



CONDITIONS UNDER WHICH WILDFIRES ARE HARMFUL

Parts I and II: Fire Regimes and Seasonality

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www.ORWW.org

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REGIME: Established system, or characteristic conditions for a process

System: Method, arrangement, or classification

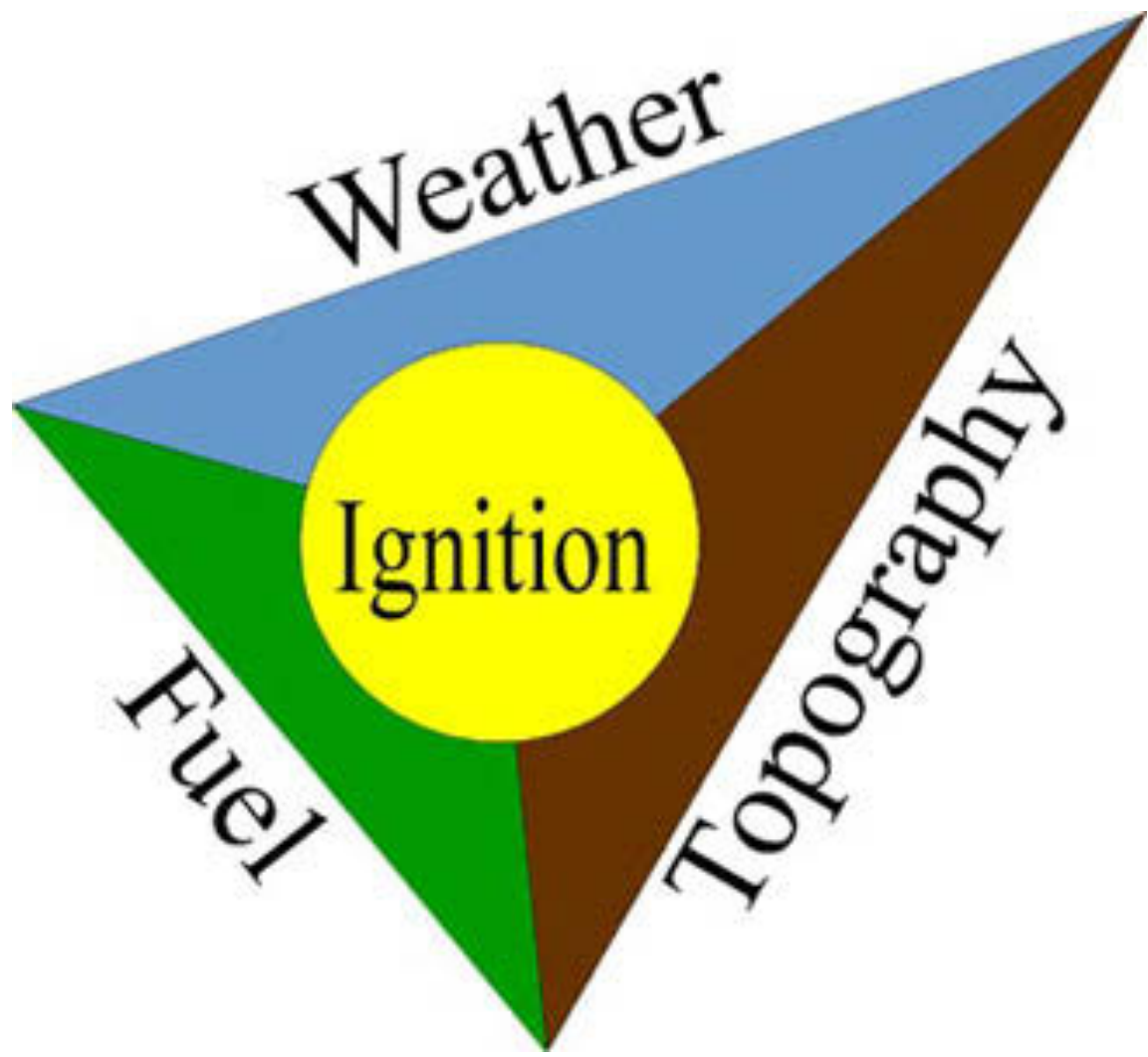
Process: Procedure, progression, or development

FIRE REGIME: Established system of landscape-scale wildfire events, or system and conditions for procedure of planned fire uses

Wildfire: Classification of unplanned fire-related events

Prescribed Fire: Human-designed method of using fire for desired outcomes

Indian Burning: Precontact history of North American fire use, including seasonal landscape-scale prescribe fire



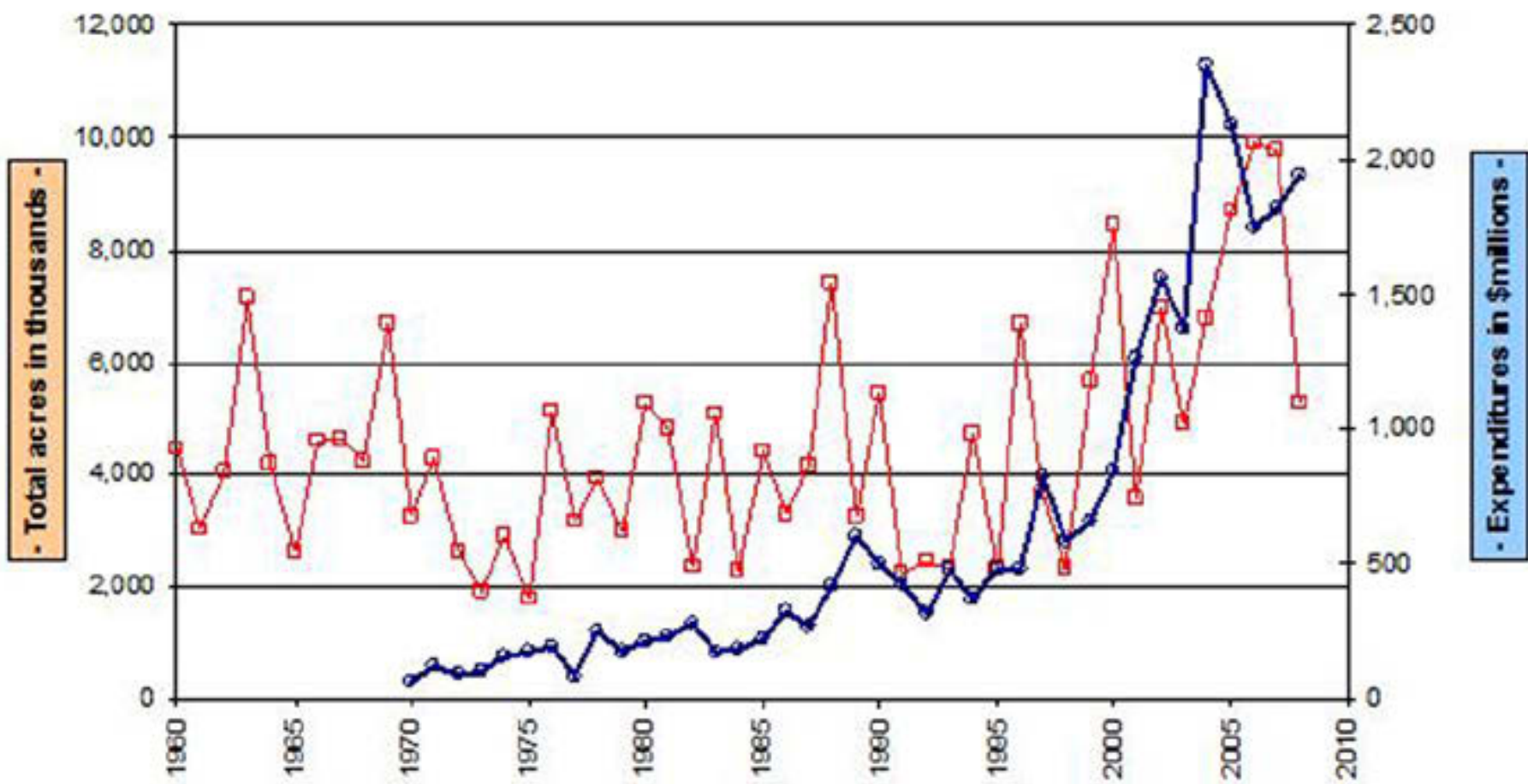


Wildfire Protection

SUPPRESSION COSTS



Total US Wildfire Acres 1961-2008, and USFS Fire Expenditures 1970-2008



PROPERTY DAMAGE





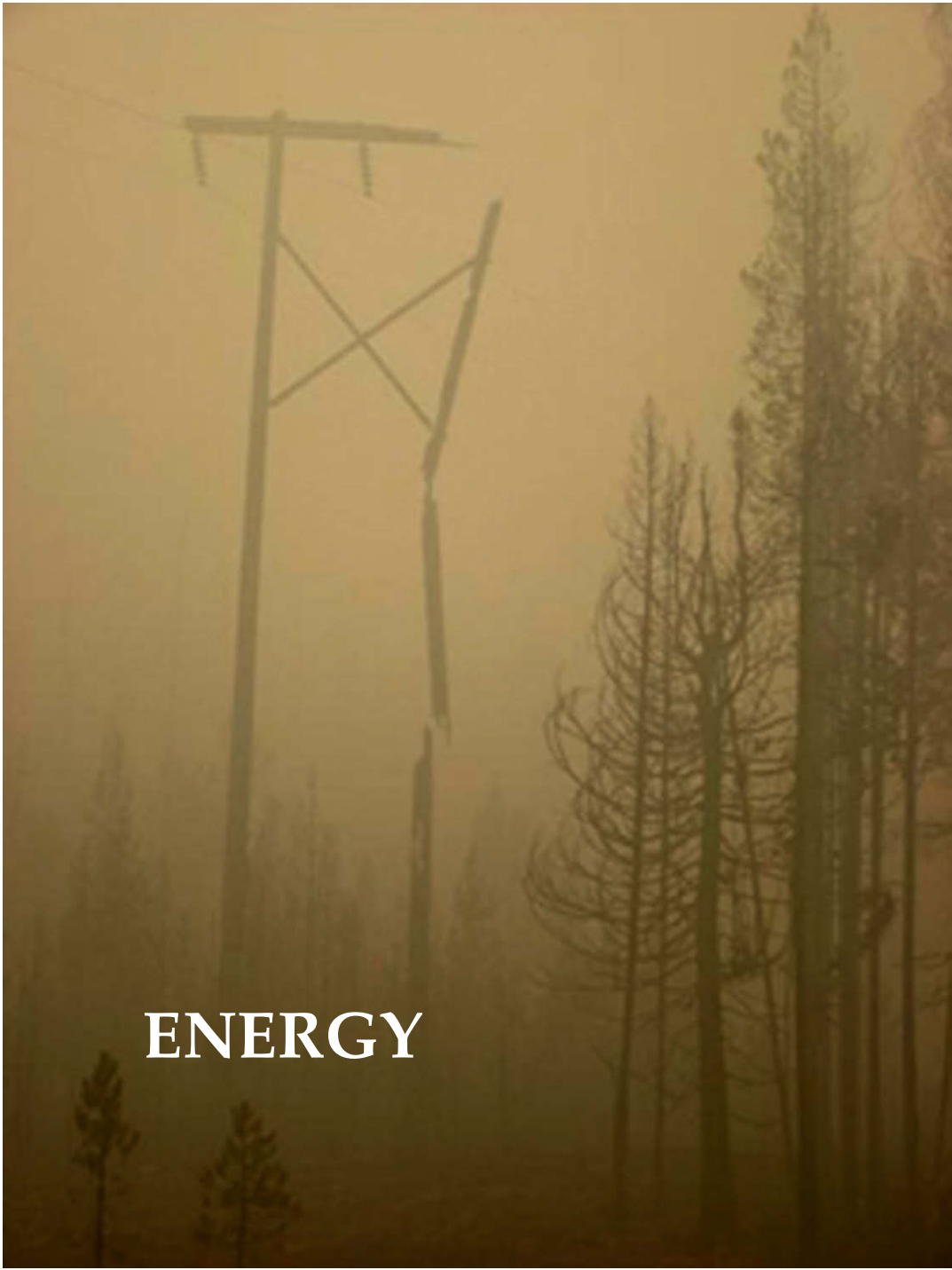
VEGETATION



WILDLIFE



AIR & ATMOSPHERICS



ENERGY



HEALTH EFFECTS

A photograph of a stream flowing through a rocky, eroded landscape. The stream is narrow and flows over light-colored, layered rock formations. The banks are steep and eroded, with numerous tree roots exposed and hanging over the water. The surrounding area is lush with green trees and vegetation. The sky is bright and clear. The word "WATER" is written in white, serif capital letters at the bottom center of the image.

WATER



SOIL-RELATED



RECREATION

HERITAGE RESOURCES

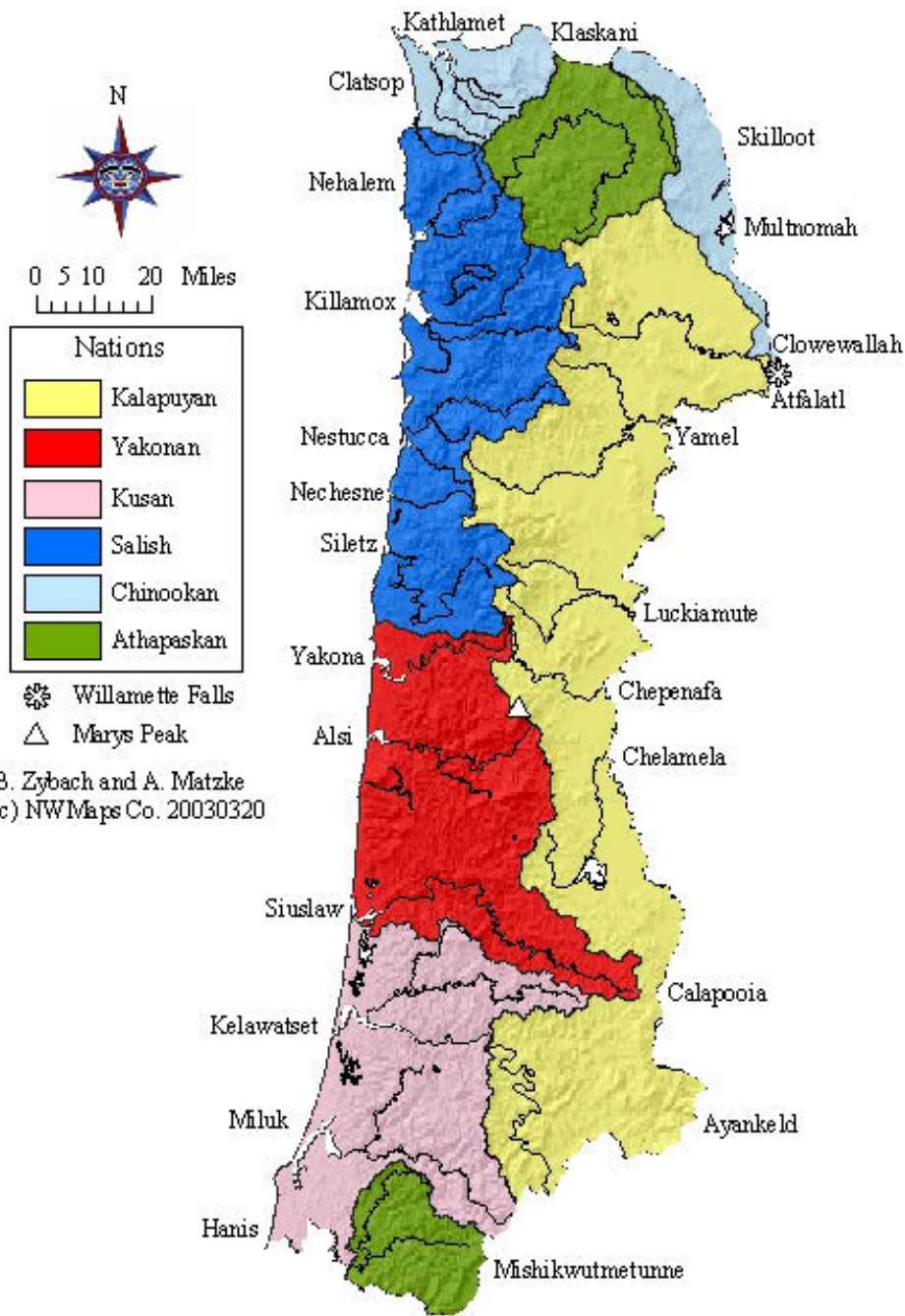


INDIAN BURNING



this Countray must be thickly inhabited by the many fiers we saw in the night and culloms of smoak we would see in the day time but I think they can derive but little of there subsistance from the sea but to compenciate for this the land was beautyfully diversified with forists and green veredent launs which must give shelter and forage to vast numbers of wild beasts most probable most of the natives on this part of the Coast live on hunting for they most of them live in land this is not the case to the Northward for the face of the Countray is widly different

--Robert Haswell, Oregon Coast, 1788



B. Zybach and A. Matzke
 (c) NWMaps Co. 20030320

Tribe	Language	River
Northern		
<u>Clowewallah</u>	Chinookan	Willamette
Multnomah	Chinookan	Willamette
<u>Kathlamet</u>	Chinookan	Columbia
Clatsop	Chinookan	<u>Youngs</u>
Klaskan	Athapaskan	Clatskanie
Nehalem	Salish	Nehalem
Eastern		
<u>Atfalatl</u>	Kalapuyan	Tualatin
<u>Yamel</u>	Kalapuyan	Yamhill
Luckiamute	Kalapuyan	Luckiamute
Chepenafa	Kalapuyan	Marys
Chelamela	Kalapuyan	Long Tom
Calapooia	Kalapuyan	Willamette
Western		
Killamox	Salish	Tillamook
Nestucca	Salish	Nestucca
<u>Nechesne</u>	Salish	Salmon
Siletz	Salish	Siletz
Yakona	Yakonan	Yaquina
Als	Yakonan	Alsea
Siuslaw	Yakonan	Siuslaw
Southern		
<u>Ayankeld</u>	Kalapuyan	Umpqua
<u>Kelawatset</u>	Kusan	Umpqua
<u>Hanis</u>	Kusan	Coos
<u>Miluk</u>	Kusan	Coquille
<u>Mishikwutmetunne</u>	Athapaskan	Coquille



YAQUIA BAY—INDIANS' FULL DRESS.





It would be difficult to find a reason why the Indians should care one way or another if the forest burned.

It is quite something else again to contend that the Indians used fire systematically to "improve" the forest.

Improve it for what purpose?

Yet this fantastic idea has been and still is put forth time and again because somebody's grandfather said that is what happened.

--C. Raymond Clar 1959: 7.

California Government and Forestry: From Spanish Days until the Creation of the Department of Natural Resources in 1927.

**Division of Forestry, Department of Natural Resources,
State of California, Sacramento, California: 623 pp.**

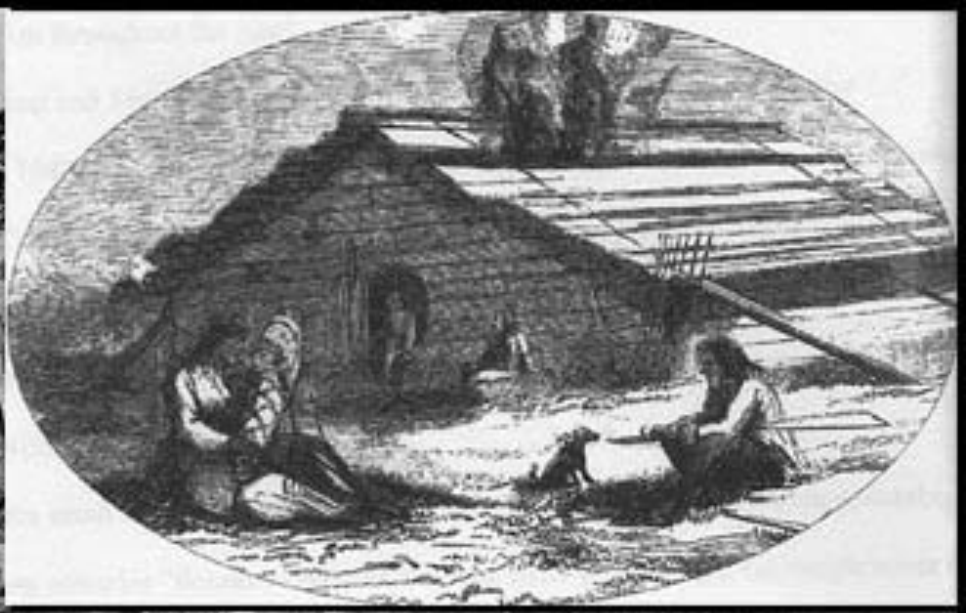
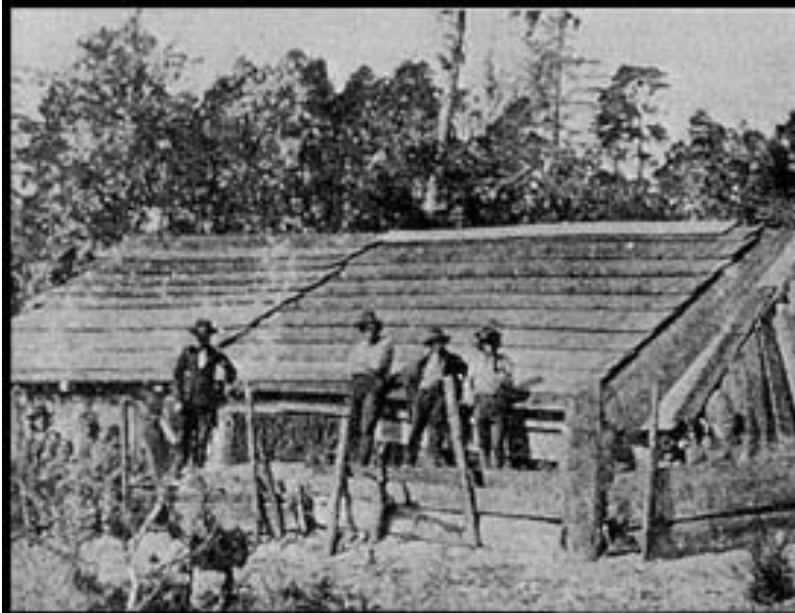
Types of Indian Burning Practices

Type of burning	Products and purposes	Timing
Firewood gathering and burning	Heat, light, cooking, boiling, fuel stores, celebration, ceremony, security	Daily, concentrated near homes, trails, settlements and campgrounds
Patch burning	Hunting, berry patches, root fields, pest control, weaving materials, trail maintenance	Seasonal and situational
Broadcast burning	Stable wildlife habitat, curing seeds, hunting, <u>transportation</u> , weaving materials, acorn harvest.	Seasonal: late summer, early fall for grasslands; late winter, early spring for brackenfern

OREGON COAST RANGE

Seasonal Burning Patterns, ca. 1600-1848

Mo.	Season	Weather	Temperature	Plant Fuels	Burning
Jan.	Winter	Wet	Freezing	Dormant	Firewood
Feb.	Winter	Wet	Freezing	Dormant	Patches
Mar.	Spring	Wet	Freezing	Budburst	Patches
Apr.	Spring	Mixed	Cool	New Growth	Patches
<i>May</i>	<i>Transition</i>	<i>Mixed</i>	<i>Warming</i>	<i>Growing</i>	<i>Projects</i>
Jun.	Summer	Dry	Warm	Growing	Firewood
Jul.	Summer	Dry	Warmest	Growing	Firewood
Aug.	Late Summer	Dry	Warmest	Dormant	Broadcast
Sep.	Late Summer	Dry	Warm	Dormant	Broadcast
<i>Oct.</i>	<i>Transition</i>	<i>Mixed</i>	<i>Cooling</i>	<i>Fall Growth</i>	<i>Patches</i>
Nov.	Fall	Wet	Freezing	Dormant	Firewood
Dec.	Fall	Wet	Freezing	Dormant	Firewood







Sacred Landmarks



Native Plants

















Traditional Foods







Vision for the Future



...complete ... cattle

Blazers
sign Roy,
All: 1

no walks in his 31st career complete game.
The Angels won their season-best fifth straight, while the

this season," Colon said through a translator. "I've got a sense of responsibility."
Colon was 21:8 with a 3.48 ERA

ing up in the ninth.
"He was still fresh," Scioscia said.
The Angels scored all their runs



with a 7-2 record on a road trip.
The 33-year-old forward is seventh in the league with 10 goals since he was traded from the Red Sox to the Bruins in June. He has scored in four of his last five games.



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Aldridge and guard Brandon Roy. Terms of the contracts were not disclosed.

Portland picked up Roy from the Chicago Bulls and drafted Viktor Khryapa from the Washington Wizards. Thomas, the fourth pick, is a guard, 6-foot-11, who averaged 14.3 points and 8.2 rebounds as a sophomore.

Roy, at 6-foot-6, played four seasons at Washington, averaging 14.3 points, 8.2 rebounds and 1.8 assists per game. Named Pacific Northwest the Year his senior, he is the Huskies' 10th all-time leading scorer.

"These two represent a strong part of the change in culture we are striving to achieve in Portland and we are looking forward to the future of them being part of the Blazers uniform."

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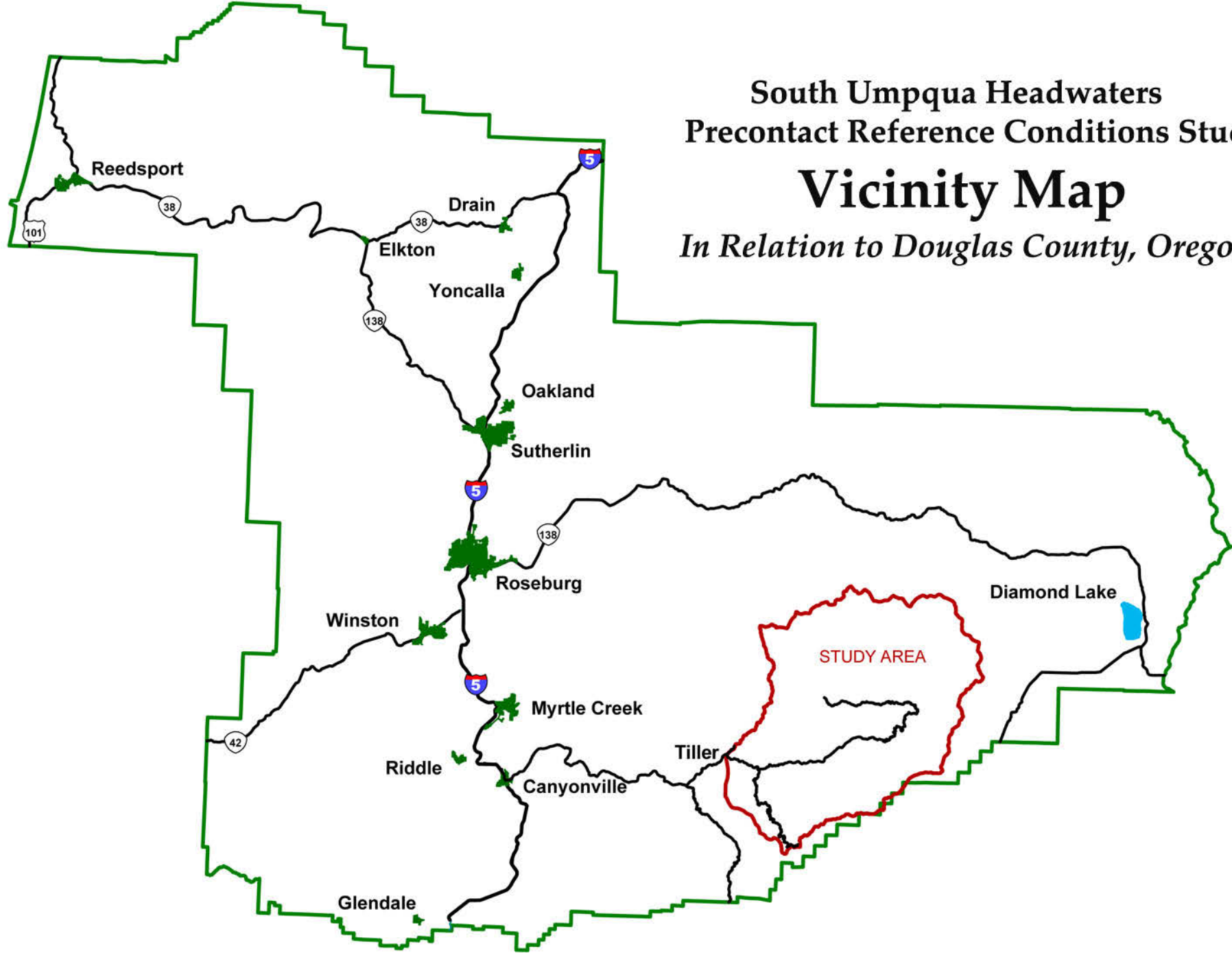
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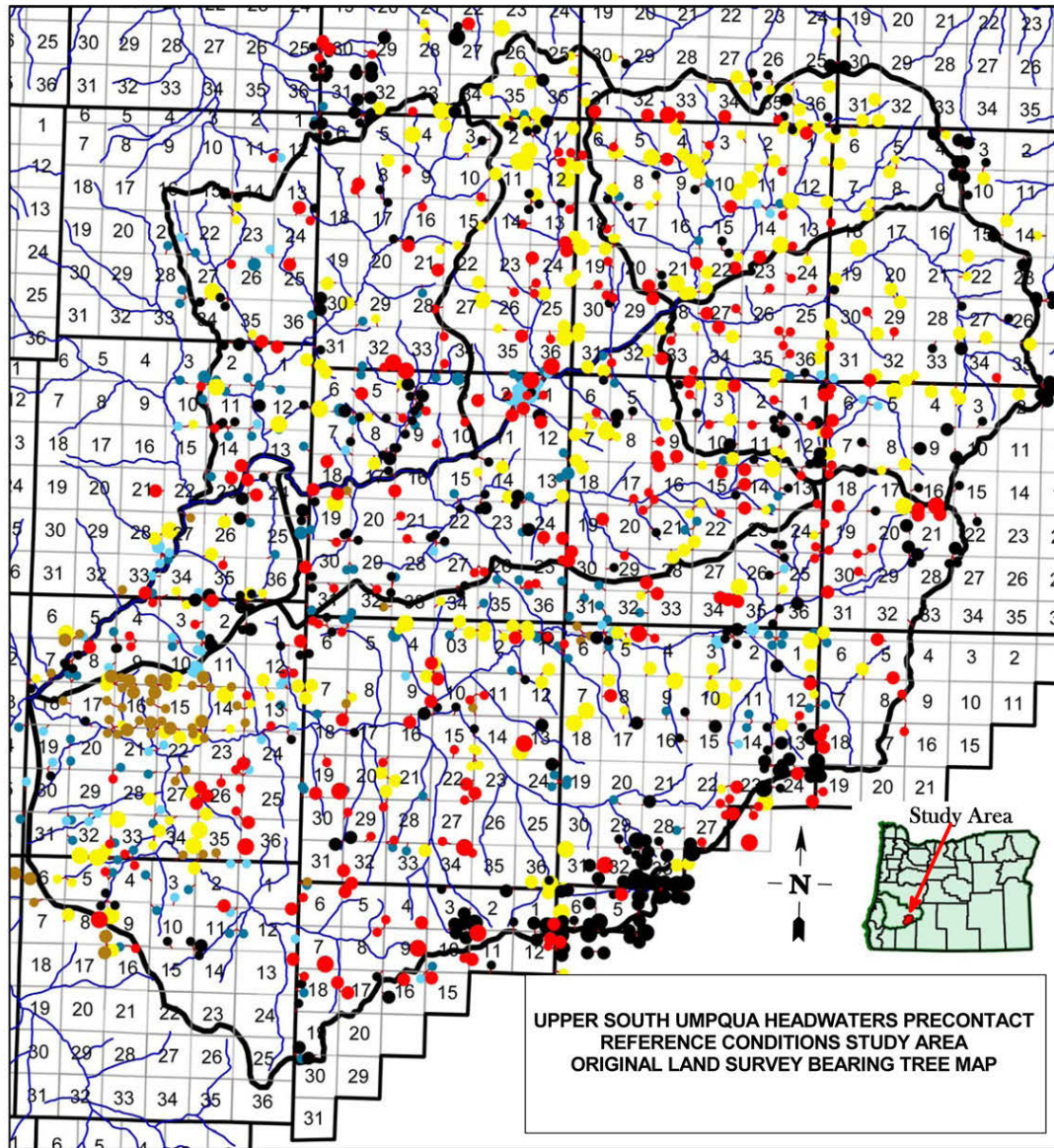
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South Umpqua Headwaters
Precontact Reference Conditions Study

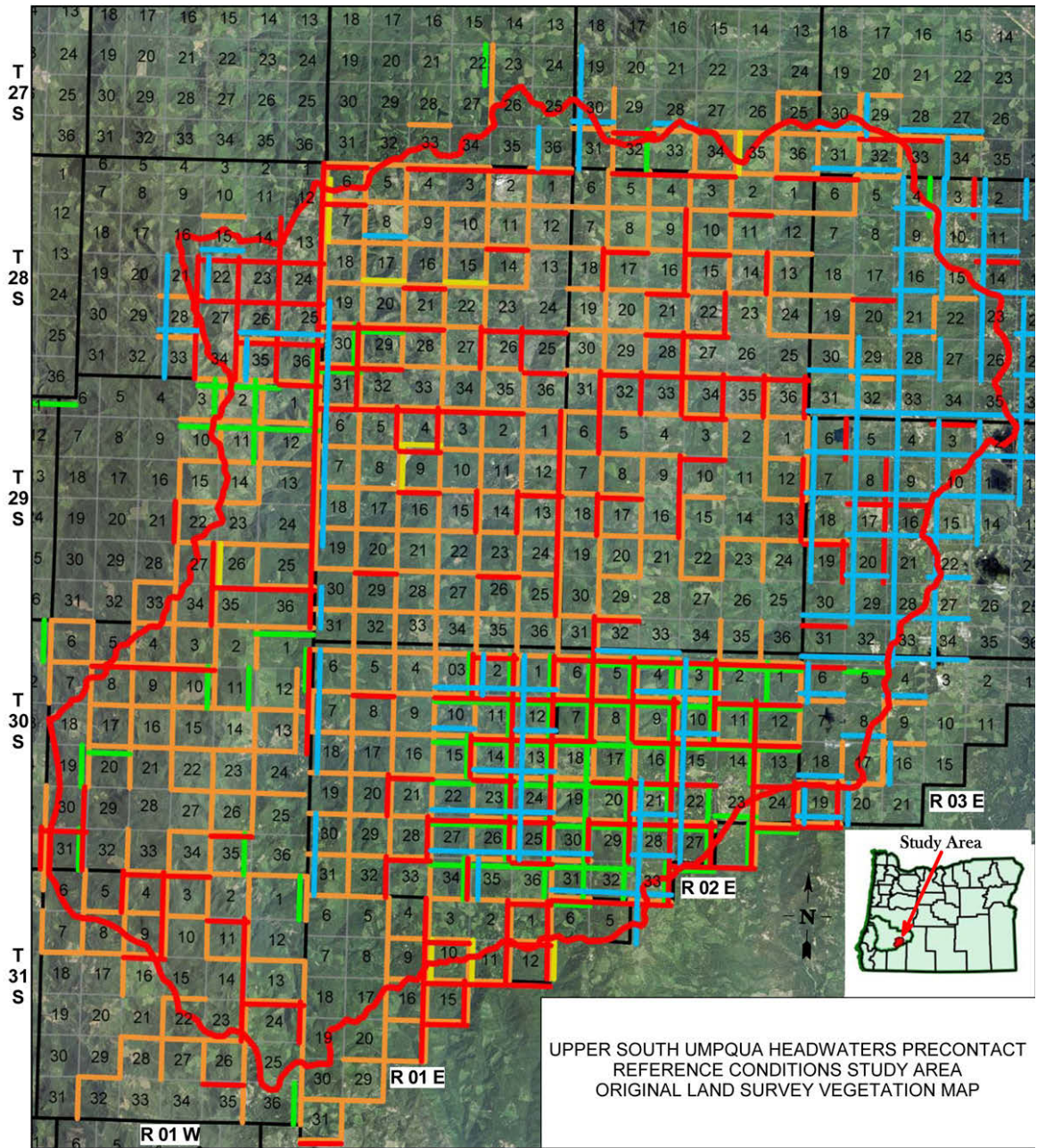
Vicinity Map

In Relation to Douglas County, Oregon










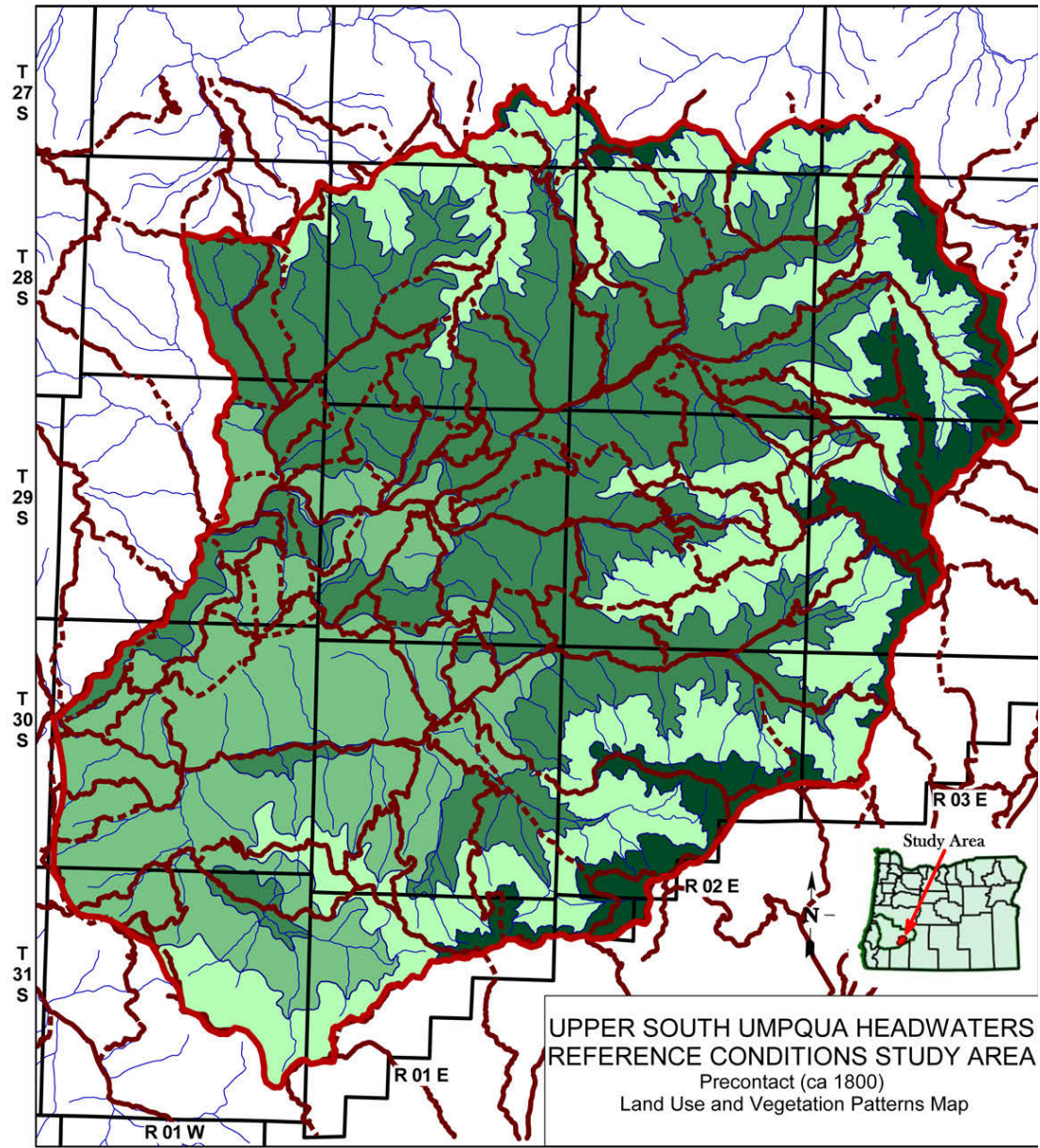


- | | | | |
|--------------------|-------------------|------------------------------|-----------------------------|
| ● Cedar Under 18 | ● Hem-Fir Over 36 | ● Pine 18 to 36 | ● Upland Hardwoods Under 18 |
| ● Cedar 18 to 36 | ● Oak Under 18 | ● Pine Over 36 | ● Upland Hardwoods 18 to 36 |
| ● Cedar Over 36 | ● Oak 18 to 36 | ● Riparian Hardwood Under 18 | ● Upland Hardwoods Over 36 |
| ● Hem-Fir Under 18 | ● Oak Over 36 | ● Riparian Hardwood 18 to 36 | ▭ Subbasins |
| ● Hem-Fir 18 to 36 | ● Pine Under 18 | ● Riparian Hardwood over 36 | |
- 1 = Boulder Subbasin** **3 = Black Rock Subbasin** **5 = Buckeye Subbasin** **7 = Jackson Subbasin**
2 = Quartz Subbasin **4 = Zinc Subbasin** **6 = Castle Rock Subbasin**



UPPER SOUTH UMPQUA HEADWATERS PRECONTACT
 REFERENCE CONDITIONS STUDY AREA
 ORIGINAL LAND SURVEY VEGETATION MAP

- | | | | | | |
|---|---|---|-----------------------|---|---------------------|
|  | Understory Huckleberry |  | Understory Salal |  | Study Area Boundary |
|  | Understory Evergreen |  | Understory Hardwoods |  | Section Lines |
| |  | | Understory Nut-Shrubs | | 2009 Aerial Flight |



FRCC-1



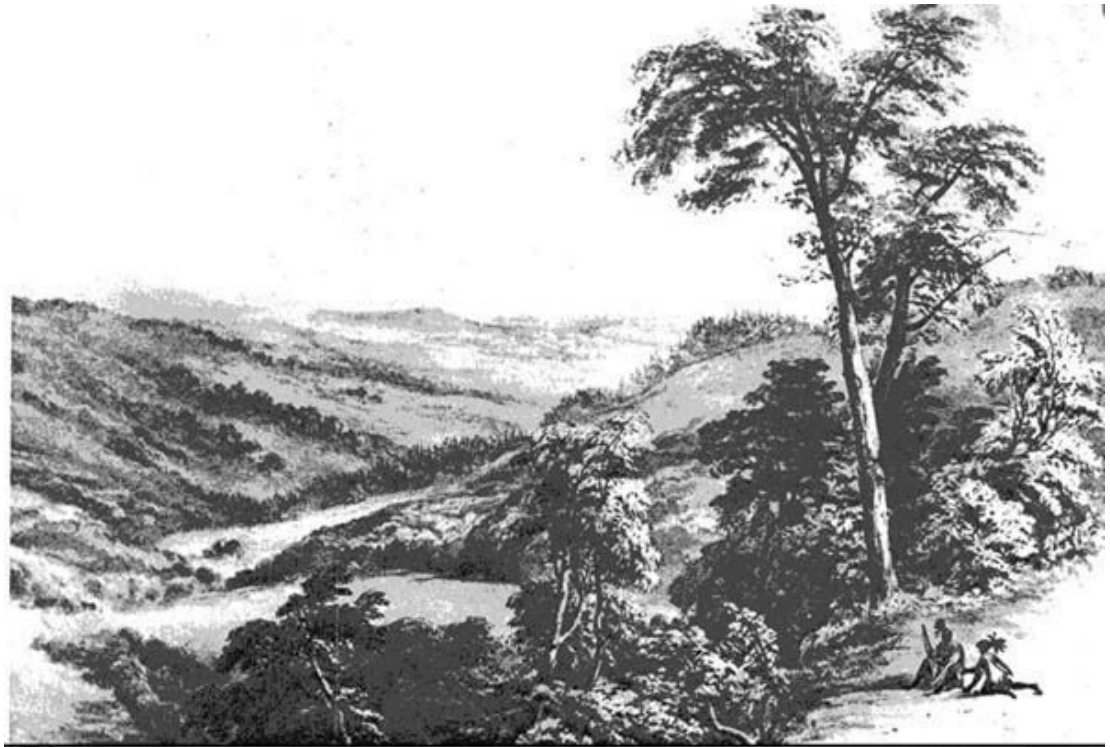
Figure 8.01 GLO Surveyor Norman Price and wife, ca. 1940.

Price helped survey much of the study area in the late 1930s (e.g., Price et al. 1929). His observations regarding his survey of Tsp. 34 S., Rng. 8 W. to the southwest of the South Umpqua River are relevant to the findings of this research:

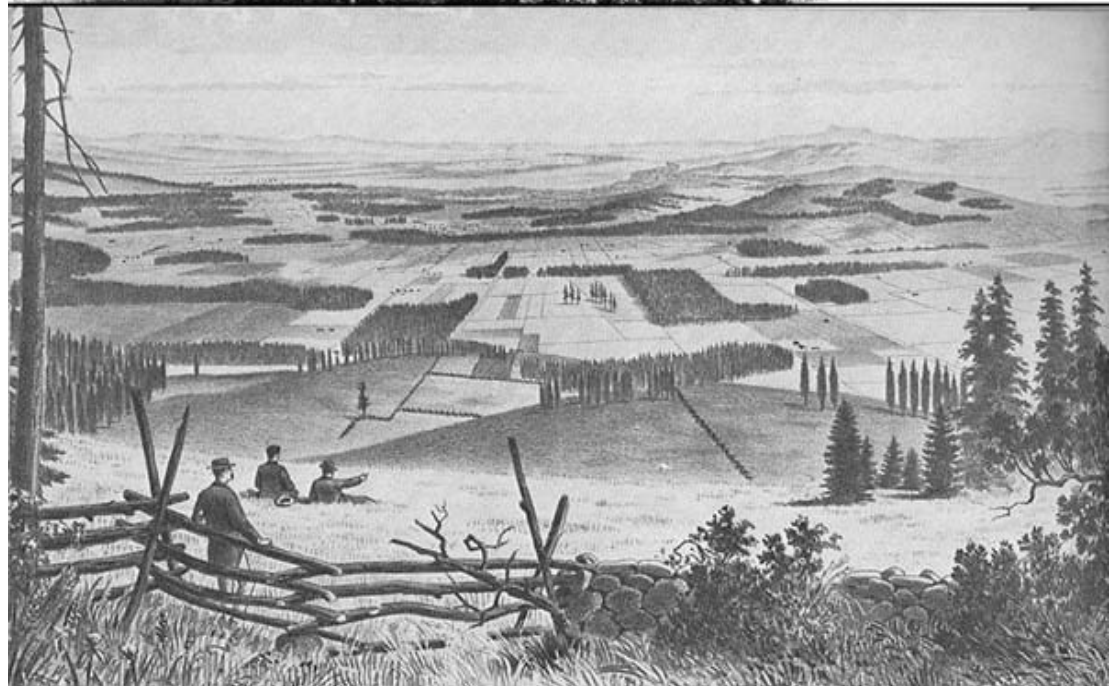
“Most of the township is covered with such a dense growth of buckthorn, manzanita, lilac, madrona, chinquapin, and sweet acorn that no grasses can thrive. A small area on what is known as Peavine Mountain, in sec. 21, sustains a growth of native peavine sufficient to graze a few head of cattle for about six weeks. It is an historical fact that in the days immediately following the occupation of this country by the Indians this country was all covered with a fine growth of native grasses and practically no underbrush. The Indians accomplished this by setting fire to the vegetation on one side of the river one year and the other side the next year. Thus they kept the country open and clean and were never in danger of a forest fire.”

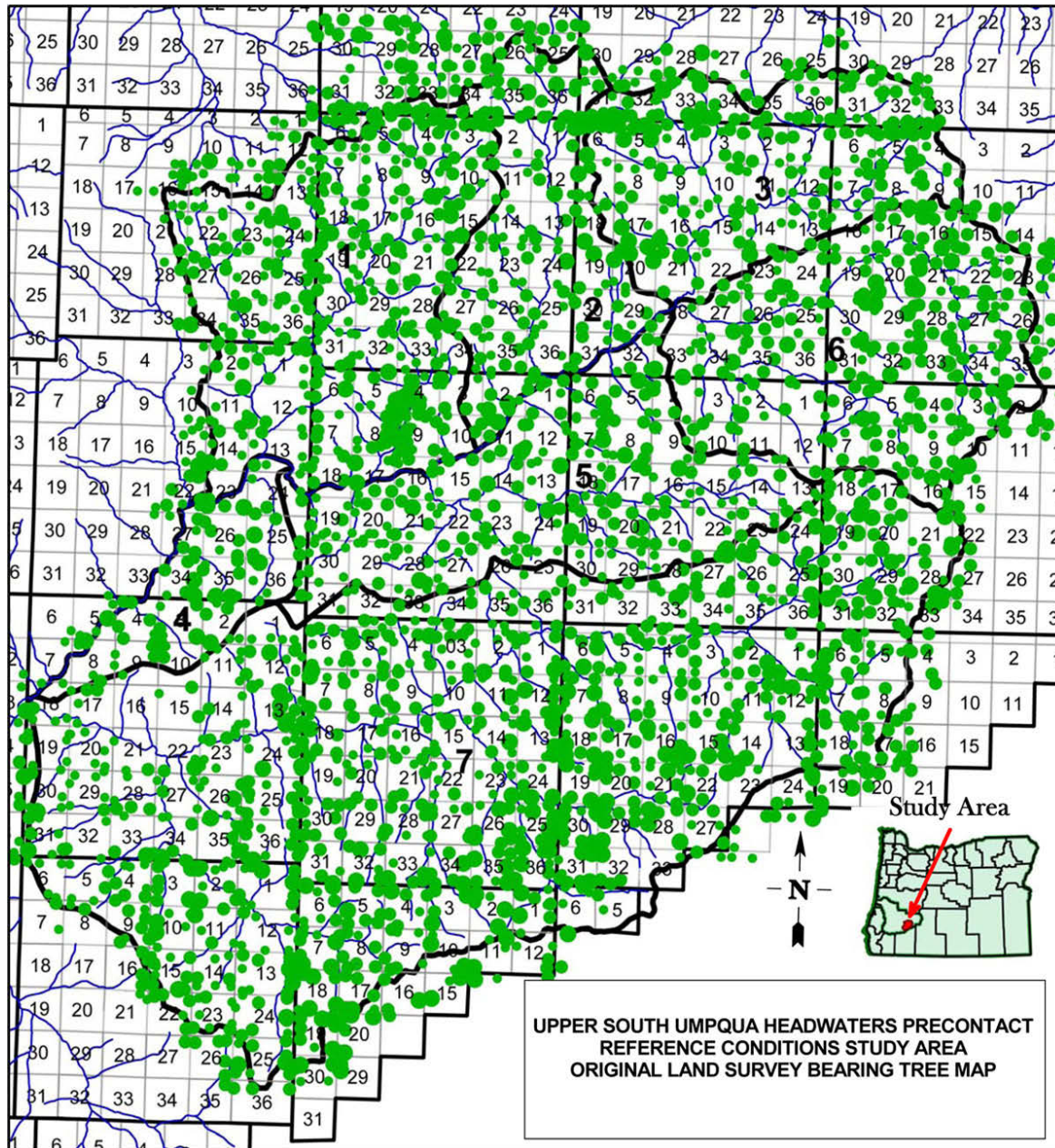
Willamette Valley, Oregon

1845

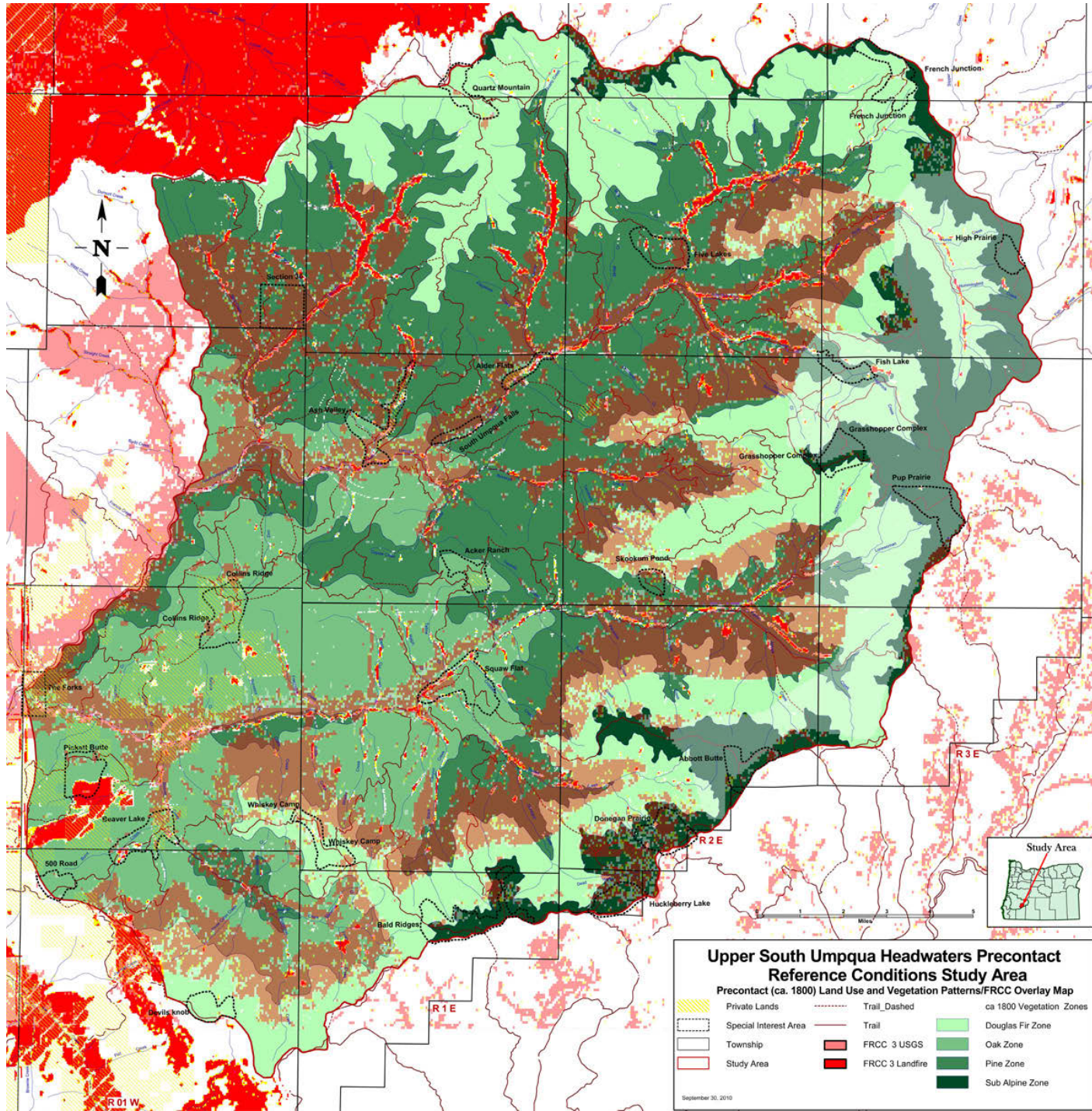


1885





- Doug-Fir Under 18
 Subbasins
 3 = Black Rock Subbasin
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- Doug-Fir 18 to 36
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FRCC (Fire Regime Condition Class)

A measure of departure from reference (pre- settlement or natural or historical) ecological conditions that typically result in alterations of native ecosystem components. These ecosystem components include attributes such as species composition, structural stage, stand age, canopy closure, and fuel loadings.

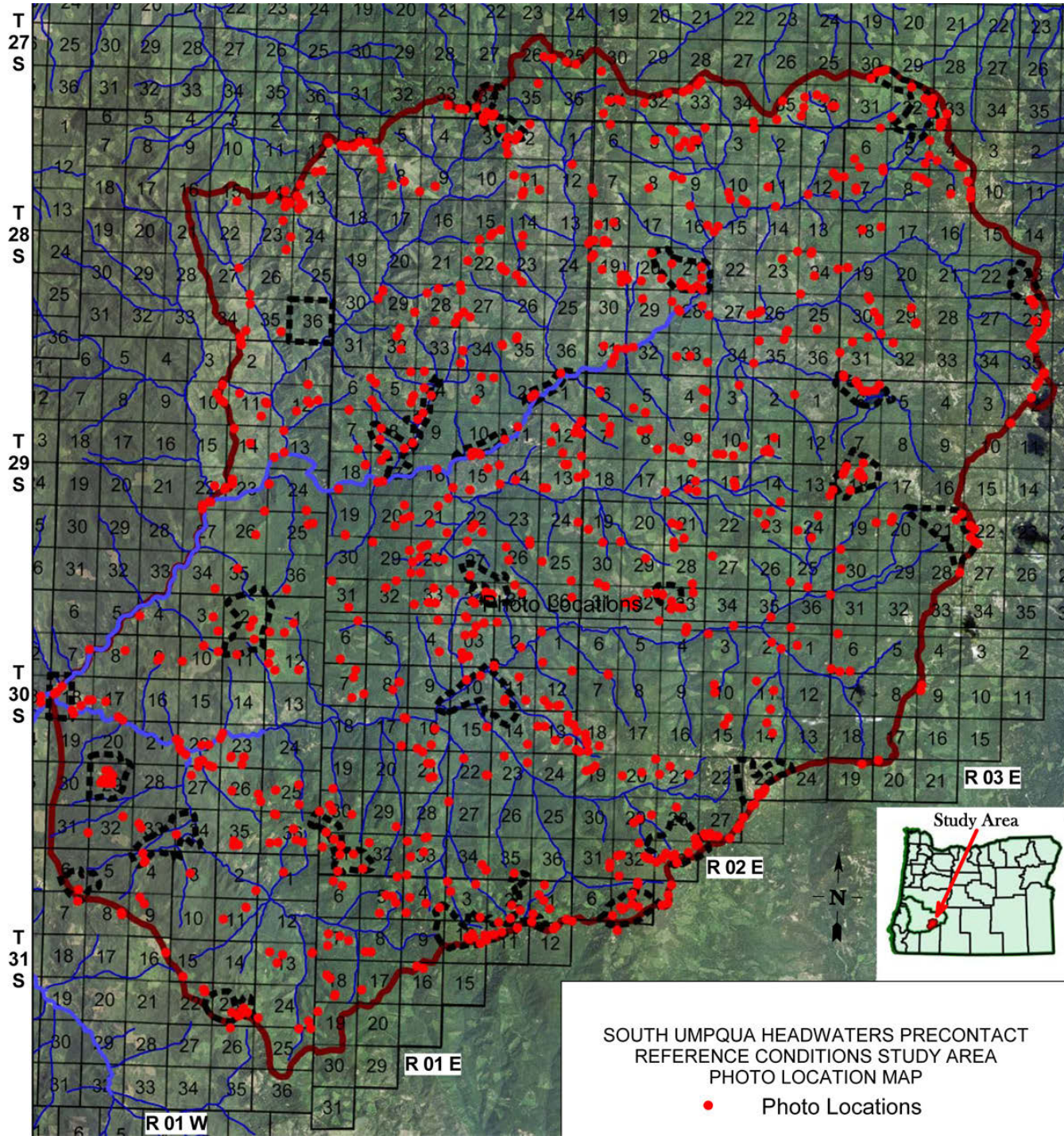
FRCC 3 is defined as:

Greater than 66 percent departure: Fire regimes have been substantially altered. Risk of losing key ecosystem components is high.

Fire frequencies may have departed by multiple return intervals.

This may result in dramatic changes in fire size, fire intensity and severity, and landscape patterns.

Vegetation attributes have been substantially altered.













Dead Wood





An aerial photograph of a forest fire. In the foreground on the left, a large, dark, metallic water bucket is suspended from a plane, with a stream of water falling from it. The background shows a vast forest landscape with a large plume of white smoke rising from a fire in the distance. The sky is blue with some light clouds.

2011 Resource Summit

The South Umpqua Project: Using Traditional Methods To Achieve Modern Objectives in Wildfire Management

By Dr. Bob Zybach, Program Manager

www.ORWW.org

09/22/2009

College of the Siskiyous, Weed, California – June 1, 2011





Conclusions

1. Catastrophic-scale wildfires are deadly, costly, and destructive.
2. There is no documented history of long-term catastrophic-scale wildfire “regimes.”
3. Regular landscape-scale prescribed fires, as exemplified by historical Indian burning practices, can greatly reduce the likelihood and severity of wildfire risks.
4. Seasonality and general conditions (weather, fuel, and topography) are largely the same for Wildfire and prescribed fire, although fuel loads for prescribed fires are typically significantly less than for wildfires.

U.S. Wildfire Cost-Plus-Loss Economics Project

<http://www.wildfire-economics.org/>



Oregon Websites and Watersheds Project, Inc.



www.ORWW.org