

# Oregon Solutions

## Southern Oregon Renewable Energy Project

### Feedstock on Public Lands



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Medford District BLM  
Rogue River-Siskiyou National Forest



# Biomass

Biomass is all vegetative materials grown in forest, woodland, or rangeland environments that are the by-products of management, restoration, or hazardous fuel reduction treatments.

Historically, this material has had little value and has to be disposed of by mostly hand piling and burning.



Biomass utilization is the offer, sale, trade, harvest or use of vegetative material to produce a product or energy.

## Traditional Slash Disposal





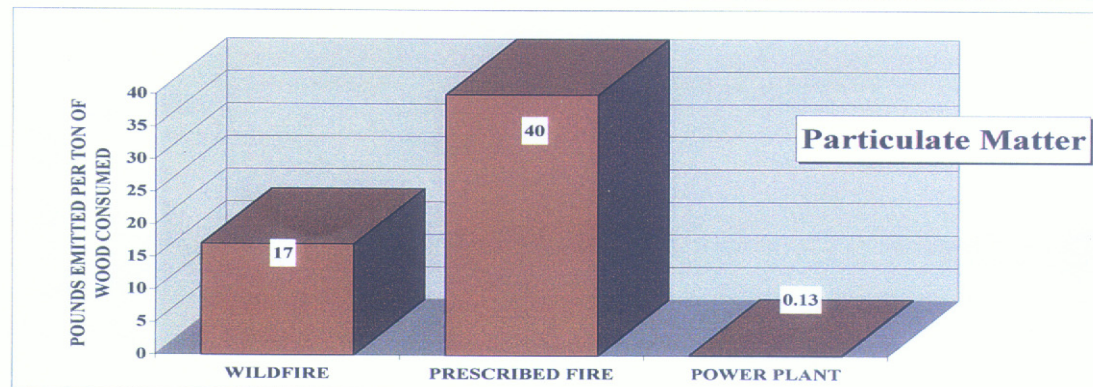
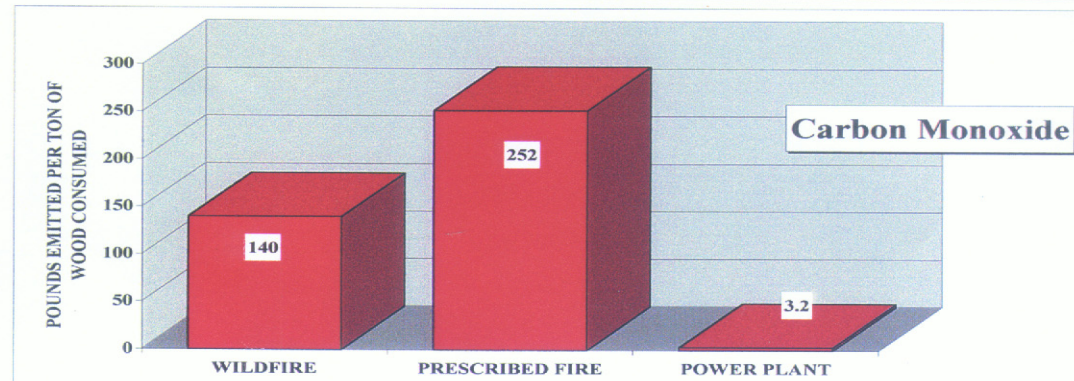
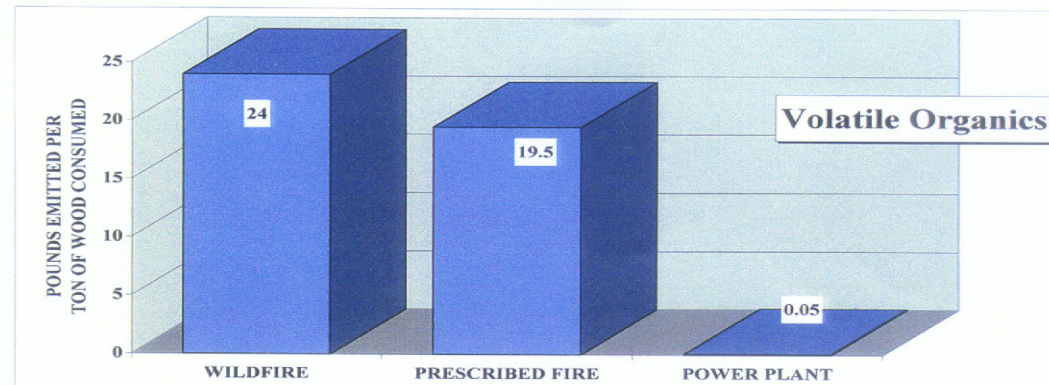
Biomass One, White City

Boise, Medford



Rough & Ready Lumber Co.  
Cave Junction

### Pollutant Emission Comparison





### Profitable Biomass Utilization:

- Whole tree skidding, adequate landing space
- Mechanized processing of trees in landing
- Chipper and van access to process biomass to hogfuel concurrently with other operational aspects



# Present Markets

- **Energy**
  - Cogen Facility
  - Wood pellets
  - Bio Bricks, Pucks
  - Firewood
  - Chips
- **Post and pole**
- **Compost**
- **Shavings for animal bedding**
- **Erosion control products**
- **Wood plastic composites**



# Barriers to Woody Biomass Use

- High thinning costs
- High transportation costs
- Limited capacity for local use
- Low quality of material
- Small size of material
- Road Systems
- Sustainable Supply



# What Is Taking Place in Southern Oregon To Promote More Utilization of Woody Biomass?

# Southwest Oregon Interagency Biomass Utilization Strategy



Medford District Bureau of Land Management  
and  
Rogue River – Siskiyou National Forest

January 2008

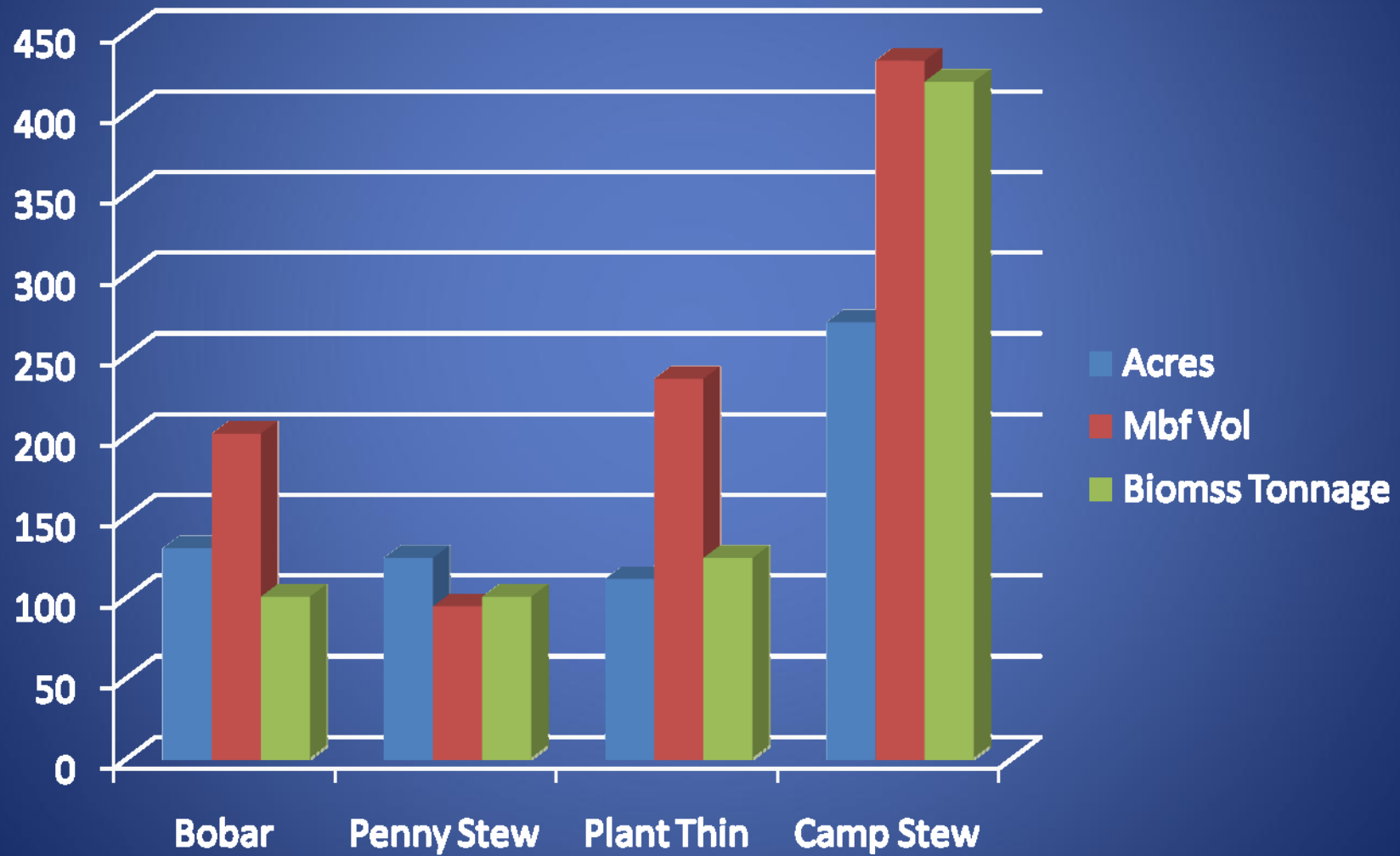


# Medford District Completed Stewardship Contracts

2003 - 2007

Stew Name	MBF Volume	Biomass Removed (Green Tons)	Acres Completed
Bobar Ashland	201	100	130
Penny Stew Grants Pass	93.92	100	124
Plantation Thin Ashland	235.1	124	111
Camp Stew Butte Falls	<u>432.42</u>	<u>419</u>	<u>270</u>
	962.44	743	635

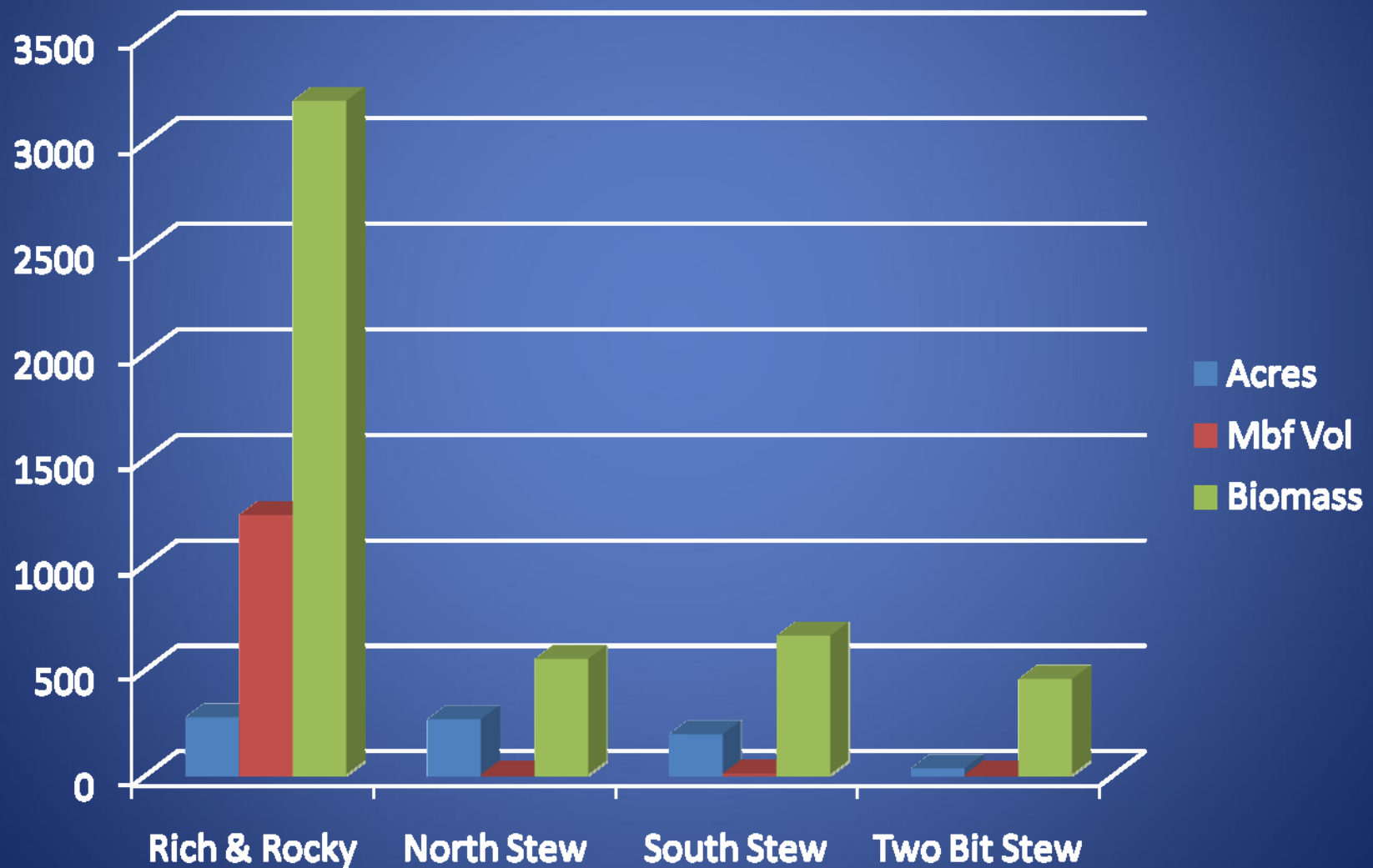
# Completed Stewardship Contracts 2003 - 2008



# Current Active Contracts

Stew Name	MBF Volume	Poles Linear Feet	Firewood	Biomass (Green Tons)	Acres Completed
<b>Rich &amp; Rocky</b> Grants Pass 7 Task Orders 5 yr Contract	1,230	0	48	4,050	281
<b>North Stew</b> Grants Pass 4 Task Orders 10 yr Contract	0	13,852	134	498	262
<b>South Stew</b> Grants Pass 4 Task Orders 7 yr Contract	4.57	24,296	140	538	191
<b>Two-Bit Stew</b> Grants Pass 3 Task Orders 10 yr contract	<u>0</u> 1,235	<u>6,000</u> 44,148	<u>77</u> 399	<u>453</u> 5,539	<u>30</u> 764

# Current Active District Stewardship Contracts



# SW Oregon Active Stewardship Contracts

# Medford BLM/Rogue River-Siskiyou NF

[illegible]

# Roseburg BLM / Umpqua NF

[illegible]

# ARRA

## Stimulus Projects

### Biomass Utilization

- South Stew – 1,900 acres – 14,000 tons
- Two Bit Stew – 1,900 acres – 14,000 tons
- Ranch Stew – 1,300 acres – 12,000 tons
- Hope Mountain Stew – 890 acres – 3,000 tons

# Inventory and Potential Future Feedstock Supply

# Early Inventory Studies

- 1999 Rogue River Basin (BLM & FS lands)
- 770,000 acres of LSR, Matrix, AMA lands
- Volume  $\leq 12''$  dbh: 6 billion board feet
- About 40% of volume, 2.4 billion board feet is within 1,000 feet of existing roads

# Cow Creek CROP

- 2 National Forests
- 8 Ranger Districts
- 4 BLM Districts
- 3 Counties
- State Lands
- Private Lands



# Cow Creek CROP

- Projected biomass volume of 236,000 gT/yr
- 76% coming from the Medford BLM
- Volume is more than sufficient to support a 13 MW power plant using 160,000 gT/yr

# Legend

## Ownership

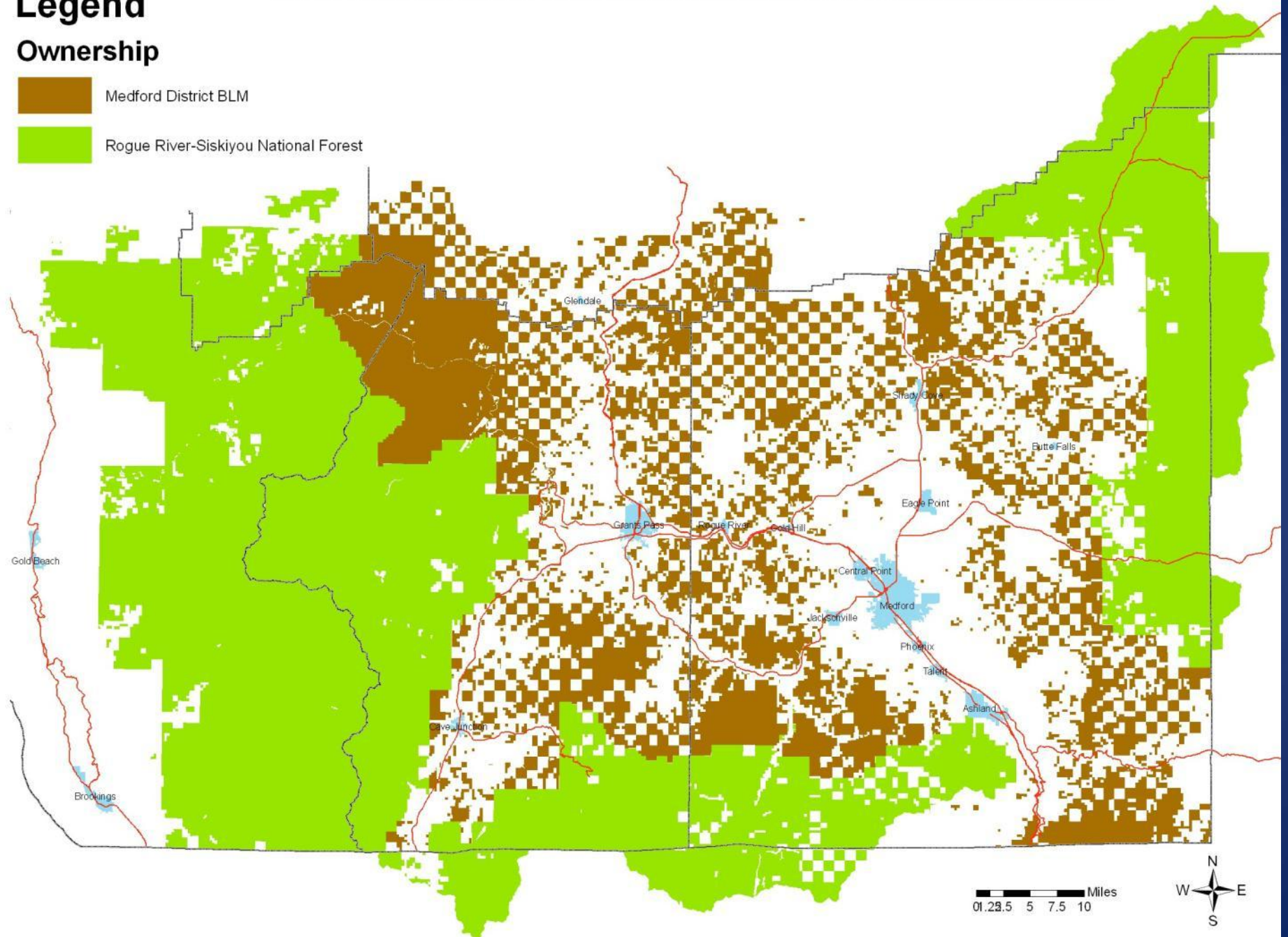


Medford District BLM



Rogue River-Siskiyou National Forest

## MEDFORD DISTRICT BLM - ROGUE-SISKIYOU NATIONAL FOREST

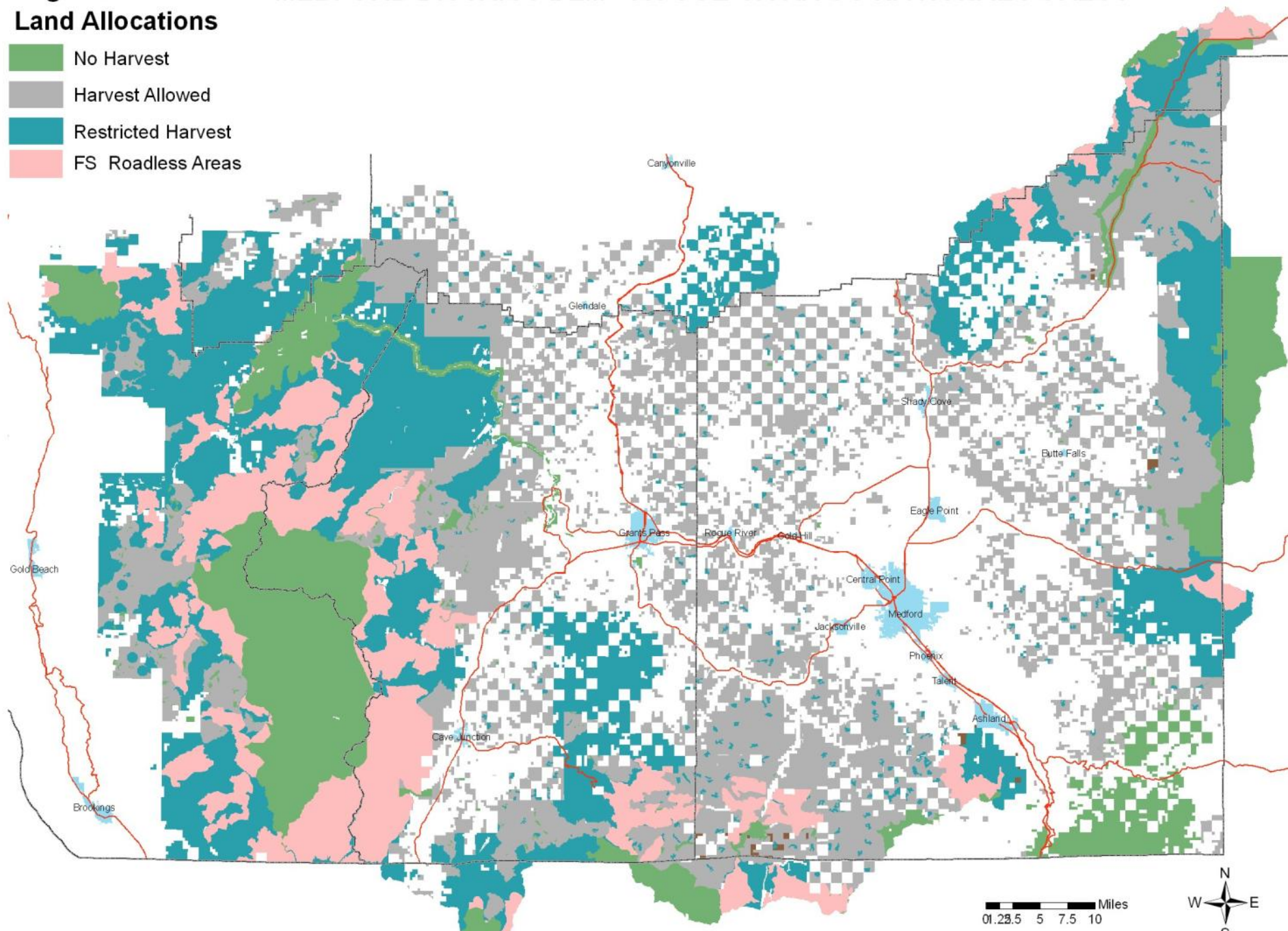


Land Allocation	Acres
Total Federal Harvestable Acres (Does not account for riparian)	<b>2,125,957</b>
After Removing Inventoried Roadless Areas (342,381 Ac)	<b>1,783,576</b>
Within the Communities at Risk One Mile Buffer	<b>380,000</b>
Private Lands	<b>3,356,622</b>
Total Analysis Area	<b>5,920,964</b>

**Legend**  
**Land Allocations**

- No Harvest
- Harvest Allowed
- Restricted Harvest
- FS Roadless Areas

**MEDFORD DISTRICT BLM - ROGUE-SISKIYOU NATIONAL FOREST**



	<b>Total Standing Volume</b>	<b>Volume available for removal under 20" using Basal Area Prescriptions</b>
<b>In Harvestable Land Allocations</b>	<b>38,155,326,000</b>	<b>7,016,073,000</b>
<b>Within the CAR Buffer</b>	<b>6,390,751,000</b>	<b>1,428,475,000</b>

Facility	Location	Capacity (MW)	Year	Notes
1. Baker	Clatsop County	100	2000	Wood-based
2. Boring	Clatsop County	100	2000	Wood-based
3. Cascade	Clatsop County	100	2000	Wood-based
4. Clifton	Clatsop County	100	2000	Wood-based
5. Condon	Clatsop County	100	2000	Wood-based
6. Corvallis	Clatsop County	100	2000	Wood-based
7. Dalles	Clatsop County	100	2000	Wood-based
8. Dayton	Clatsop County	100	2000	Wood-based
9. Elsie	Clatsop County	100	2000	Wood-based
10. Estacada	Clatsop County	100	2000	Wood-based
11. Gresham	Clatsop County	100	2000	Wood-based
12. Harney	Clatsop County	100	2000	Wood-based
13. Heppner	Clatsop County	100	2000	Wood-based
14. Hillsboro	Clatsop County	100	2000	Wood-based
15. Independence	Clatsop County	100	2000	Wood-based
16. Joseph	Clatsop County	100	2000	Wood-based
17. Klamath Falls	Clatsop County	100	2000	Wood-based
18. Medford	Clatsop County	100	2000	Wood-based
19. Milvado	Clatsop County	100	2000	Wood-based
20. Molokini	Clatsop County	100	2000	Wood-based
21. Multnomah	Clatsop County	100	2000	Wood-based
22. Newberg	Clatsop County	100	2000	Wood-based
23. Nyssa	Clatsop County	100	2000	Wood-based
24. Oatfield	Clatsop County	100	2000	Wood-based
25. Olney	Clatsop County	100	2000	Wood-based
26. Oriskany	Clatsop County	100	2000	Wood-based
27. Pacific City	Clatsop County	100	2000	Wood-based
28. Rainier	Clatsop County	100	2000	Wood-based
29. Reedsport	Clatsop County	100	2000	Wood-based
30. Seaside	Clatsop County	100	2000	Wood-based
31. Tillamook	Clatsop County	100	2000	Wood-based
32. Tualatin	Clatsop County	100	2000	Wood-based
33. Union	Clatsop County	100	2000	Wood-based
34. Veneta	Clatsop County	100	2000	Wood-based
35. Warrenton	Clatsop County	100	2000	Wood-based
36. Westport	Clatsop County	100	2000	Wood-based
37. Willamette	Clatsop County	100	2000	Wood-based
38. Woodburn	Clatsop County	100	2000	Wood-based
39. Yachats	Clatsop County	100	2000	Wood-based
40. Youngs Bay	Clatsop County	100	2000	Wood-based

**Legend**

**Oregon Biomass Facilities**

- Wood Chip Mills
- Wood Chip Mills - Cooperative
- Logging Camps
- Logging Camps - Cooperative

**Net Biomass Supply (Dry Tons)**

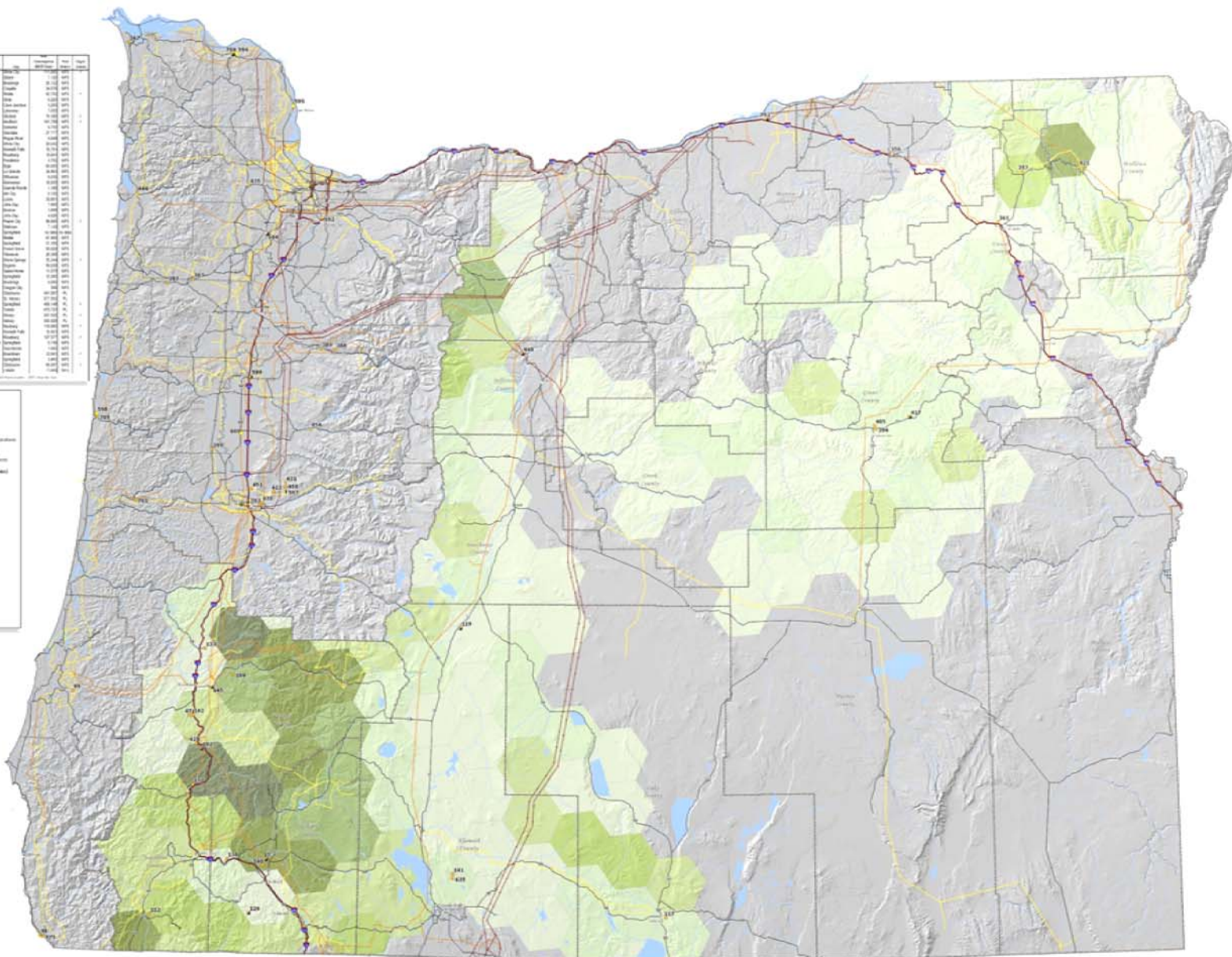
- 0 - 45,000
- 45,000 - 100,000
- 100,000 - 200,000
- 200,000 - 400,000
- 400,000 - 600,000
- 600,000 - 1,000,000
- 1,000,000+

**Transmission Lines (kV)**

- 115 kV
- 138 - 161 kV
- 230 - 500 kV

**Coastal to Inland**

**Other Features**



**Forest Biomass Energy Opportunity Map**  
Oregon's Forest Biomass Supply, Existing Wood-Based Energy Facilities, and Power Transmission Grid

0 12.5 25 50 Miles

This map is for informational purposes only and does not constitute a legal agreement or contract. Oregon Biomass Supply data is derived from 2002 inventory. 2002 data was used for comparison of biomass potential and availability. Data is from Oregon Biomass Inventory, 2002. Data is derived from 2002 inventory. 2002 data was used for comparison of biomass potential and availability. Data is from Oregon Biomass Inventory, 2002.



Questions ?