## **Figures and Tables**



Figure 1. Northwest Forest Plan area.

Table 1. Completed watershed analyses.

	Number	Completed	Not	Completed,
			completed	%
Key	111	103	8	92.7
Watersheds <sup>a</sup>				
Non-key	217	193	24	89
watersheds <sup>a</sup>				
Other	282	248	34	88
watersheds of				
unknown status				
Total <sup>b</sup>	610	544	66	89

<sup>a</sup> Data are available for only 15 administrative units differentiating between key and non-key watersheds.

<sup>b</sup> The information is for 28 administrative units: the total includes analyses for both 5<sup>th</sup>- and 6<sup>th</sup>field-scale watersheds, and agency records do not make the distinction. Therefore, the number is different from the total of 5<sup>th</sup>-field watersheds (550) in the Plan. Also, the total includes some analyses reported by both agencies where lands adjoin and BLM or FS had the lead.



Figure 2. Completion of watershed analyses, reviewed by compliance monitoring, 1999-2003.



Figure 3. Key Watersheds in the Plan area.

Table 2. Summary of restoration accomplishments by the National Park Service<sup>a</sup>, FS, and BLM in key and non-key watersheds, 1998-2003<sup>b</sup>

Watersheds	Instream structure s (mi.)	Instream passage (mi.)	Riparian (ac.)	Riparian (mi.)	Upland (ac.)	Decommissioned roads (mi)	Road improved (mi.)	Wetland (ac.)
Key	240.2	117.2	3933	112.9	6474	295.4	1234.8	286
Non-Key	686.5	543.8	64914	547.3	25941	1397.3	1850.3	1217
Totals	926.7	661	68847	660.2	32415	1692.7	3085.1	1503

<sup>a</sup> Includes Redwood National Park

<sup>b</sup> Data were not available for some administrative units, and others may be incomplete. Most of the data provided is for Oregon and Washington, but California data is included when it was recorded. The data includes projects reported for October 1997 to December 2001 (the 1998 data request was for FY98 and CY98), 2002, and 2003. If part of a project was in a key watershed, the whole project was classified as being in a key watershed.

*Instream structures.* Actions designed to change or modify stream complexity and structure, including but not limited to adding large woody, building weirs or deflectors, creating pools, placing boulders, building rock gabions, adding gravel, developing or improving side channels, alcoves, or other actions designed to improve stream structure.

*Instream passage.* Actions designed to protect and improve fish passage for juvenile or adult fish, including but not limited to removing culverts, upgrading culverts, improving or installing fish ladders, irrigation diversions, or fish screens.

*Riparian area treatments*. Actions designed to improve, restore, or maintain quality or conditions of riparian zone vegetation, including but not limited to planting, fencing, watering off channel, managing beaver, controlling invasive plants, rotating livestock or other management, and stand conversion.

*Upland restoration*. Actions include slope stabilization, revegetation, silvicultural treatments, and livestock-exclusion fencing in upland areas designed to improve habitat condition.

*Decommissioning roads.* Actions designed to make roads hydrologically stable and selfmaintaining; they may range from full obliteration to water barring with culvert removal.

*Improving roads.* Actions to reduce sediment and improve stability or to allow more natural functioning of streams and flood plains, including but not limited to drainage, upgrades, stabilization, and relocation.

*Wetlands (freshwater and coastal) treatments.* Actions including creating, maintaining, or restoring freshwater and coastal wetland habitat.



Figure 4. State 5<sup>th</sup>-field watersheds including key watersheds and restoration projects in the Plan area.

Agency	Baseline road mileage			Current road mileage				Permanent roads where
	(9)	(b)	a + b = (c)	(d)	(e)	$\mathbf{d} = \mathbf{e} = (\mathbf{f})$	c + f	flowwoo
	(a)	(0)	a + b - ( t )	(u)	(0)	u - c - (l)	C + I	now was
	Perm-	Temp-	Total roads	New	Decomm	Net	Total	improved <sup>e</sup> or
	anent <sup>b</sup>	orary <sup>c</sup>	In 1994	permanent	issioned <sup>d</sup>	change	roads in	restored since
	roads	roads		and temp-	since	since	2003	1994
	in	in 1994		orary roads	1994	1994		
	1994			built since				
				1994				
FS (key only)	5363.1	89.6	5452.7	39.4	518	-478.6	4974.1	327.8
FS(5 <sup>th</sup> -field) <sup>a</sup>	7769.6	134.5	7904.1	34.5	437.1	-402.6	7501.5	214.8
BLM (key only)	329.2	212	604.2	0	29	-29	575.2	6
BLM (5 <sup>th</sup> -field) <sup>a</sup>	1602.8	210	1812.8	21.4	88.8	-67.4	1745.4	183.5
Total key	5692.3	301.6	6056.9	39.4	547	-507.6	5549.3	333.8
Total 5 <sup>th</sup> -field <sup>a</sup>	9372.4	344.5	9716.9	55.9	525.9	-470	9246.9	398.3

Table 3 Changes in road mileage for monitored watersheds, 2000-2003<sup>a</sup>.

<sup>a</sup> Information for 5<sup>th</sup> field watersheds was not collected in 2000. See Road Mileage

Tables for individual years in Appendix B for further explanation of what is included in the above table.

Note: Road closures with gates or barriers do not qualify as decommissioning or a reduction in road mileage, ROD B19.

<sup>b</sup> Permanent roads include classified roads, system roads, and managed roads; abandoned roads and unclassified roads not decommissioned; and privately controlled roads on public land.

<sup>c</sup> Temporary roads include those built for short-term use. They are normally decommissioned after use.

<sup>d</sup> Decommissioned roads include any closed and hydrologically stabilized road. Future use is not planned. Decommissioned roads are taken off the system (if they were ever on it) and no longer managed.

<sup>e</sup> Improved roads include permanent roads upgraded or rebuilt to better accommodate hydrologic flow in accordance with aquatic strategy objectives; improved fish passage, improved stability, and restored drainage are examples.

## Table 4. Decrease in road miles in the Plan area, through 2002

Current system mileage <sup>a</sup>	Net change in miles	Net decrease in miles, %
86,813	-4307	4.7

<sup>a</sup> Road miles represent the sum of all system road-classes defined in the glossary; see restoration data sources for an explanation of areas and periods covered.



Figure 5. Roads built and decommissioned in Regions 5 and 6<sup>a</sup>.

<sup>a</sup> The figure does not contain information for the BLM; their data were available for the entire period 1995-2002, but not by individual year and the figure does not contain data for one FS forest for 2002.

					Total of	Net
					Obliterated,	Reduction
				Closed/	Decommissioned	in Road
Agency	Constructed	Obliterated	Decommissioned	Gated	& Closed/Gated	Mileage
BLM OR	99.6	191.1	267.5	574.7	1033.3	933.7
USFS R 5	55.3	411.5			411.5	356.2
USFS R 6	198.6		1879.4		1879.4	1680.8
Grand						
Total	353.5	602.6	2146.9	574.7	3324.2	2970.7

Table 5.	Changes in	roads I	by agency.	1995-2002
Table J.	Changes in	Tuaus	by agency,	1999-2002

Table 6. Miles of roads maintained in Region 6<sup>a</sup> and the BLM in Oregon 2000-2003<sup>b</sup>

		Y	ear	
	2000	2001		
Miles	2003			
	20,791	22,988	21,482	17,102

<sup>a</sup> Region 5 and the BLM in California are not included.

<sup>b</sup> The numbers include all roads maintained in those forests only partially in the Plan area; total

miles of system roads in 2002 for Region 6 and the BLM in Oregon were 63,480.

Basin name and	number	Cost (Dollars)
Upper Columbia	170200	2,629,109
Yakima River	170300	2,592,800
Middle Columbia	170701	1,579,860
Deschutes	170703	2,629,890
Lower Columbia	170800	12,356,022
Willamette	170900	12,577,964
Washington Coastal	171001	5,596,000
Northern Oregon Coas	stal 171002	9,775,244
Southern Oregon Coa	stal 171003	26,622,239
Puget Sound	171100	6,354,328
Northern California Co	astal 180101	3,834,896
Klamath	180102	4,270,576
Total		\$90,818,928

Table 7. Summary of restoration project costs by 3<sup>rd</sup>-field watershed (1998-2003)



Figure 6: Third-field hydrologic units in the Plan area.

Table 8. Activities and watersheds monitored,	1996 – 2003
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	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
1996	Timber sales	42 <sup>a</sup>	Implemented in 1995,	Matrix, late-	45 sales <sup>a</sup> selected,
			10% sample size	successional	but one was
				reserves,	outside the Plan
				adaptive	area and two extra
				management	were selected
				areas	to have at least 1 in
					each province, so
					only 42 included in
					the annual report
1997	Timber sales	39 <sup>b</sup>	>100,000 board feet	Matrix, late-	40 sales <sup>b</sup> planned
			Sold in 1995 or 1996	successional	but, 1 sale was not
				reserves,	monitored because
	Roads	17	Associated with a	adaptive	it was designed
			timber sale, monitored	management	pre-Plan; projects
				areas	were in 10 of 12
	Restoration	16	Jobs in woods project		provinces
1998	Timber sales	24	>1,000,000 board feet	Matrix, late-	
	and associated		Sold in 1996 or 1997,	successional	
	new roads		1 per administrative	reserves, and	
			unit	adaptive	
				management	
				areas	
	Watershed	6 <sup>c</sup>	Two per state		informal feasibility
	Assessments				look, no reports

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
					prepared <sup>c</sup>
1999	Timber sales	24	>1,000,000 board feet	Matrix, late-	
			Implemented and	successional	
			harvested since 1995	reserves,	
				adaptive	
	Watershed	12	Tiered to timber sale	management	
	assessments		One per province	areas	
2000	Watershed	24	Two per province	All	Emphasis on
	assessments				review of
					watershed
					assessments
					because timber
					sale program
					stalled

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
2001	Watershed	21 <sup>d</sup>	Two per Province	All	Watershed
	assessments		>640 acres of public		assessments (24) <sup>d</sup>
			land		and projects
			Not previously		planned, but 3 not
			monitored		monitored because
			Watersheds should not		of extreme fire
			be adjacent		season
			Must have ground		Emphasis on
			disturbing activities		watershed
					analyses review
	Projects		One project per		with a desire to
	Timber sales	6	watershed assessment		review projects of
	Vegetation	2	reviewed		interest
	density		Broad range of		
	management in		activities		
	LSRs				
	Roads	2			
	management				
	Roads	4			
	decommissioning				
	Prescribed fire	1 <sup>d</sup>			
	Special forest	1			
	products				
	Watershed	4			
1	1	1		1	

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
2001	Restoration				
2001	Decreation	od			
cont.	Recreation	0			
	Other site	1			
	development				
2002	Vegetation	22 <sup>e</sup>	Two per Province	Late-	Twenty-four <sup>e</sup>
	density	(12 timber	At least 1 of the	Successional	planned, but 1 not
	management in	sales and 10	projects must have	Reserves	monitored because
	LSRs	non-	produced a commercial		of severe fire
		commercial	product		season, and 1 not
		silvicultural	Not in watershed		monitored because
		treatments)	monitored in previous 2		of lack of project
			years		activity
	Watershed	21 <sup>e</sup>	Two per province,		
	assessments		defined by selected		
			projects		
	Other programs		One additional project	All except	Previously under-
	outor programo			motrix	
				maurx	sampled programs
	Question		On the second		
	Grazing	1	Grazing allotment		

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
2002	Prescribed fire	1†	Planned since 1994		One <sup>†</sup> project review
cont.			and completed on at		was combined with
			least 40 acres		a density-
			Must be for hazard		management report
			reduction or habitat		(thus 2 separate
			improvement		projects are
					recorded in the
	Recreation	4	NEPA decision signed		database)
			since 1994		
			Building or rebuilding		
			Fully implemented		
	Watershed	5	>40 acres or		
	restoration		0.5 miles cumulative		
			length or		
			>\$10,000 expended on		
			project		
2003	Projects		Two per province		Program emphasis
					is to establish
	Vegetation	15 <sup>9</sup>	>40 acres cumulative	Late-	project database
	density		per project	successional	and program types
	management in		Exclude regeneration or	reserves	(emerging issues)
	LSRs		salvage treatments		for future
					monitoring

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
	Prescribed fire	7	Planned and completed	Late-	<sup>g</sup> Emphasis
			since 1994	successional	continued to be on
			Hazard reduction or	reserves,	monitoring density-
			habitat improvement	matrix, riparian	management
				reserves	projects (16
	Mining	1	Locatable mineral	Matrix	planned, but 1
			Current plan of		project was
			operations or		consumed by
			rehabilitated since 1994		wildfire), but if none
2003			Must meet MM-1 s&g		existed or had
cont.			interpretation letter		previously been
			March 6, 2002		monitored, then the
					categories in order
	Watershed	21 <sup>h</sup>	Determined by the		were: prescribed
	assessments		project location		fire, grazing,
			Two per province		mining, recreation
					and watershed
					restoration.
					<sup>h</sup> Only 21
					watershed
					assessments were
					monitored because
					some projects were
					in the same
					watershed.

	Activities	Number of	Selection criteria	Land-use	Comments
Year	monitored	monitored		allocation	
		activities			
		Total			Annual reports do
		projects			not reflect
		monitored,			database records
		1996-2003,			for 2002, when 3
		240			projects were
		(238 in			included in a single
		annual			report
		reports)			
		Total			
					* Ten watershed
		individual			assessments were
		watershed			monitored more
		assessments			than once resulting
		monitored,			in 99 total reviews
		1999-2003,			
		89*			

Fiscal year	Regeneration	Partial	Grand Total
FISCAL year	llaivest	Temovai	Granu Totai
fy 1995	13151	15242	28393
fy 1996	9276	37840	47116
fy 1997	7728	39890	47618
fy 1998	8159	45941	54100
fy 1999	5229	28875	34104
fy 2000	4861	46397	51258
fy 2001	1379	18353	19732
fy 2002	1925	20759	22684
fy 2003	1142	34117	35259
Grand Total	52850	287414	340264

Table 9. Regeneration and partial removal, harvested acres by year<sup>a</sup>

<sup>a</sup> California BLM is not included.

<sup>b</sup> Regeneration harvest includes clearcuts, preparation cuts, seed tree removal and overstory removal.

<sup>c</sup> Partial removal includes selection cuts, improvement cuts, commercial thinning (precommercial thinning

is not included), sanitation cuts, uneven-aged management, and density management.



Figure 7. Acres treated by harvest method<sup>a</sup>.

<sup>a</sup> Figure does not include acres treated for the BLM in California.

Table 10. Mechanical and prescribed fire treatments, 2003<sup>a</sup>.

Mechanical				Prescribed Fire				Т	otal
WUI	WUI	NonWUI	NonWUI	WUI WUI NonWUI NonWUI				no.	Acres
no.	acres	no.	acres	no.	acres	no.	acres		
823	39,850	347	26,545	483	38,580	251	26625	1904	131,603

<sup>a</sup> WUI is wildland-urban interface. The Table includes all projects for the following forests and a BLM field unit not entirely in the Plan area: Lassen, Modoc, Klamath, Shasta-Trinity, Mendicino, Deschutes, Winema, and Klamath Falls.

Table 11. Historical allowable sale quantities (ASQ) compared to timber harvest levels (PSQ) under the Plan<sup>a</sup>.

Historical allowable sale quantities	4.5 billion board feet per year
Probable harvest levels	958 million board feet per year

<sup>a</sup> Historical allowable sale quantities and timber harvest levels taken from the FSEIS, Chapter 3&4, p. 266 and 268; the PSQ is the Plan's probable sale quantities.



Figure 8. Allowable sale quantity compared to probable sale quantity.

Table 12. Probable sale quantity adjustments.

Year	Agency, Region	PSQ in millions of board feet	Change in PSQ
1994, ROD	FS, Region 6	533	
	FS, Region 5	224	
	BLM	201	
	Total	958	
1995	FS, Region 6	533	
	FS, Region 5	161	-63
	BLM	174	-27
	Total	868	-90
1999	FS, Region 6	476	-57
	FS, Region 5	161	
	BLM	174	
	Total	811	-57
2001	FS, Region 6	476	
	FS, Region 5	161	
	BLM	168	-6*
	Total	805	-6

\*BLM declared the 6 million board foot adjustment retroactive to 1999.



Figure 9. Probable sale quantities compared to volume offered<sup>a</sup>.

<sup>a</sup> All volumes are in 32 foot logs. Volume offered includes volume arising from lands not contributing to PSQ, such as late-successional and riparian reserves; therefore, direct comparisons cannot be made. Note, howver, that volume offered for the reporting period has not met PSQ, on average. About 80 percent of the volume offered arises from matrix and adaptive management areas, which are attributable to PSQ.

Table 13. Range use, 1993 and 2002<sup>a,b</sup>

Year	Animal unit months	Allotments and leases	Number of permittees <sup>c</sup>	Area of active allotments (thousands of acres) <sup>d</sup>
1993	142,684	378	370	4,208
2002	100,326	267	234	3,415

<sup>a</sup> Table does not include Klamath Falls BLM administered land.

<sup>b</sup> Data from 2001 were used to determine 2002 figures for OR BLM.

<sup>c</sup> For BLM, the number of allotments and leases = the number of permittees.

<sup>d</sup> Only reported for FS.



Figure 10. Comparison of grazing allotments and permittees before (1993) and after (2002) the ROD. (see the explanation in the data sources section)



Figure 11. Adaptive management areas in the Plan area.

							Humans and	
Adaptive						Insects	natural	
management	Vegetation	Water and	Wildlife	Ecosystem	Fire	and	resource	Total
area	management	watersheds	and fish	processes	science	disease	interactions	projects
Finney	а	а	а	а	а	а	а	а
Olympic	2	1	1	1			1	6
Snoqualmie Pass	3	2					2	7
Cispus	5	1	1	2	2	1	2	14
N. Coast Range	9	1	2	4		3		19
Central Cascades	9	19	16	45	2		10	101
Little River	4	3	1	2	2		1	13
Applegate	10		3		4		1	18
Goosenest	2		8	2				12
Hayfork	3		1				1	5
Totals	47	27	33	56	10	4	18	195

Table 14. Research and monitoring projects in adaptive management areas

<sup>a</sup> Not reported.

Table 15.	Compliance of	f adaptive	management	area projects	with standards	and guidelines
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Project type and years monitored	Number of applicable project types evaluated	Number of applicable questions	Number of not mets	Number of mets	Compliance with standards and guidelines, percent
Timber sales	70	209	6	203	97
Other silvicultural activities	0	0	0	0	-
Prescribed fire	1	4	0	4	100
Road management	6	28	1	27	96
Recreation	0	0	0	0	-
Watershed restoration	2	6	0	6	100
Grazing	0	0	0	0	-
Mining	0	0	0	0	-



Figure 12. Participation in implementation (compliance) monitoring reviews 1996-2003.<sup>a</sup> <sup>a</sup> Examples of the "other" participant category include nonfederal participants representing the following interests: environmental, timber, recreation, public at large, mining, homeowners, and others.

Table 16: Project compliance with standards and guidelines by project type and land-use allocation and question category 1996-2003; percentage compliance equals the number of applicable questions minus the number of not mets divided by the number of applicable questions.

	Land use	Number of			Compliance	
Project type	allocation	applicable	Number of	Number	with	
and years	and	project	applicable	of not	standards	
monitored	question	types	questions	mets	and	
	category	evaluated			guidelines	
	All	162	742	5	99%	
	LSR/MLSA <sup>a</sup>	93	650	22	97%	
Timber	Aquatic	154	1 544	45	97%	
sales	strategy		1,011	10		
	Matrix	123	1,022	61	94%	
N = 162	Adaptive					
(number of	Management	70	209	6	97%	
projects	Areas					
monitored)	Species 1 <sup>b</sup>	135	238	1	99.5%	
	Species 2 <sup>c</sup>	90	122	3	98%	
1996-1999	Species 3 <sup>d</sup>	4	7	0	100%	
and 2001-	Research	14	35	0	100%	
2003	Biological					
	opinion terms	15	15	0	1009/	
	and	15	15	U	100%	
	conditions					

<sup>a</sup> Late-successional reserves, managed late-successional areas

<sup>b</sup> Projects implemented prior to February 12, 2001 and under the original Plan standards and guidelines <sup>c</sup> Questions applicable under both the Plan and February 12, 2001 Survey and Manage ROD. <sup>d</sup> All projects implemented after February 12, 2001.

Table 16, continued								
	Land use	Number of			Compliance			
	allocation	applicable	Number of	Number	with			
Project type	and	project	applicable	of not	standards			
	question	types	questions	mets	and			
	category	evaluated			guidelines			
	All	15	64	0	100%			
Other	LSR/MLSA	14	127	6	95%			
othor	Aquatic							
silvicultural	strategy	15	134	5	96%			
activities	Strategy							
(such as	Matrix	0	0	0	NA			
(Such as	Adaptive							
precom-	managamant	0	0	0	NA			
mercial	management	0	0	0	NA			
thinning)	areas							
unning)	Species 1	4	8	0	100%			
	On a size O	0	40	0	4000/			
N = 15	Species 2	Ö	12	U	100%			
	Species 3	2	2	0	100%			
2001 and	Research	2	3	0	100%			
2007 4114	Biological							
2002	opinion terms							
	and	4	4	0	100%			
	conditions							

Table 16, continued

	Land use	Number of			Compliance	
	allocation	applicable	Number of	Number	with	
Project type	and	project	applicable	of not	standards	
	question	types	questions	mets	and	
	category	evaluated			guidelines	
	All	10	29	0	100%	
	LSR/MLSA	4	60	1	98%	
	Aquatic	10	120	4	079/	
	strategy	10	129	4	51/0	
Proscribod	Matrix	5	7	0	100%	
fire projecto	Adaptive					
nre projects	management	1	4	0	100%	
	areas					
N - 10	Species 1	6	12	0	100%	
N - 10	Species 2	3	4	0	100%	
	Species 3	2	4	0	100%	
	Research	2	4	0	100%	
2001-2003	Biological					
2001 2000	opinion terms	2	2	0	400%	
	and	3	3	0	100%	
	conditions					
	Other					
	prescribed	8	20	0	100%	
	fire questions					

Table 16, continued

Project type	Land Use allocation / question category	Number of applicable project types evaluated	Number of applicable questions	Number of not mets	Compliance with standards and guidelines
	A.I.	10			1000/
	All	19	66	0	100%
	LSR/MLSA	11	42	1	98%
Road	Aquatic strategy	19	313	5	98%
manage-	Matrix	11	11	0	100%
ment N = 19	Adaptive management areas	6	28	1	96%
	Species 1	14	23	0	100%
	Species 2	7	9	0	100%
1997 and	Species 3	2	2	0	100%
2001	Research	3	5	0	100%
	Biological opinion terms and conditions	0	0	0	_

Table 16, continued

	Land use	Number of			Compliance	
	allocation	applicable	Number of	Number	with	
Project type	and	project	applicable	of not	standards	
	question	types	questions	mets	and	
	category	evaluated			guidelines	
	All	26	96	2	98%	
	LSR/MLSA	23	105	3	97%	
	Aquatic	26	227	1	00%	
	strategy	20	557	4	9970	
	Matrix	8	15	0	100%	
Watershed	Adaptive		6	0	100%	
restoration	management	2				
	areas					
N - 26	Species 1	15	20	0	100%	
N - 20	Species 2	11	9	0	100%	
	Species 3	5	7	0	100%	
	Research	1	2	0	100%	
1997, 2001	Biological					
and 2002	opinion terms		4	0	100%	
	and	4	4	0	100%	
	conditions					
	Other					
	watershed	-	40	0	1000/	
	restoration	5	10	U	100%	
	questions					



Figure 13. Compliance for timber sale projects from 1996 through 2003<sup>a</sup>. The number of projects reviewed was 162.

<sup>a</sup> No timber sales were monitored in 2000, only watershed scale standards and guidelines.



Figure 14. Percentage compliance for 1996–2003<sup>a</sup>, all projects, all provinces; total projects reviewed were 240.

<sup>a</sup> No projects were monitored in 2000, only watershed scale standards and guidelines.



Figure 15. Percentage compliance for projects monitored by year, 1996-2003<sup>a</sup>.

<sup>a</sup> In 2000, only watershed scale standards and guidelines were monitored.



Figure 16. Watersheds monitored, 1999-2003.

Table 17. Summary of Not Met responses for projects and watershed.

Question related to:	Standards	Applicable	Not	No. not	Reasons	Trend
	and	land use	met,	met / no.	for not-	
	guidelines	allocations	%	applicable	met <sup>a</sup>	
				activities	projects	
					only	
Projects:						
Prohibiting harvest if snag	C46	Matrix	36	5/14	p = 0	Undetermined-
requirements for cavity					i = 3	lack of recent
nesters were not met					r = 2	reviews
Modifying coarse woody	C40	Matrix,	20	14/70	p = 0	Same as
debris guidelines in areas of		Adaptive			i = 0	above
partial harvest		manage-			r = 14	
		mentareas				
Retaining 240 linear feet of	C40	Matrix	16	3/19	p = 0	Same as
logs per acre (greater than or					i = 3	above
equal to 20 inches in					r = 0	
diameter and 20 feet long						
and decay classes 1 and 2)						
generally N of Eugene BLM						
and W of the Cascades						
Indefinite retaining of green	C42	Matrix	13	5/40	p = 5	Undetermined
trees and dispersed patches		Adaptive			i = 0	-lack of recent
		manage-			r = 0	reviews
		ment areas				
Retention of at least 120	C40	Matrix	11%	3/28	p = 0	Same as
linear feet of logs per acre (>					i = 3	above. Likely
16 in. in diameter (large end)					r = 0	static with

Question related to:	Standards	Applicable	Not	No. not	Reasons	Trend
	and	land use	met,	met / no.	for not-	
	guidelines	allocations	%	applicable	met <sup>a</sup>	
				activities	projects	
					only	
and 16 feet long and in decay						occasional
class 1 and 2), generally S of						instances of
Eugene BLM and E of the						non-
Cascades						compliance
Excluding riparian reserves	C31-32	All with	9	11/123	p = 4	Improved
from timber harvest except		riparian			i = 1	
for specific reasons		reserves			r = 6	
Establishing riparian reserve	B9	All with	8	14/184	p = 14	Static with
boundaries for seasonally		riparian			i = 0	occasional
flowing or intermittent		reserves			r = 0	instances of
streams, wetlands < 1 acre,						non-
and unstable and potentially						compliance
unstable areas with specific						
parameters						
Keeping trees in riparian	C37	All with	8%	8/101	p = 7	Static with
reserves felled to reduce		riparian			i = 0	occasional
safety risks on-site when		reserves			r = 1	instances of
needed as coarse woody						non-
debris						compliance
Providing for the needs of	C47	Matrix	6	5/82	p = 4	Improved with
other cavity-nesting species,					i = 0	no recent
(above and beyond specific					r = 1	instances of
needs for white-headed						non-

Question related to:	Standards	Applicable	Not	No. not	Reasons	Trend
	and	land use	met,	met / no.	for not-	
	guidelines	allocations	%	applicable	met <sup>a</sup>	
				activities	projects	
					only	
woodpecker, black-backed						compliance
wood-pecker, and pygmy						
nuthatch)						
Retaining enough snags in	C42	Matrix	4	4/109	p = 4	Undetermined-
harvest units to support					i = 0	few applicable
species of cavity-nesting					r = 0	projects
birds at 40% of potential						monitored in
populations						recent years
Retaining and protecting	C40	Matrix	4	4/94	p = 2	Appears to be
coarse woody debris already		Adaptive			i = 2	improving
on the ground to the greatest		manage-			r = 0	
extent possible		ment areas				
Establishing riparian reserve	C30	All	3	5/146	p = 4	Static with
boundaries for permanently					i = 1	occasional
flowing, nonfish-bearing					r = 0	instances of
streams with specific						non-
parameters						compliance
Using practices that minimize	C44	Matrix	3	4/119	p = 2	Likely
soil and litter disturbances		Adaptive			i = 2	occasional
from harvest methods,		manage-			r = 0	instance of
yarding, and heavy		ment areas				non-
equipment.						compliance
Conducting analyses with	R54, A2-3,	All	2	5/238	p = 2	Improving,

Question related to:	Standards	Applicable	Not	No. not	Reasons	Trend
	and	land use	met,	met / no.	for not-	
	guidelines	allocations	%	applicable	met <sup>a</sup>	
				activities	projects	
					only	
coordination and consultation	C1				i = 3	occasional
to ensure consistency with					r = 0	instance non-
environmental laws						compliance
Watershed Assessments:						
Developing a road	C33	All	54	43/80		Improving
management or	RF-7 a					
transportation plan to meet	thru e					
aquatic strategy objectives						
Developing a road	C33	All	43	25/58		Improving
management plan for	RF-7 a					
inspections and maintenance	thru e					
during storm events						
Developing a road	C33	All	39	23/59		Improving
management plan for	RF-7 a					
regulating traffic during wet	thru e					
periods to prevent damage to						
riparian resources						
Developing a road	C33	All	31	18/58		Improving
management plan for	RF-7 a					
operating and maintaining	thru e					
roads in riparian areas						
Developing a road	C33	All	31	18/58		Improving

Question related to:	Standards	Applicable	Not	No. not	Reasons	Trend
	and	land use	met,	met / no.	for not-	
	guidelines	allocations	%	applicable	met <sup>a</sup>	
				activities	projects	
					only	
management plan to	RF-7 a					
establish purposes through	thru e					
road management objectives						
Using watershed analyses to	A-7, B21,	All	30	22/73		Declining
develop strategies for	B30					
monitoring						
Developing a road	C33	All	30	17/57		Improving
management plan for	RF-7 a					
inspections and maintenance	thru e					
after storm events						
Watershed analyses used to	A-7, B21,	All	24	14/58		Improving
develop priorities for	B30					
restoration funding						
Watershed analyses	A7, B21,	All	15	13/88		Static
completed for entire 5 <sup>th</sup> field	B30					
watershed						
Reducing roads in key	B19, B31	All	11	5/45		Static
watersheds through						
decommissioning						

<sup>a</sup> Reasons for not-met projects: p = planning process; i = implementation; r = qualified reason.

Planning – the not met was a function of missing the standard and guideline during the planning process or a planning requirement, such as completing a watershed analysis when required, was not done.

Implementation – the not met was a result of not implementing the requirement on the ground, normally the planning document identified the need for meeting the standard and guideline.

Other qualified reason – the not met was a function of another reason for not meeting the standard and guideline such as meeting safety requirements first, as in the snags that were cut and sold in the campground. The standard applies to timber sales regardless of any other reasons.

## Figure 17. Plan implementation monitoring methods through 2003





Figure 18. Fiscal year 2004 Plan implementation monitoring methods using database and analytical tool.



Figure 19. Projects monitored by type and province, 1996 through 2003<sup>a</sup>; total projects reviewed were 240.

<sup>a</sup> No projects were reviewed in 2000, only watershed scale standards and guidelines.



Figure 20. Projects monitored in each province by land use allocation through 2003<sup>a</sup>; total projects reviewed were 240.

<sup>a</sup> No projects were reviewed in 2000, only watershed scale standards and guidelines. For

projects with multiple land use allocations, the major allocation was recorded in the database.