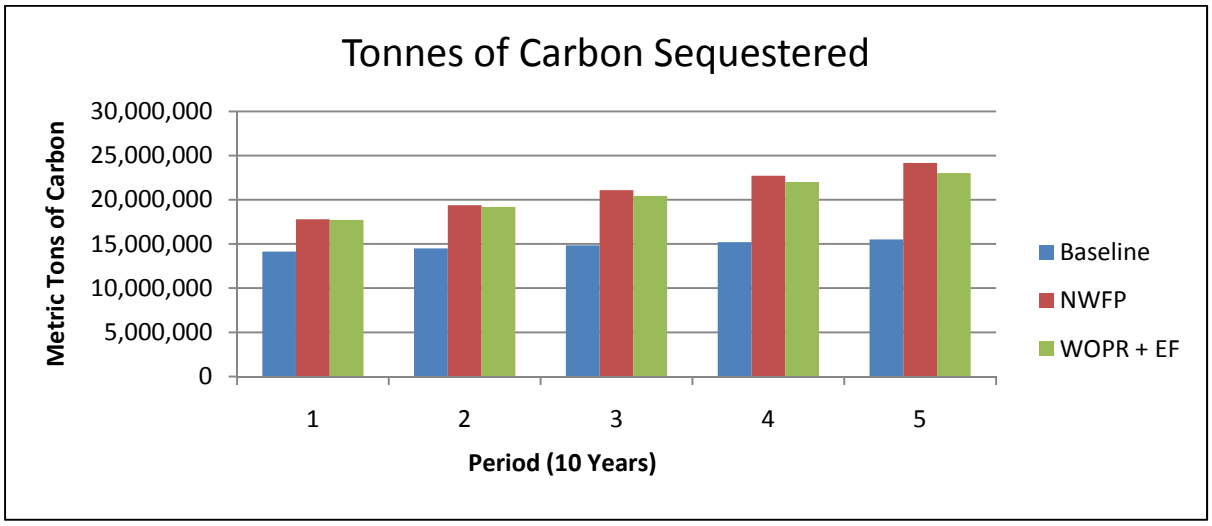

Figure 1. Tonnes of carbon sequestered in each of the first ten-year five periods under the baseline and NWFP in the 72,000 acre study area.

[1] This analysis draws most heavily on the work of one student group composed of Amber Craig, Rachael Heath, Jeremy Karby, William Pollack, and Jeremy Sudgen.

Value of the added carbon sequestration

Carbon markets generally buy and sell metric tons (tonnes) of carbon dioxide. To convert carbon to carbon dioxide, we multiplied total carbon by 44/12 (the ratio of the molecular weight of carbon dioxide to carbon). Total carbon was thus multiplied by 3.67 and then multiplied by the sale price of CO2 to arrive at each value (Cathcart and Delaney 2006).

We calculated the value of the additional carbon storage as follows:

1. The value of the initial difference in carbon stored between the two management scenarios was calculated as a lump sum payment which would occur in period one.
2. The value of the additional carbon stored in periods two-five was calculated as the extra carbon that would accumulated over the initial difference.
3. The amount of added CO2 was multiplied by either a "low" value of $ 2.75/tonne or "high" value of $15.00/tonne. This range of values was reflective of prices found in different carbon markets in spring, 2010. For comparison, California plans to use a minimum of $10/tonne in its climate registry (Wilent 2011).

Total monetized value of the increased carbon storage for the first five 10-year periods from the 72,000 acre study area is approximately $87 million at the "low" value per tonne and $475 million at the "high" value per tonne for the NWFP and slightly less for WOPR-EF (Tables 2 and 3). Approximately one-third of the value accrues in the first period reflecting the initial difference in carbon storage. Other assumptions about the management strategy in historical O&C management and the two options presented here would yield different monetized values but the general conclusions would not change*: Significant carbon value has accrued and will continue to accrue on O&C forests due to their redirection to be managed under the Northwest Forest Plan.*

Table 2. Value of increased carbon storage under Option 1 (NWFP)

Period	**Additional Tonnes of carbon stored (millions)**	**Tonnes of CO2 (millions)**	**Total Value $2.75/tonne (millions)**	**Total Value $15.00/tonne (millions)**
1 (Lump Sum Payment)	3.7	13.4	$36.8	$200.5
2	1.3	4.6	$12.6	$69.0
3	1.3	4.9	$13.4	$73.3
4	1.3	4.7	$13.0	$70.7
5	1.1	4.1	$11.4	$62.2
Total	**8.7**	**31.7**	**$87.2**	**$475.8**

Table 3. Value of increased carbon storage under Option 2 (WOPR + EF)

Period	**Additional Tonnes of carbon stored (millions)**	**Tonnes of CO2 (millions)**	**Total value $2.75/tonne (millions)**	**Total Value $15.00/tonne (millions)**
1 (Lump Sum Payment)	3.6	13.1	$36.0	$196.5
2	1.1	4.1	$11.2	$61.3
3	0.9	3.3	$9.1	$49.4
4	1.2	4.5	$12.4	$67.8
5	0.7	2.6	$7.0	$38.3
Total	**7.5**	**27.5**	**$75.7**	**$413.2**

Discussion

Much discussion has occurred about the development of carbon markets in the United States, but relatively few have emerged. One prominent exception is California which just recently solidified the operation of its carbon markets, including the allowance of carbon offsets from forestry projects (Wilent 2011).

Our argument here is not focused on entering the O&C lands into a market like California's in which there would be an attempt to sell the carbon sequestration that has occurred on the O&C lands since their management was redirected toward conservation of endangered species and related biodiversity goals. Rather, we argue that the value of this sequestration should enter into the discussion about how to compensate the counties for the current inability of these lands to achieve fully the goals of the 1937 Act.

Willingness-To-Pay for Recreation Activities on BLM O&C Lands[2]

We live, work, and play in the context of a market economy. Value is understood in terms of dollars exchanged. This system makes it difficult to measure the value of opportunities, experiences, and other things that are not traded in a market. Many outdoor recreation opportunities fall into that category. Fortunately, over the last several decades, several systems have emerged to help measure and understand the value of "products" for which no cash is exchanged, such as recreation opportunities and experiences.

Researchers like John Loomis, Colorado State University, and Randal Rosenberger, Oregon State University, have developed and refined methods for determining the dollar value of outdoor recreation activities. They essentially created hypothetical markets that act as a proxy for the processes and outputs of traditional markets. Using another important economic concept, willingness-to-pay (WTP), Loomis and many others have created equations that help capture the value of these activities using consumer surplus. This method is well established and has been used all over the world to help determine the market value of a range of recreation opportunities, from snorkeling in Australia to riding off-highway vehicles (OHVs) in Colorado. Surveys are conducted to determine individuals' WTP at specific sites. When direct measurements are not available, researchers use a method called *benefit transfer* instead. Values for similar sites and activities are used to estimate values for the study site.

Methods

To determine use levels, we utilized the number of visitor days for each activity that were provided by the Salem District BLM for the Marys Peak Resource Area. For willingness-to-pay values, we relied on Loomis (2005) in which values were compiled from various studies across the country. They were broken down by region and most were also separated into individual activities. We averaged the values for hiking, biking, and horseback riding and also for camping and picnicking because the use levels for

[2] This analysis draws most heavily on the work of one student group composed of Amber Craig, Rachael Heath, Jeremy Karby, William Pollack, and Jeremy Sudgen.

these activities were reported by the BLM in aggregate. When possible we used the values provided for Oregon and Washington but several of the values were from regional studies that also included California. This may lead to slight inflation of some of the values but we thought they were better estimates than the values from completely different regions.

Results

We estimated the total value of the major recreation opportunities that are provided in this area to be about $15 million annually (Table 4). This represents an average of $52.25 per activity day (twelve hours). Compare this to the cost of attending a movie which is about $8 for two hours. An activity day of attending a movie would have a use value of $48. Consider the situation: you are sitting at the edge of Alsea falls having a picnic with your family. The sky is blue (for once), the trees are green and the flowers are fragrant. We anticipate that an experience like that would actually be worth far more to many people than sitting inside a movie theater for a few hours. We propose that $52.25 a day is not at all an unreasonable value for the recreation opportunities provided on the O&C lands. Other assumptions about willingness-to pay will yield different levels of monetary benefits but the general conclusions are clear: *significant monetary value is being provided through recreation services on the O&C lands.*

Table 4. Activity levels, use values, and total annual value for the study area. (Note: An activity day represents twelve hours of participation in that activity and may represent a number of individual users.)

Recreation Activity	Activity Days/year	Use Values (WTP)	Total Annual Value
Nonmotorized boating	487	$32.07	$15,618.09
Motorized off-highway vehicle travel	24,086	$46.51	$1,120,239.86
Fishing	29,342	$48.37	$1,419,272.54
Hunting (big game, upland game, and migratory game birds)	74,302	$40.63	$3,018,890.26
Nonmotorized travel (hiking, biking, and horseback riding)	12,348	$34.96	$431,686.08
Camping and picnicking	91,136	$73.42	$6,691,205.12
Driving for pleasure (along designated BLM roadways)	51,135	$42.01	$2,148,181.35
Wildlife viewing, interpretation, and nature study	5,529	$40.32	$222,929.28
Totals	**288,365**		**$15,068,022.58**

Discussion

WTP is a valid measure for recreation benefits. The validity has been demonstrated by Loomis and Walsh (1997) in numerous empirical studies. It is also the preferred valuation method for the U.S. Department of the Interior. The WTP model is based on the economic principles of the demand curve and consumer surplus. The value to society of the total consumer surplus, as modeled by the WTP method, adds up quickly. Our estimate of total value of recreation opportunities provided by the BLM on the Marys Peak Resource Area may seem high but it is justified by this demand curve model and the well-established concept of willingness-to-pay.

We do not argue here that the people should be charged for recreation use of the O&C lands. Rather, we argue that the value of this recreation use should enter into the discussion about how to compensate the counties for the current inability of these lands to achieve fully the goals of the 1937 Act.

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Appendix A. Background maps and tables about study area

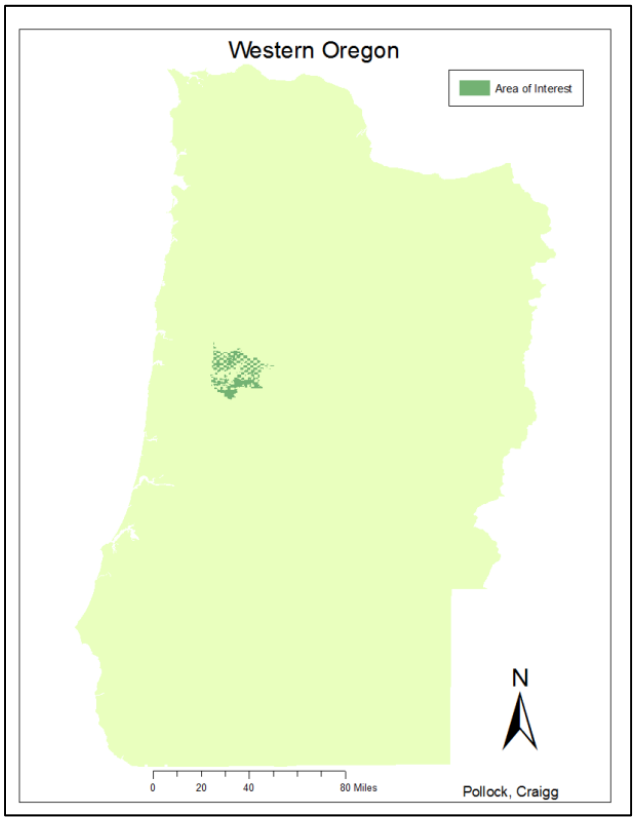

Figure A1. Study area location

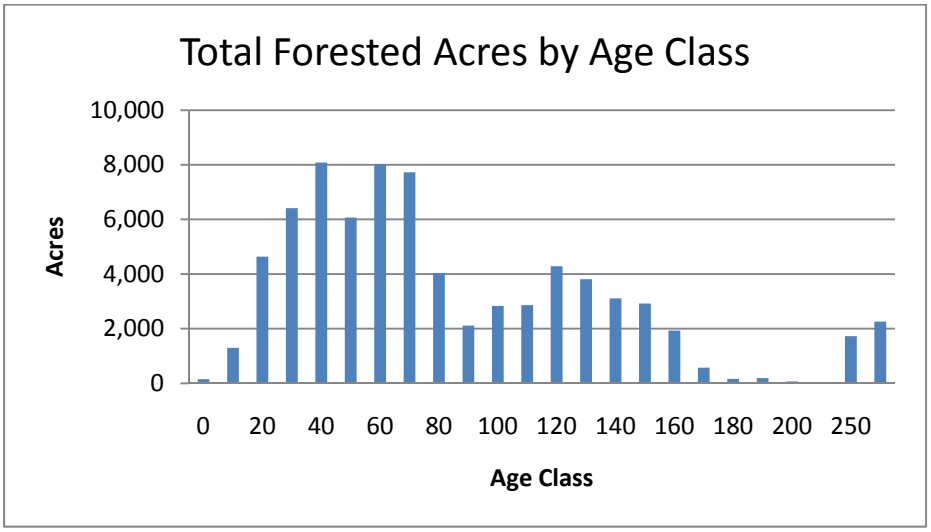

Figure A2. Forested acres by age class in the study area

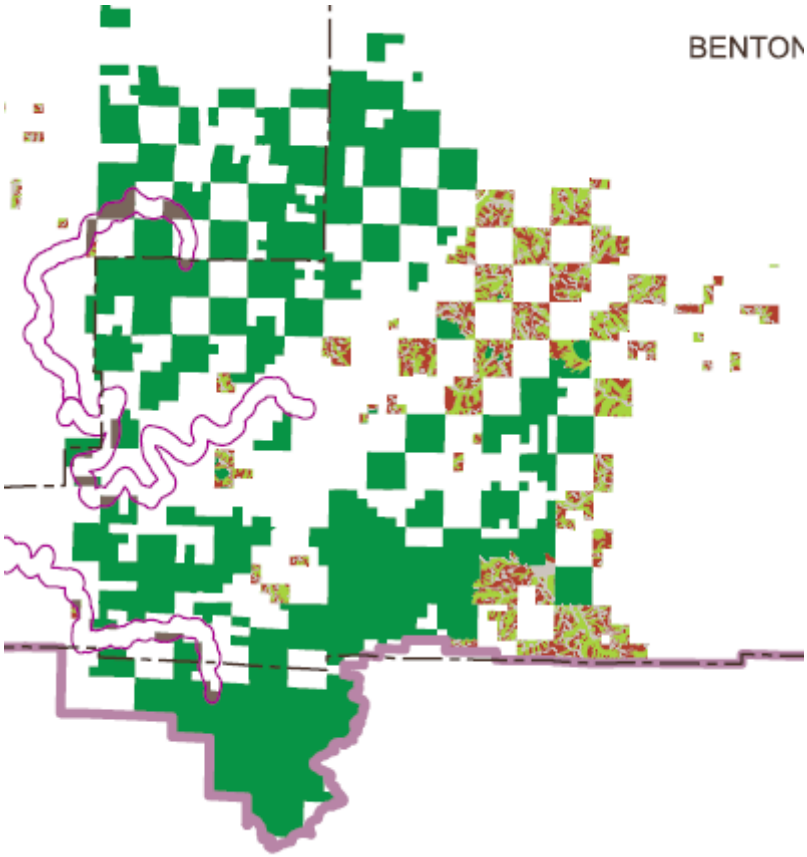

Figure A3. Land allocations in the study area under the Northwest Forest Plan (Dark green= Late Successional Reserves, Light green = Riparian Reserves, Red/brown = Matrix

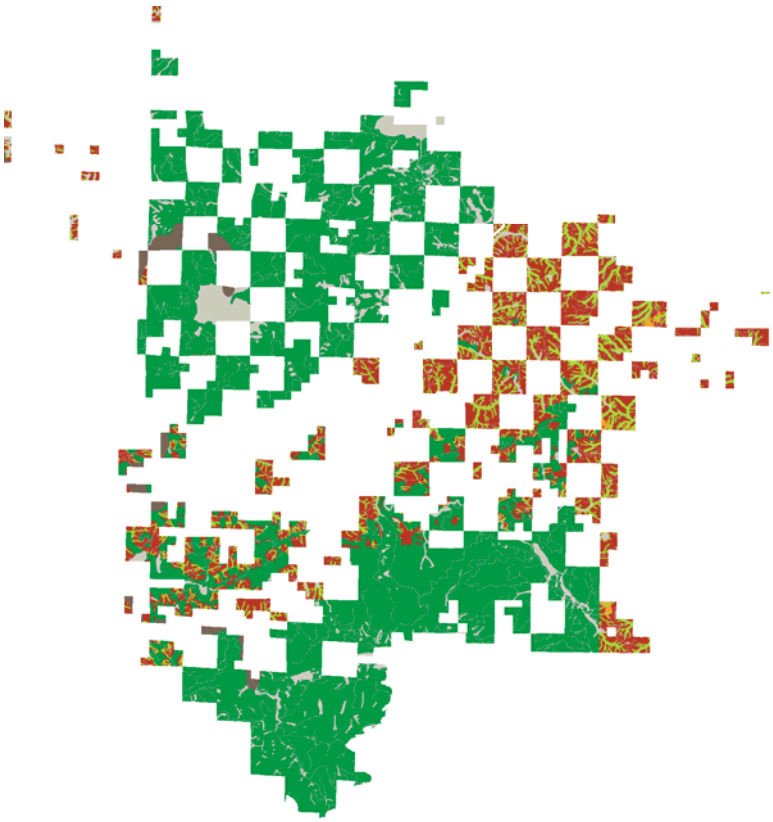

Figure A4. Land allocations in the study area under the Western Oregon Plan Revision ((Dark green= Late Successional Reserves, Light green = Riparian Reserves, Red/brown = Matrix)