Results of *Western Oregon CROP 2008 - 2012*

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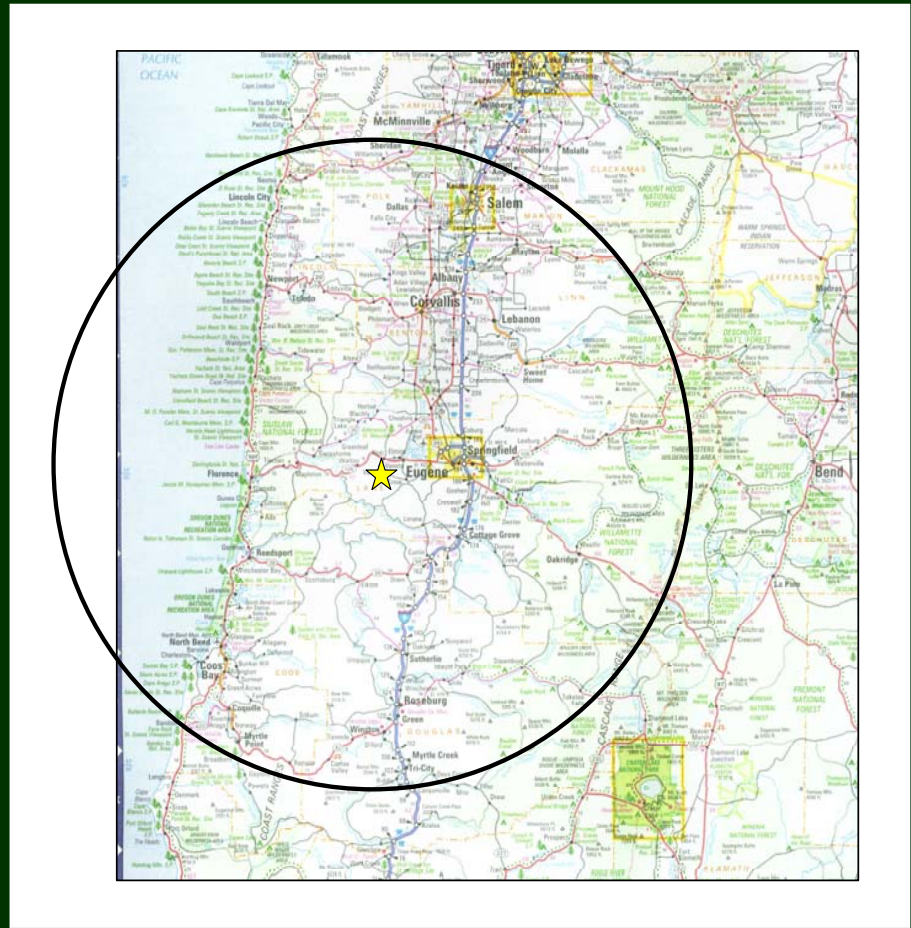
Western Oregon CROP 2008-2012

Western Oregon CROP:

Center Point:
Vaughn

75-mi. radius

- **3 National Forests**
- **State lands**
- **State Dept. of Trans.**
- **4 BLM districts**
- **8 Counties**



Western Oregon CROP 2008-2012

Western Oregon CROP Biomass Suppliers (2008 – 2012)

BLM:
- **A** *Coos Bay District*
- **B** *Eugene District*
- **C** *Roseburg District*
- **D** *Salem District*

Counties:
- ***E*** *Coos Co.*
- **F** *Douglas Co.*

ODF:
- **G** *W. Lane District*
- **H** *N. Cascade District*
- **I** *W. Oregon District*

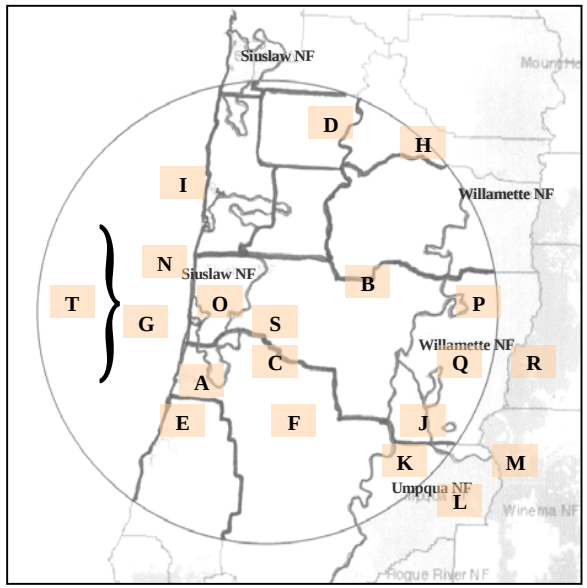
Umpqua NF:
- **J** *Cottage Grove RD*
- **K** *N. Umpqua RD*
- **L** *Tiller RD*
- **M** *Diamond Lake RD*

Siuslaw NF:
- **N** *Hebo RD*
- **O** *South Zone RD*

Willamette NF:
- **P** *Middle Fork RD*
- **Q** *McKenzie RD*
- **R** *Sweet Home RD*

DSL:
- **S** *Elliott SF*

ODOT:
- **T** *ODOT*



National Forests: Ranger Districts

- **Umpqua NF:** Cottage Grove, Diamond Lake, North Umpqua, Tiller
- **Siuslaw NF:** Hebo, South Zone
- **Willamette NF:** Sweet Home, McKenzie, Middle Fork

4 of BLM Districts:

Coos Bay, Eugene, Roseburg, Salem

8 Counties:

Benton	Douglas	Linn	Marion
Coos	Lane	Lincoln	Polk

(only Coos and Douglas expect removal over the next 5 years)

What we asked for:

- **Volume (by mmbf, green tons, ccf, etc.)**
- **Diameter sizes <4” 4”-7” 7”-9” 9”-12” >12”**
- **Species (all species evaluated for resource flow)**
- **Harvest “type”: fuel load reduction, timber sale, etc.**
- ***Location* of resource offering**

- **NEPA Phase**
- **Road accessibility**

} **USFS Pilots**

= *biomass (gT)*

= *small logs (mmbf)*

= *large logs (mmbf))*

So, let's take a look at results . . .

Overall biomass offering (2008 – 2012):

Year	Total Biomass (1,116,260 gT)	% of 5-yr volume
2008	156,777	14%
2009	180,128	16%
2010	221,333	20%
2011	245,767	22%
2012	312,255	28%

Biomass = 10%
(up to 7” dbh)

Total Small Log (1006.15 mmbf)	% of 5-yr volume
159.58	16%
170.52	17%
206.06	20%
218.7	22%
251.3	25%

Small Logs = 46%
(>7” – 12” dbh)

Total Large Log (943.39 mmbf)	% of 5-yr volume
171.33	18%
163.94	17%
194.82	21%
192.74	20%
220.56	23%

Large Logs = 43%
(>12” dbh)

<u>At-a Glance</u>: Overall biomass offering (2008 – 2012):

- **By supplier**
- **By volume**
- **By diameter**
- **By year**

Western Oregon CROP 2008-2012

Western Oregon: <u>All Agencies</u> CROP offering/removal '08 – '12
(gT = 1,116,260 / S = 1,006.156 mmbf / L = 943.39 mmbf)
(2,172.8 total mmbf)

gT = green tons (up to 7" dbh)
S = small log mmbf (>7"-12" dbh)
L = large log mmbf (>12" dbh)

BLM: 4 Districts – 55%
(gT = 815,013 / S = 648.757 / L = 372.638)

Umpqua NF: 4 RDs – 15%
(gT = 243,885 / S = 155.407 / L = 130.405)

Siuslaw NF: 2 RDs – 6%
(gT = 18,940 / S = 65.965 / L = 70.247)

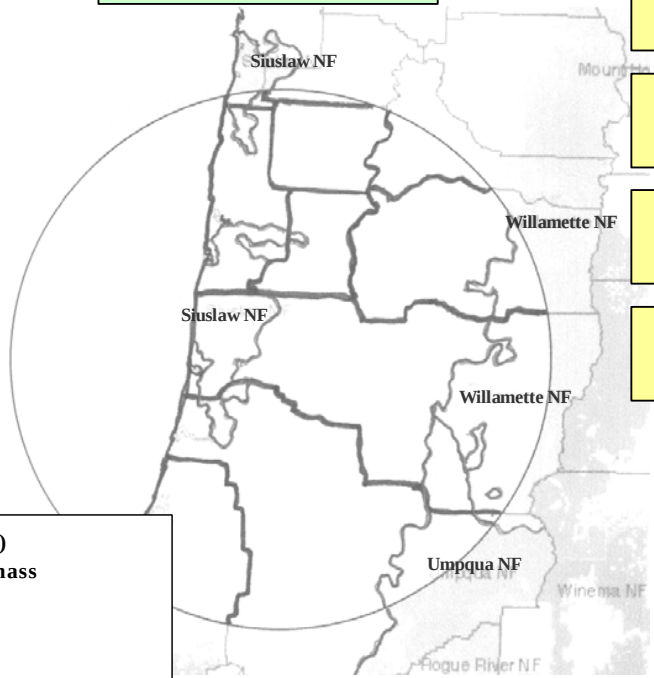
Willamette NF: 3 RDs – 8%
(gT = 30,422 / S = 66.947 / L = 99.915)

DSL: Elliott SF - 7%
(gT =0 / S = 40.984 / L = 119.207)

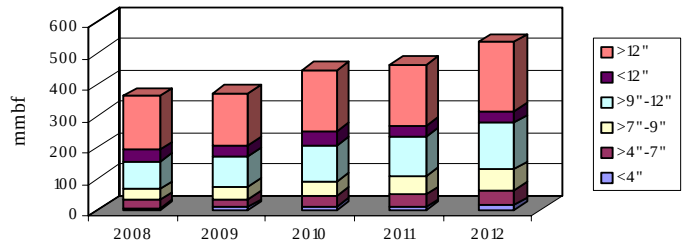
ODOT – <1%
(gT = 4,500 / S = 1.7 / L = 1.5)

ODF: 3 Districts – 5%
(gT = 0 / S = 19.346 / L = 98.678)

Counties: 2 Co.'s – 3%
(gT = 3,500 / S = 7.05 / L = 50.8)



All Agencies: (5-yr total = 2,172.8 mmbf)
223.252 mmbf is <7" = 1,116,260 gT of biomass
1006.16 mmbf is >7"-12" = small logs
943.391 mmbf is >12" = large logs



	gT	mmbf	
	Biomass	Small Log	Large Log
2008	156776.9987	159.5794	171.3325
2009	180128.4987	170.5193	163.9411
2010	221333.6487	206.0598	194.8194
2011	245766.8987	218.6983	192.7427
2012	312254.8987	251.2997	220.5557
Totals	1116260.943	1006.1565	943.3915
%	10%	46%	43%
mmbf	223.2522		

2172.8002

By Species
(5-year totals)

Western Oregon CROP 2008-2012

By Species		5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
Douglas fir	(81% of 5-yr. total)	882,597	808.955	775.666
Western hemlock	(10% of 5-yr. total)	131,604	101.27	83.916
White woods	(2% of 5-yr. total)	43,484	26.162	9.732
Red Alder	(2% of 5-yr. total)	3,000	20.837	14.254
Grand fir	(1% of 5-yr. total)	12,891	13.913	10.66
Mixed pine	(1% of 5-yr. total)	16,655	12.338	6.8
Sitka spruce	(1% of 5-yr. total)	1,000	.912	13.35
Mixed cedar	(1% of 5-yr. total)	6,131	6.138	4.09
Other conifers	(<1% of 5-yr. total)	5,700	2.873	5.328
True firs	(<1% of 5-yr. total)	9,585	4.102	2.132
Western red cedar	(<1% of 5-yr. total)	879	1.411	3.925
Lodgepole pine	(<1% of 5-yr. total)	0	1.99	3.11
Incense cedar	(<1% of 5-yr. total)	629	1.411	2.475
Ponderosa pine	(<1% of 5-yr. total)	629	2.059	2.475
Hardwoods	(<1% of 5-yr. total)	725	.525	2.535
Port Orford cedar	(<1% of 5-yr. total)	250	.35	1.45
Maple	(<1% of 5-yr. total)	500	.38	1.22
Noble fir	(<1% of 5-yr. total)	0	0	.268

Who's providing what?

Agency	5-yr total *Biomass (gT)*	5-yr total *Small Log (mmbf)*	5-yr total *Large Log (mmbf)*	% of 5-yr total
BLM	815,013	648.756	372.638	55%
Umpqua NF	243,885	155.408	130.405	15%
Willamette NF	30,422	66.947	99.915	8%
Siuslaw NF	18,940	65.965	70.247	6%
ODF	0	19.345	98.678	5%
DSL	0	40.984	119.207	7%
ODOT	4,500	1.7	1.5	<1%
OR Counties	3,500	7.05	50.8	3%

Willamette NF: *(gT= 30,420; Small log = 66.94 mmbf; Large log = 99.91 mmbf)*

Agency	Ranger Districts	5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
Willamette NF	Middle Fork	14,766	34.34	51.2
	McKenzie	8,887	19.05	28.45
	Sweet Home	6,767	13.54	20.25

Siuslaw NF: *(gT= 18,939; Small log = 65.96 mmbf; Large log = 70.25 mmbf)*

Agency	Ranger Districts	5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
Siuslaw NF	Hebo	2,462	8.57	9.13
	South Zone	16,477	57.39	61.12

Umpqua NF: *(gT= 243,883; Small log = 155.4 mmbf; Large log = 130.4 mmbf)*

Agency	Ranger Districts	5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
Umpqua NF	Cottage Grove	28,944	31.1	36.4
	N. Umpqua	65,719	38.1	37.1
	Tiller	46,856	30.2	19.4
	Diamond Lake	102,364	56	37.5

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BLM: *(gT= 815,013; Small log = 648.757 mmbf; Large log = 372.638 mmbf)*

Agency	Field Offices	5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
OR BLM	Eugene	246,000	167	136.1
	Coos Bay	3,000	176.5	59.8
	Roseburg	122,618	122.772	81.848
	Salem	443,395	182.484	94.89

Other agencies:

Agency	5-yr total (Biomass = gT)	5-yr total Small log (mmbf)	5-yr total Large log (mmbf)
ODF	0	19.346	98.678
DSL	0	40.984	119.207
ODOT	4,500	1.7	1.5
OR Counties	3,500	7.05	50.8

Private lands: **No historical data exists for removal patterns.**

Is there a change from historical practices?

Yes! Agency	Past Removal 2003-2007 (mmbf)	CROP 2005-2009 (mmbf)	CROP 2008-2012 (mmbf)	CROP % change from '05-'09
Umpqua NF	153.56	183.22	333.1	83%
Willamette NF	291.4	149	185	16%
Siuslaw NF	148	110	140	27%
Eugene BLM	na	165	352	113%
Coos Bay BLM	na	177	236	33%
Roseburg BLM	na	150	229	53%
Salem BLM	na	122	366	200%

Western Oregon CROP 2008-2012

Value-add picture looks good !

Fairly good picture for small log processing where largest percentage of volume is projected to be in the >9”-12” log strata (best grade recovery).

5-yr small log total =

- **>7”-9” = 249.61 mmbf**
- **9”- 12” = 570.94 mmbf**
- **<12” = 185.6 mmbf**

(% of total volume)	*>7”-9”*	*>9”-12”*	*<12”*
Douglas fir	195.174	460.692	153.09
Western hemlock	31.588	62.385	7.296
White woods	13.096	13.066	0
Red Alder	.4	18.35	2.087
Grand fir	.587	1.0489	12.277
Mixed pine	4.53	6.58	1.28
Sitka spruce	.1	.5	.312
Mixed cedar	0	0	6.138
Other conifers	0	0	2.874
True firs	1.887	2.215	0
Western red cedar	.737	1.399	0
Lodgepole pine	0	1.99	0
Incense cedar	.587	1.049	0
Ponderosa pine	.587	1.049	0
Hardwoods	.14	.165	.22
Port Orford cedar	.1	.25	0
Maple	.1	.2	.08
Noble fir	0	0	0

Resource Offering Maps (ROMS):

Here's what you get ***for each species*** . . .

- ✓ ***Who*** will supply?
- ✓ ***When*** will supply be offered?
- ✓ ***How much*** will be offered?
- ✓ ***What diameter size*** will it be offered in?
- ✓ Will supply be consistent and ***levelized over time*** to invite purchase and investment?

For each species:

- ✓ ***Locator map*** **per specific supplier**
- ✓ ***Summary sheet***
- ✓ ***Detailed supply breakouts*** **by volume, diameter, and year per supplier**

Let's look at Douglas fir for the Western Oregon CROP as an example . . .

Western Oregon: ***<u>All Agencies</u>*** **CROP offering/removal '08 – '12**
(gT =1,116,260 / S = 1,006.156 mmbf / L = 943.39 mmbf)
(2,172.8 total mmbf)

gT = green tons (up to 7" dbh)
S = small log mmbf (>7"-12" dbh)
L = large log mmbf (>12" dbh)

<u>BLM</u>:

- **A** ***Coos Bay District (gT = 3,000 / S = 176.5 / L = 59.8)***
- **B** ***Eugene District (gT = 246,000 / S = 167 / L = 136.1)***
- **C** ***Roseburg District (gT = 122,618 / S = 122.77 / L = 81.848)***
- **D** ***Salem District (gT = 443,395 / S = 182.484 / L = 94.89)***

<u>Counties</u>:

- ***E*** ***Coos Co. (gT = 3,500 / S = 4.55 / L = 40.8)***
- **F** ***Douglas Co. (gT = 0 / S = 2.5/ L = 10)***

<u>ODF</u>:

- **G** ***W. Lane District (gT = 0 / S = 3.821 / L = 34.843)***
- **H** ***N. Cascade District (gT = 0 / S = 0 / L = 28.235)***
- **I** ***W. Oregon District (gT = 0 / S = 15.24 / L = 35.599)***

<u>Umpqua NF</u>:

- **J** ***Cottage Grove RD (gT = 28,944 / S = 31.039 / L = 36.466)***
- **K** ***N. Umpqua RD (gT = 65,719 / S = 38.145 / L = 37.136)***
- **L** ***Tiller RD (gT = 46,856 / S = 30.204 / L = 19.35)***
- **M** ***Diamond Lake RD (gT = 102,364 / S = 56.019 / L = 37.453***

<u>Siuslaw NF</u>:

- **N** ***Hebo RD (gT = 2,462 / S = 8.575 / L = 9.132)***
- **O** ***South Zone RD (gT = 16,477 / S = 57.39 / L = 61.115)***

<u>Willamette NF</u>:

- **P** ***Middle Fork RD (gT = 14,766 / S = 34.342 / L = 51.197)***
- **Q** ***McKenzie RD (gT = 8,887 / S = 19.0558 / L = 28.458)***
- **R** ***Sweet Home RD (gT = 6,767 / S = 13.546 / L = 20.258)***

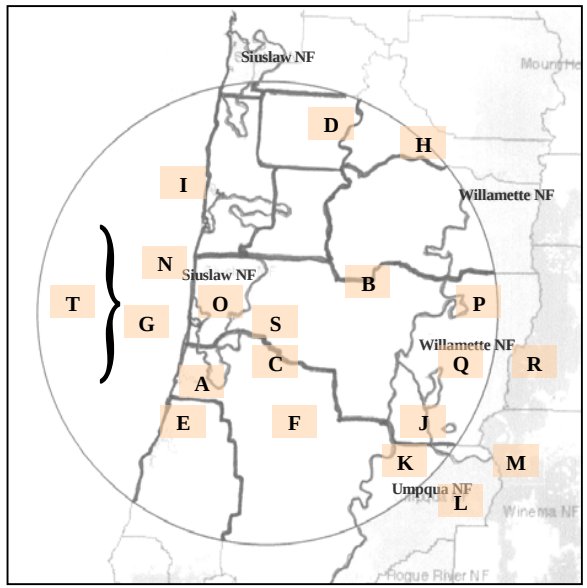
<u>DSL</u>:

- **S** ***Elliott SF (gT = 0 / S = 40.984 / L = 119.207)***

<u>ODOT</u>:

- **T** ***ODOT (gT = 4,500 / S = 1.7 / L = 1.5)***

Locator Map



Western Oregon CROP 2008-2012

Summary Sheet

***Western Oregon: <u>Douglas Fir</u>* CROP offering/removal '08 – '12**
(gT = 882,597 / S = 808.955 mmbf / L = 775.66 mmbf)
(1,761.14 total mmbf)

ROM # DF 1.1

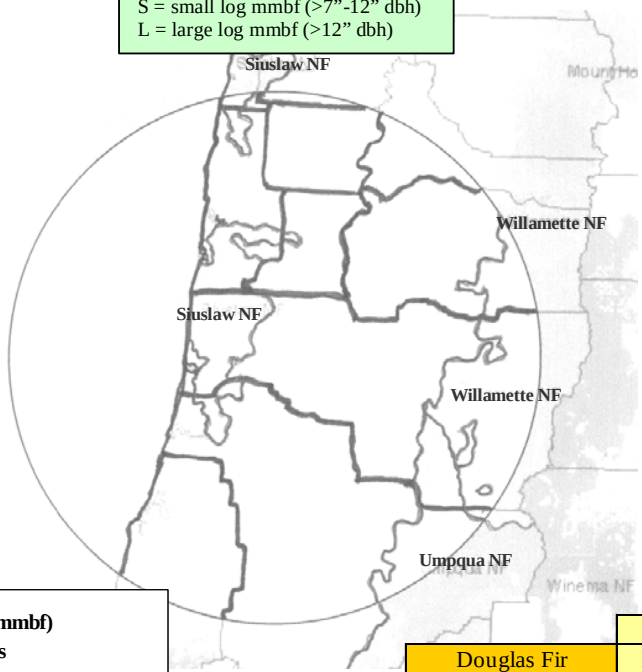
gT = green tons (up to 7" dbh)
S = small log mmbf (>7"-12" dbh)
L = large log mmbf (>12" dbh)

BLM: 4 Districts – 55%
(gT = 655,011 / S = 527.087 / L = 305.31)

Umpqua NF: 4 RDs – 15%
(gT = 184,972 / S = 116.145 / L = 111.58)

Siuslaw NF: 2 RDs – 8%
(gT = 17,993 / S = 62.667 / L = 66.734)

Willamette NF: 3 RDs – 7%
(gT = 22,870 / S = 47.313 / L = 70.212)



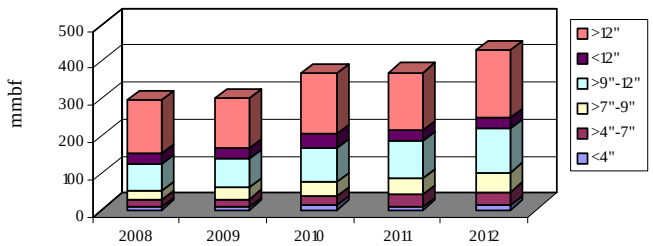
DSL: Elliott SF – 8%
(gT =0 / S = 36.668 / L = 109.87)

ODOT– <1%
(gT = 1,000 / S = .2 / L = .1)

ODF: 3 Districts – 6%
(gT = 0 / S = 15.1 / L = 85.708)

Counties: 2 Co.'s – 2%
(gT = 750 / S = 3.775 / L = 26.15)

All Agencies: Douglas Fir (5-yr total = 1,761.141 mmbf)
176.519 mmbf is <7" = 882,596 gT of biomass
808.055 mmbf is >7"-12" = small logs
775.666 mmbf is >12" = large logs



	gT	mmbf	
Douglas Fir	Biomass	Small Log	Large Log
2008	124036.7869	128.2701	141.1454
2009	141466.1539	137.3493	133.6593
2010	177183.9879	169.3795	163.9118
2011	198252.7459	172.9837	157.1177
2012	241657.2539	200.9731	179.8320
Totals	882596.9284	808.9556	775.6663
%	10%	46%	44%
mmbf	176.5194		
			1761.1412

Detailed Breakouts

. . . with CROP, we're able to look at:

- ***performance between different public agencies*** **to identify needed coordination of supply; *and***

- ***performance between ranger districts in a single NF*** **to see where coordination of supply offering might be needed.**

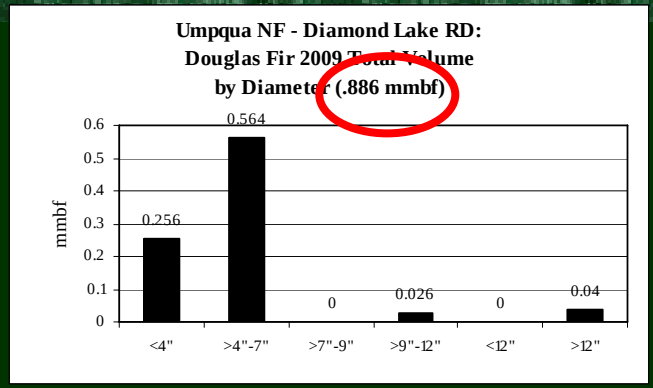
Let's take a look …

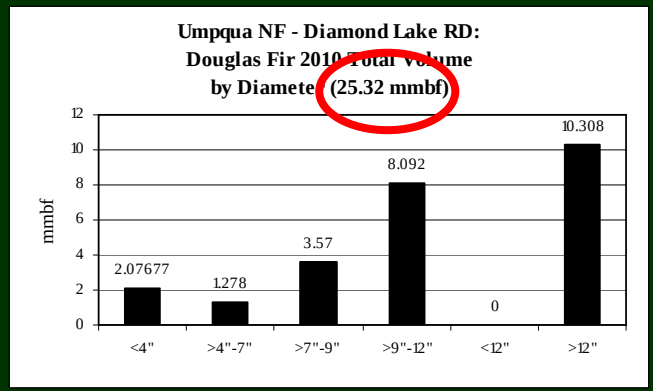
Western Oregon CROP 2008-2012

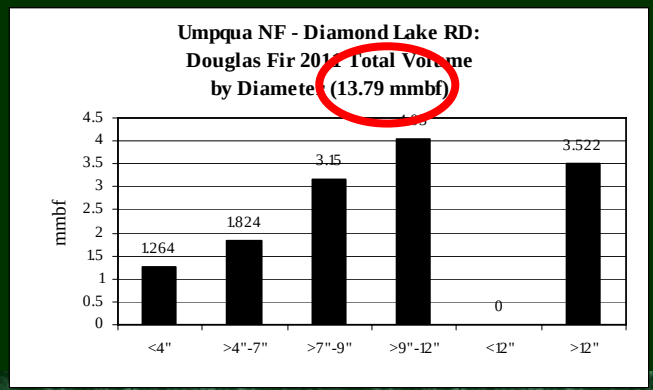
Unlevel **supply from year to year:**

Umpqua NF: **Diamond Lake RD**
Douglas fir offering

- **2009: < 1 mmbf**
- **2010: 25.3 mmbf**
- **2011: 13.79 mmbf**







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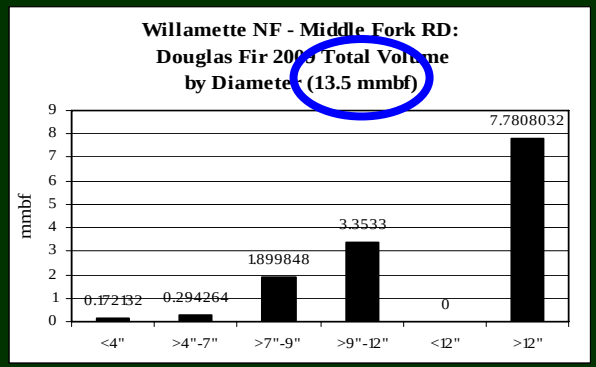
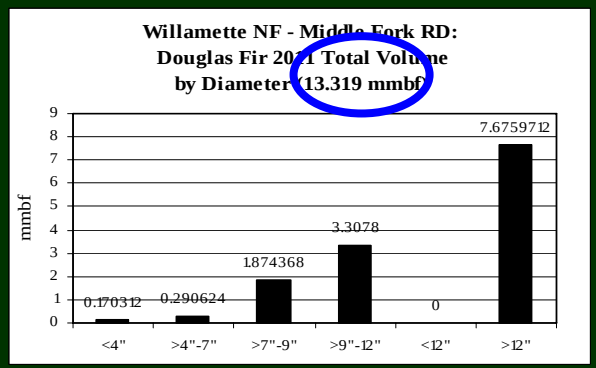
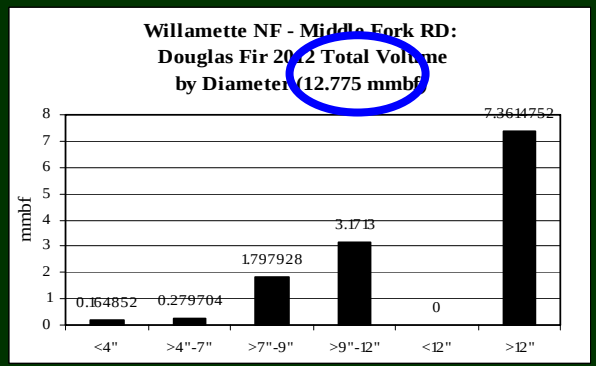
Levelized **supply from year to year:**

Willamette NF: **Middle Fork RD**
Douglas fir offering

- **2009: 13.5 mmbf**
- **2011: 13.3 mmbf**
- **2012: 12.77 mmbf**







Levelized supply for five years?

Species-by-species

R = relatively level
G = volume growing
na = not applicable

		gT Biomass		Small Logs		Large Logs	
		yes	*no*	*yes*	*no*	*yes*	*no*
Douglas fir	(81% of 5-yr. total)	G		G			✓
Western hemlock	(10% of 5-yr. total)	✓		G		G	
White woods	(2% of 5-yr. total)		✓		✓		✓
Red Alder	(2% of 5-yr. total)	R		R		R	
Grand fir	(1% of 5-yr. total)		✓	R		R	
Mixed pine	(1% of 5-yr. total)		✓		✓		✓
Sitka spruce	(1% of 5-yr. total)	✓		✓		✓	
Mixed cedar	(1% of 5-yr. total)		✓	R			✓
Other conifers	(<1% of 5-yr. total)	✓		✓		✓	
True firs	(<1% of 5-yr. total)	G		G		G	
Western red cedar	(<1% of 5-yr. total)	R			✓	R	
Lodgepole pine	(<1% of 5-yr. total)	na			✓		✓
Incense cedar	(<1% of 5-yr. total)		✓	R		R	
Ponderosa pine	(<1% of 5-yr. total)	R		R		R	
Hardwoods	(<1% of 5-yr. total)	G		G		G	
Port Orford cedar	(<1% of 5-yr. total)	✓		✓		✓	
Maple	(<1% of 5-yr. total)		✓		✓		✓
Noble fir	(<1% of 5-yr. total)	na		na		✓	

What about NEPA?

It's important to know!

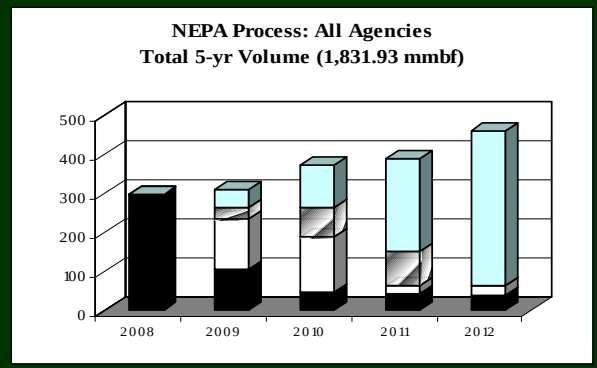
. . . here's how it looks

Western Oregon CROP 2008-2012

NEPA picture for Western Oregon CROP landscape

***All Agencies lands*: % of 5-yr total = (1,831.93 mmbf; includes gT as mmbf)**

	% of total
Approved	29%
In process	17%
Just started	11%
Not started	43%



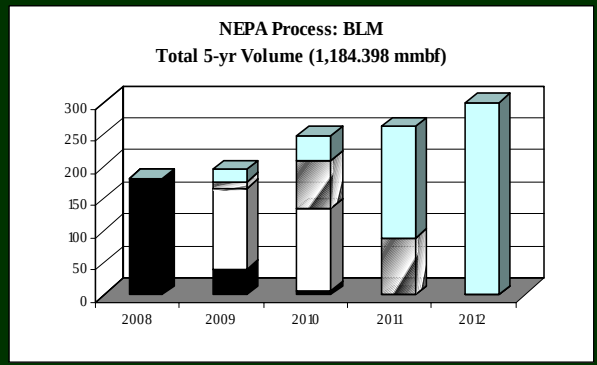
Over 50 % of CROP resource offering either *not started* or *just started*! (*BLM* biggest risk factor here)

Western Oregon CROP 2008-2012

NEPA picture for Western Oregon CROP landscape

***BLM lands**: (% of 5-yr total = 1,184.39 mmbf; includes gT as mmbf)*

	% of total
Approved	19%
In process	22%
Just started	15%
Not started	45%



Over 60% of CROP resource offering either *not started* or *just started*.

What about road access to supply? Here's how it looks . . .

Agency	5-yr total volume	Affected by No Current Road Access		
	mmbf	mmbf	% of total volume with no road access	Species affected
BLM	1,184.397	2.896	<1%	DF,GF, Mix cedar, WH, Mix pine
Umpqua NF	334.59	0	0%	
Willamette NF	172.946	0	0%	
Siuslaw NF	140	4.2	3%	DF, WH
ODF	118.024	23.604	20%	DF, WH, RA, OC, HWD, MAP, NF
DSL	160.191	32.038	20%	DF, OC, RA
ODOT	4.1	0	0%	
OR Counties	58.55	0	0%	
Total	2172.8	62.74	3%	

Conclusions:

- **Demand for *small logs exceeds CROP supply* when BLM high-risk NEPA volumes (60%) subtracted.**
- **Demand for *large logs can be met with CROP supply* even when BLM high-risk NEPA volumes (60%) subtracted.**
- **Even with BLM high-risk NEPA volumes (60%) subtracted from biomass calculations, still leaves *~125,450 gT/yr for project development*.**

For more information:

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