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October 7, 2013

#### VIA EMAIL AND U.S. MAIL

PUC Filing Center
Public Utility Commission of Oregon
PO Box 1088
Salem, OR 97308-1088

Re:

Docket UM 1635 - Northwest Natural Gas Company's Mechanism for Recovery of

**Environmental Remediation Costs** 

#### Attention Filing Center:

Enclosed for filing are printed and electronic copies of the Joint Parties' Revised Responses to Bench Requests issued on September 17, 2013. These revised responses correct errors that we recently identified in the original responses, which were filed on September 20, 2013. In particular, the workpapers have been revised for 2012 amounts in the earnings test scenario section (lines 36 to 53) of each tab. The original amounts reflected 10.2 as the reference ROE, rather than the weighted average 10.08 resulting from the November 1, 2012 rate case effective date. Additionally, the WACOG sharing amount for 2012 had not been entered, and it is used for each scenario on the "writeoff if WACOG sharing excluded from all earnings tests" line. For ease of reference, we are re-filing the entire excel file.

Also, please note that we have identified an error in the cover letter accompanying the initial filing. On page 2, in the first full paragraph, the letter states that the updated total deferral period expense and interest is \$93.4 million. The correct amount is provided in the spreadsheets as \$94.3 million.

Very truly yours,

Lisa Rackner

Enclosures

cc: Service List

1	CERTIFICATE C	OF SERVICE
2	I hereby certify that I served a true and corre	ct copy of the foregoing document in Docket UM
3	1635 on the following named person(s) on the da	te indicated below by email addressed to said
4	person(s) at his or her last-known address(es) indica	ted below.
5		
6	Chad M. Stokes	Tommy A. Brooks
7	Cable Huston Benedict Haagensen & Lloyd cstokes@cablehuston.com	Cable Huston Benedict Haagensen & Lloyd tbrooks@cablehuston.com
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12	Jay Tinker Portland General Electric	Richard George Portland General Electric
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14	Judy Johnson Public Utility Commission of Oregon	Jason W. Jones PUC Staff – Department of Justice
15	Judy.johnson@state.or.us	Jason.w.jones@state.or.us
16	DATED: October 7, 2013	
17		
18	1	Lendy Malnelvo dy McIndoo
19	Wen Offic	dy McIndoo e Manager
20		
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#### **Future Earnings Test Proposed Methodology Applied to Past Results**

_	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
ROE - Earnings Test	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%	
A - Insurance not Included											
SRRM Credit - Company Responsibility	\$0	\$27	\$257	\$1,322	\$622	\$526	\$8,283	\$6,593	\$7,261	\$439	\$25,330
SRRM Amortization - Customer Responsibility	\$1,034	\$2,178	\$8,952	\$5,238	\$8,140	\$7,639	\$1,684	\$7,081	\$8,059	\$18,983	\$68,989
ROE given SRRM	8.05%	9.48%	9.73%	10.15%	10.10%	9.99%	10.25%	10.24%	10.25%	9.82%	
B.a. Equal 10 year application of Insurance											
SRRM Credit - Company Responsibility	\$0	\$0	\$257	\$1,322	\$622	\$526	\$5,896	\$6,593	\$7,261	\$439	\$22,916
SRRM Amortization - Customer Responsibility	(\$3,036)	(\$1,866)	\$4,882	\$1,168	\$4,070	\$3,569	\$0	\$3,011	\$3,989	\$14,913	\$30,699
ROE given SRRM	8.05%	9.49%	9.73%	10.15%	10.10%	9.99%	10.53%	10.24%	10.25%	9.82%	
B.b. Insurance proportional to Expense											
SRRM Credit - Company Responsibility SRRM Amortization - Customer Responsibility	\$0 (\$3,036)	\$27 (\$1,866)	\$257 \$4,882	\$1,322 \$1,168	\$622 \$4,070	\$526 \$3,569	\$7,986 \$0	\$6,593 \$3,011	\$7,261 \$3,989	\$439 \$14,913	\$25,033 \$30,699
ROE given SRRM	8.05%	9.48%	9.73%	10.15%	10.10%	9.99%	10.29%	10.24%	10.25%	9.82%	455/555
B.c. Insurance applied to year of receipt											
SRRM Credit - Company Responsibility	\$0	\$27	\$257	\$1,322	\$622	\$526	\$8,283	\$6,593	\$7,261	\$439	\$25,330
SRRM Amortization - Customer Responsibility	\$1,034	\$2,178	\$8,952	\$5,238	\$8,140	\$7,639	\$1,684	\$7,081	\$4,410	\$14,913	\$61,269
ROE given SRRM	8.05%	9.48%	9.73%	10.15%	10.10%	9.99%	10.25%	10.24%	10.25%	9.82%	

# Insurance Spread: None

	2003	2004	<b>2005</b>	2006	<u>2007</u>	2008	2009	2010	<b>2011</b>	2012		
er Results of Operations ("ROO") as filed: data is from filed ROOs	, column c (after Typ	e I normalizing a	adjustments), the	ere are slight rou	nding differences							
et Operating Revenue	\$61,541	\$71,694	\$78,821	\$82,753	\$83,957	\$83,918	\$89,513	\$84,845	\$86,680	\$82,251		
otal Rate Base	\$814,052	\$858,497	\$940,148	\$958,767	\$975,963	\$978,907	\$986,180	\$967,308	\$993,165	\$1,028,353		
eturn on Rate Base	7.56%	8.35%	8.38%	8.63%	8.60%	8.57%	9.08%	8.77%	8.73%	8.00%		
eturn on Equity	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%		
uthorized ROE	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.08%	see note 1	
OE Threshold for each year's Spring Earnings Test	13.27%	13.27%	13.32%	13.44%	13.40%	13.14%	11.54%	11.02%	10.92%	10.92%		
nvironmental costs:											<u>Totals</u>	
nvironmental deferrals (as actually recorded each year) nterest on deferrals (as actually recorded each year)	\$1,034 \$0	\$2,205 \$0	\$9,209 \$0	\$5,290 \$1,270	\$6,754 \$2,008	\$5,415 \$2.750	\$6,464 \$3,503	\$9,231 \$4,444	<b>\$9,762</b> <b>\$5,559</b>	\$15,571 \$3,852	\$70,934 \$23,385	see i
otal Environmental deferrals with interest	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	
nsurance proceeds		0									0	
et Environmental costs	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	
nvironmental Deferrals Earnings Test Scenarios: these scenarios at exceeding the threshold results in a writeoff of costs to the extent the												
											<u>Totals</u>	of env
re tax amount of ROE compared to 10.2% write off to extent of earnings exceeded 10.2% deadband	<b>(\$14,492)</b> \$0	<b>(\$5,379)</b> \$0	<b>(\$3,535)</b> \$0	<b>\$878</b> \$878	<b>(\$233)</b> \$0	<b>(\$1,327)</b> \$0	<b>\$8,719</b> \$8,719	<b>\$6,940</b> \$6,940	<b>\$7,643</b> \$7,643	<b>(\$1,707)</b> \$0	(\$2,493) \$24,180	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$878	\$0	\$6,166	\$0	\$5,889	\$5,172	\$0	\$18,105	
sing deadband that existed in relevant Spring Earnings Test [a												
write off to extent of earnings exceeded deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$599 \$0	\$2,081 \$0	\$0 \$0	\$2,680	
00 bps deadband	, ,	, ,				, ,	, -	, -		,		
write off to extent of earnings exceeded 11.2% deadband	\$0	\$0	\$0	\$0	\$0	\$0	\$115	\$0	\$0	\$0	\$115	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
0 bps deadband	*0	+0	+0	+0	+0	+0		+2.074	+2 700	+0	*** ***	
write off to extent of earnings exceeded 10.7% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$1,775	\$4,417 \$0	\$3,074 \$2,022	\$3,780 \$1,309	\$0 \$0	\$11,271 \$5,107	
50 bps deadband												
write off to extent of earnings exceeded 9.7% deadband	\$0	\$0	\$536	\$5,008	\$4,067	\$3,064	\$9,967	\$10,807	\$11,506	\$2,360	\$47,314	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$536	\$5,008	\$4,067	\$8,165	\$0	\$9,756	\$9,035	\$0	\$36,567	
100 bps deadband write off to extent of earnings exceeded 9.2% deadband	\$0	\$2,151	\$4,606	\$6,560	\$8,367	\$7,454	\$9,967	\$13,675	\$15,320	\$6,426	\$74,527	
write off to extent or earnings exceeded 9.2% deaddand     writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$2,151	\$4,606	\$6,560	\$8,367	\$8,165	\$9,967 \$1,377	\$13,622	\$15,320	\$2,615	\$60,362	
ariable bps deadbands:												
100	<b>#</b> 0	<b>#</b> 0	40	40	<b>#</b> 0	<b>#</b> 0	¢11E	40	40	40	***	
write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	
-100												
write off to extent of earnings exceeded 9.2% deadband	\$0	\$2,151	\$4,606	\$6,560	\$8,367	\$7,454	\$9,967	\$13,675	\$15,320	\$6,426	\$74,527	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$2,151	\$4,606	\$6,560	\$8,367	\$8,165	\$1,377	\$13,622	\$12,898	\$2,615	\$60,362	
SRRM Application of Insurance Proceeds per Stipulation												
SRRM Credit - Company Responsibility	\$0	\$27	\$257	\$1,322	\$622	\$526	\$8,283	\$6,593	\$7,261	\$439	\$25,330	
SRRM Amortization - Customer Responsibility	\$1,034	\$2,178	\$8,952	\$5,238	\$8,140	\$7,639	\$1,684	\$7,081	\$8,059	\$18,983	\$68,989	
	8.05%	9,48%	9.73%	10.15%	10.10%	9.99%	10.25%	10.24%	10.25%	9.82%		
ROE given SRRM application	6.05%	5. 10 70	317 3 70									
ROE given SRRM application  SRRM Band - ROE less 75 bps up to ROE  SRRM Band - ROE to 50 bps over ROE	\$0	\$27	\$257	\$620 \$702	\$622	\$526	\$645 \$3,442	\$580 \$3,093	\$579 \$3,090	\$439		

# Insurance Spread: Equal over 10 years

NW Natural Rates & Regulatory Affairs Analysis of Oregon Earnings Tests (\$000's)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
er Results of Operations ("ROO") as filed: data is from filed ROOs,	column c (after Typ	e I normalizing a	djustments), ther	re are slight rour	nding differences							
et Operating Revenue	\$61,541	\$71,694	\$78,821	\$82,753	\$83,957	\$83,918	\$89,513	\$84,845	\$86,680	\$82,251		
otal Rate Base	\$814,052	\$858,497	\$940,148	\$958,767	\$975,963	\$978,907	\$986,180	\$967,308	\$993,165	\$1,028,353		
eturn on Rate Base	7.56%	8.35%	8.38%	8.63%	8.60%	8.57%	9.08%	8.77%	8.73%	8.00%		
eturn on Equity	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%		
uthorized ROE	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.08%		
DE Threshold for each year's Spring Earnings Test	13.27%	13.27%	13.32%	13.44%	13.40%	13.14%	11.54%	11.02%	10.92%	10.92%		
nvironmental costs:											<u>Totals</u>	
vironmental deferrals (as actually recorded each year) terest on deferrals (as actually recorded each year)	\$1,034 \$0	\$2,205 \$0	\$9,209 \$0	\$5,290 \$1.270	\$6,754 \$2.008	\$5,415 \$2,750	\$6,464 \$3,503	\$9,231 \$4,444	\$9,762 \$5.559	\$15,571 \$3,852	\$70,934 \$23,385	
otal Environmental deferrals with interest	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	1
surance proceeds	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(4,070)	(40,704)	
et Environmental costs	(\$3,036)	(\$1,866)	\$5,139	\$2,490	\$4,692	\$4,095	\$5,896	\$9,604	\$11,250	\$15,352	\$53,615	
												-
nvironmental Deferrals Earnings Test Scenarios: these scenarios of												
at exceeding the threshold results in a writeoff of costs to the extent that the tax amount of ROE compared to 10.2%	t earnings exceeded (\$14,492)	d the threshold. U	Jnder this interpro (\$3,535)	etation, the write	eoff is the lesser	of the pre-tax an	nount exceeding \$8,719	\$6,940	r the actual env	vironmental spent.	<u>Totals</u>	write of envi
write off to extent of earnings exceeded 10.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$878 \$878	\$0 \$0	\$0 \$4,095	\$5,896 \$0	\$6,940 \$5,889	\$7,643 \$5,172	\$0 \$0	\$21,358 \$16,033	
	φU	φυ	φυ	φ <b>0</b> / 0	φU	φτ,033	φV	φ3,003	φ3,172	φU	\$10,033	
ing deadband that existed in relevant Spring Earnings Test [a] write off to extent of earnings exceeded deadband writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$599 \$0	\$2,081 \$0	\$0 \$0	\$2,680	
	,-	7.	7.	7-	7-	, ,	7-	7-	7-	7.		
00 bps deadband write off to extent of earnings exceeded 11.2% deadband	\$0	\$0	\$0	\$0	\$0	\$0	\$115	\$0	\$0	\$0	\$115	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
D bps deadband write off to extent of earnings exceeded 10.7% deadband	*0											
		40	¢0	¢0	¢Ω	¢Ω	¢4.417	¢2.074	<b>#2 70</b> ∩	¢0	¢11 274	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$1,775	\$4,417 \$0	\$3,074 \$2,022	\$3,780 \$1,309	\$0 \$0	\$11,271 \$5,107	
50 bps deadband	\$0		\$0	\$0	\$0	\$1,775	\$0	\$2,022	\$1,309	\$0	\$5,107	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband		\$0 \$0	\$0 \$536	\$0 \$2,490	\$0 \$4,067	\$1,775 \$3,064	\$0 \$5,896	\$2,022 \$9,604	\$1,309 \$11,250	\$0 \$2,360	\$5,107 \$39,266	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0	\$0	\$0	\$0	\$1,775	\$0	\$2,022	\$1,309	\$0	\$5,107	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests 1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband	\$0 \$0 \$0	\$0 \$0 \$0	\$536 \$536 \$536	\$0 \$2,490 \$2,490 \$2,490	\$4,067 \$4,067 \$4,067 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095	\$5,896 \$0 \$5,896	\$2,022 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250	\$0 \$2,360 \$0 \$6,426	\$5,107 \$39,266 \$29,826 \$49,059	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0 \$0	\$0 \$0 \$0	\$0 \$536 \$536	\$0 \$2,490 \$2,490	\$0 \$4,067 \$4,067	\$1,775 \$3,064 \$4,095	\$5,896 \$0	\$2,022 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035	\$0 \$2,360 \$0	\$5,107 \$39,266 \$29,826	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests 1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests ariable bps deadbands:	\$0 \$0 \$0	\$0 \$0 \$0	\$536 \$536 \$536	\$0 \$2,490 \$2,490 \$2,490	\$4,067 \$4,067 \$4,067 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095	\$5,896 \$0 \$5,896	\$2,022 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250	\$0 \$2,360 \$0 \$6,426	\$5,107 \$39,266 \$29,826 \$49,059	
60 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 ariable bps deadbands: 1.00 write off to extent of earnings exceeded 11.2% deadband	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$536 \$536 \$536 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490	\$0 \$4,067 \$4,067 \$4,692 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$4,095	\$0 \$5,896 \$0 \$5,896 \$1,377	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250	\$0 \$2,360 \$0 \$6,426 \$2,615	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  ariable bps deadbands: 100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0	\$536 \$536 \$536 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$2,490	\$4,067 \$4,067 \$4,067 \$4,692 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095	\$5,896 \$0 \$5,896 \$1,377	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250	\$0 \$2,360 \$0 \$6,426 \$2,615	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729	
60 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0	\$536 \$536 \$536 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490	\$0 \$4,067 \$4,067 \$4,692 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$4,095	\$0 \$5,896 \$0 \$5,896 \$1,377	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250	\$0 \$2,360 \$0 \$6,426 \$2,615	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729	
60 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0	\$0 \$536 \$536 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$0 \$0	\$0 \$4,067 \$4,067 \$4,692 \$4,692 \$0 \$0	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$0 \$0	\$5,896 \$0 \$5,896 \$1,377 \$115 \$0	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604 \$0 \$0	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250 \$0 \$0	\$0 \$2,360 \$0 \$6,426 \$2,615 \$0 \$0	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729 \$115 \$0	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests 1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests ariable bps deadbands: 100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$536 \$536 \$4,606 \$4,606 \$0 \$0	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$0 \$0 \$2,490	\$0 \$4,067 \$4,067 \$4,692 \$4,692 \$0 \$0	\$1,775 \$3,064 \$4,095 \$4,095 \$0 \$0 \$0	\$5,896 \$5,896 \$1,377 \$115 \$0	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604 \$0 \$0	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250 \$0 \$11,250	\$0 \$2,360 \$0 \$6,426 \$2,615 \$0 \$0	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729 \$115 \$0	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  ariable bps deadbands: 100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  SRRM Application of Insurance Proceeds per Stipulation  SRRM Credit - Company Responsibility	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$536 \$536 \$4,606 \$4,606 \$0 \$0 \$4,606 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$0 \$0 \$0 \$2,490 \$2,490 \$2,490 \$1,322	\$0 \$4,067 \$4,067 \$4,692 \$4,692 \$0 \$0 \$0 \$4,692 \$4,692 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$0 \$0 \$0 \$4,095 \$4,095 \$4,095 \$4,095	\$0 \$5,896 \$0 \$5,896 \$1,377 \$115 \$0 \$5,896 \$1,377 \$1,377	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604 \$0 \$0 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250 \$0 \$0 \$11,250 (\$4,070) \$7,261	\$0 \$2,360 \$0 \$6,426 \$2,615 \$0 \$0 \$6,426 \$2,615 (\$4,070)	\$39,266 \$29,826 \$49,059 \$40,729 \$115 \$0 \$49,059 \$40,729 (\$40,704) \$22,916	
write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  100 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  ariable bps deadbands: 100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  -100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  SRRM Application of Insurance Proceeds per Stipulation  SRRM Credit - Company Responsibility SRRM Amortization - Customer Responsibility	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$536 \$536 \$4,606 \$4,606 \$0 \$0 \$4,606 \$4,606 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$0 \$0 \$2,490 \$2,490 \$1,322 \$1,168	\$0 \$4,067 \$4,067 \$4,692 \$4,692 \$0 \$0 \$4,692 \$4,692 \$4,692 \$4,070 \$622 \$4,070	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$0 \$0 \$4,095 \$4,095 \$4,095 \$4,070 \$526 \$3,569	\$5,896 \$1,377 \$115 \$0 \$5,896 \$1,377 \$4,070) \$5,896 \$0	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604 \$0 \$0 \$0 \$9,604 \$9,604 \$1,000	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250 \$0 \$0 \$11,250 \$11,250 \$11,250 \$7,261 \$3,989	\$0 \$2,360 \$0 \$6,426 \$2,615 \$0 \$0 \$439 \$14,913	\$5,107 \$39,266 \$29,826 \$49,059 \$40,729 \$115 \$0 \$49,059 \$40,729	
50 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  1.00 bps deadband write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  ariable bps deadbands: 1.00 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  -1.00 write off to extent of earnings exceeded 9.2% deadband write off to extent of earnings exceeded 9.2% deadband	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	\$0 \$536 \$536 \$4,606 \$4,606 \$0 \$0 \$4,606 \$4,606 \$4,606	\$0 \$2,490 \$2,490 \$2,490 \$2,490 \$0 \$0 \$0 \$2,490 \$2,490 \$2,490 \$1,322	\$0 \$4,067 \$4,067 \$4,692 \$4,692 \$0 \$0 \$0 \$4,692 \$4,692 \$4,692	\$1,775 \$3,064 \$4,095 \$4,095 \$4,095 \$0 \$0 \$0 \$4,095 \$4,095 \$4,095 \$4,095	\$0 \$5,896 \$0 \$5,896 \$1,377 \$115 \$0 \$5,896 \$1,377 \$1,377	\$2,022 \$9,604 \$9,604 \$9,604 \$9,604 \$0 \$0 \$9,604 \$9,604 \$9,604	\$1,309 \$11,250 \$9,035 \$11,250 \$11,250 \$0 \$0 \$11,250 (\$4,070) \$7,261	\$0 \$2,360 \$0 \$6,426 \$2,615 \$0 \$0 \$6,426 \$2,615 (\$4,070)	\$39,266 \$29,826 \$49,059 \$40,729 \$115 \$0 \$49,059 \$40,729 (\$40,704) \$22,916	

NW Natural Rates & Regulatory Affairs Analysis of Oregon Earnings Tests (\$000's)

# Insurance Spread: % of Expense

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
er Results of Operations ("ROO") as filed: data is from filed ROOs,	column c (after Typ	e I normalizing a	djustments), the	re are slight rour	nding differences							
et Operating Revenue	\$61,541	\$71,694	\$78,821	\$82,753	\$83,957	\$83,918	\$89,513	\$84,845	\$86,680	\$82,251		
tal Rate Base	\$814,052	\$858,497	\$940,148	\$958,767	\$975,963	\$978,907	\$986,180	\$967,308	\$993,165	\$1,028,353		
eturn on Rate Base	7.56%	8.35%	8.38%	8.63%	8.60%	8.57%	9.08%	8.77%	8.73%	8.00%		
eturn on Equity	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%		
uthorized ROE	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.08%		
DE Threshold for each year's Spring Earnings Test	13.27%	13.27%	13.32%	13.44%	13.40%	13.14%	11.54%	11.02%	10.92%	10.92%		
vironmental costs:											<u>Totals</u>	
vironmental deferrals (as actually recorded each year) terest on deferrals (as actually recorded each year)	\$1,034 \$0	\$2,205 \$0	\$9,209 \$0	\$5,290 \$1,270	\$6,754 \$2.008	\$5,415 \$2,750	\$6,464 \$3,503	\$9,231 \$4,444	\$9,762 \$5,559	\$15,571 \$3,852	\$70,934 \$23,385	
tal Environmental deferrals with interest	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	1
surance proceeds	(446)	(951)	(3,974)	(2,831)	(3,781)	(3,524)	(4,301)	(5,901)	(6,612)	(8,382)	(40,704)	
et Environmental costs	\$588	\$1,253	\$5,235	\$3,729	\$4,981	\$4,641	\$5,665	\$7,773	\$8,709	\$11,041	\$53,615	
nvironmental Deferrals Earnings Test Scenarios: these scenarios of												
at exceeding the threshold results in a writeoff of costs to the extent that e tax amount of ROE compared to 10.2%	(\$14,492)	(\$5,379)	Jnder this interpri	etation, the write	(\$233)	of the pre-tax an	s8,719	\$6,940	\$7,643	(\$1,707)	<u>Totals</u> (\$2,493)	write of envi
write off to extent of earnings exceeded 10.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$878 \$878	\$0 \$0	\$0 \$4,641	\$5,665 \$0	\$6,940 \$5,889	\$7,643 \$5,172	\$0 \$0	\$21,127 \$16,580	
	φU	φU	φU	4070	φU	φτ,041	φu	φ3,003	φ3,172	φU	\$10,56U	
sing deadband that existed in relevant Spring Earnings Test [a] write off to extent of earnings exceeded deadband	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$599	\$2,081	\$0	\$2,680	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
00 bps deadband write off to extent of earnings exceeded 11.2% deadband	\$0	\$0	\$0	\$0	\$0	\$0	\$115	\$0	\$0	\$0	\$115	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
D bps deadband	*0	+0	40	*0	*0	*0	A4 417	42.074	#2.700	*0	414 274	
write off to extent of earnings exceeded 10.7% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$1,775	\$4,417 \$0	\$3,074 \$2,022	\$3,780 \$1,309	\$0 \$0	\$11,271 \$5,107	
50 bps deadband												
write off to extent of earnings exceeded 9.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$536 \$536	\$3,729 \$3,729	\$4,067 \$4,067	\$3,064 \$4,641	\$5,665 \$0	\$7,773 \$7,773	\$8,709 \$8,709	\$2,360 \$0	\$35,903 \$29,455	
	φU	ΨU	φυυ	φ3,72 <del>3</del>	φτ,υυ/	φτ,υτ1	φu	φ1,113	φυ,/υσ	ΨU	929 <sub>1</sub> 433	
100 bps deadband write off to extent of earnings exceeded 9.2% deadband	\$0	\$1,253	\$4,606	\$3,729	\$4,981	\$4,641	\$5,665	\$7,773	\$8,709	\$6,426	\$47,785	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$1,253	\$4,606	\$3,729	\$4,981	\$4,641	\$1,377	\$7,773	\$8,709	\$2,615	\$39,685	
ariable bps deadbands:												
100 write off to extent of earnings exceeded 11.2% deadband	\$0	\$0	\$0 *0	\$0 *0	\$0 *0	\$0 *0	\$115	\$0	\$0	\$0 *0	\$115	
100	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100												
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$1,253	\$0 \$4,606	\$0 \$3,729	\$0 \$4,981	\$0 \$4,641	\$0 \$5,665	\$0 \$7,773	\$0 \$8,709	\$0 \$6,426	\$0 \$47,785	
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests  SRRM Application of Insurance Proceeds per Stipulation  SRRM Credit - Company Responsibility	\$0 \$0 \$0 (\$45) \$0	\$1,253 \$1,253 (\$140) \$27	\$4,606 \$4,606 (\$537) \$257	\$0 \$3,729 \$3,729 (\$820) \$1,322	\$0 \$4,981 \$4,981 (\$1,198) \$622	\$0 \$4,641 \$4,641 (\$1,551) \$526	\$5,665 \$1,377 (\$1,981) \$7,986	\$7,773 \$7,773 (\$2,571) \$6,593	\$8,709 \$8,709 (\$3,232) \$7,261	\$0 \$6,426 \$2,615 (\$4,070) \$439	\$47,785 \$39,685	
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100 write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests SRRM Application of Insurance Proceeds per Stipulation SRRM Credit - Company Responsibility SRRM Amortization - Customer Responsibility	\$0 \$0 \$0 (\$45) \$0 (\$3,036)	\$1,253 \$1,253 (\$140) \$27 (\$1,866)	\$0 \$4,606 \$4,606 (\$537) \$257 \$4,882	\$0 \$3,729 \$3,729 (\$820) \$1,322 \$1,168	\$0 \$4,981 \$4,981 (\$1,198) \$622 \$4,070	\$0 \$4,641 \$4,641 (\$1,551) \$526 \$3,569	\$5,665 \$1,377 (\$1,981) \$7,986 \$0	\$0 \$7,773 \$7,773 (\$2,571) \$6,593 \$3,011	\$8,709 \$8,709 (\$3,232) \$7,261 \$3,989	\$6,426 \$2,615 (\$4,070) \$439 \$14,913	\$47,785 \$39,685	
100 write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests -100 write off to extent of earnings exceeded 9.2% deadband	\$0 \$0 \$0 (\$45) \$0	\$1,253 \$1,253 (\$140) \$27	\$4,606 \$4,606 (\$537) \$257	\$0 \$3,729 \$3,729 (\$820) \$1,322	\$0 \$4,981 \$4,981 (\$1,198) \$622	\$0 \$4,641 \$4,641 (\$1,551) \$526	\$5,665 \$1,377 (\$1,981) \$7,986	\$7,773 \$7,773 (\$2,571) \$6,593	\$8,709 \$8,709 (\$3,232) \$7,261	\$0 \$6,426 \$2,615 (\$4,070) \$439	\$47,785 \$39,685	

# **Insurance Spread: yr of reimbursement**

NW Natural Rates & Regulatory Affairs Analysis of Oregon Earnings Tests (\$000's)

Analysis (\$000's)	of Oregon Earnings Tests	1 <b>2003</b>	2 <b>2004</b>	3 <b>2005</b>	4 <b>2006</b>	5 <b>2007</b>	6 <b>2008</b>	7 <b>2009</b>	8 <b>2010</b>	9 <b>2011</b>	2012		
1	Per Results of Operations ("ROO") as filed: data is from filed ROOs, or					•		2442	<u> </u>				
2	Net Operating Revenue	\$61,541	\$71,694	\$78,821	\$82,753	\$83,957	\$83,918	\$89,513	\$84,845	\$86,680	\$82,251		
4	Total Rate Base	\$814,052	\$858,497	\$940,148	\$958,767	\$975,963	\$978,907	\$986,180	\$967,308	\$993,165	\$1,028,353		
6	Return on Rate Base	7.56%	8.35%	8.38%	8.63%	8.60%	8.57%	9.08%	8.77%	8.73%	8.00%		
8	Return on Equity	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%		
10 11													
12 13	Authorized ROE	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.08%		
14 15	ROE Threshold for each year's Spring Earnings Test	13.27%	13.27%	13.32%	13.44%	13.40%	13.14%	11.54%	11.02%	10.92%	10.92%		
16 17	Environmental costs:											<u>Totals</u>	
18 19	Environmental Costs. Environmental deferrals (as actually recorded each year) Interest on deferrals (as actually recorded each year)	\$1,034 \$0	\$2,205 \$0	\$9,209 \$0	\$5,290 \$1,270	\$6,754 \$2,008	\$5,415 \$2,750	\$6,464 \$3,503	\$9,231 \$4,444	\$9,762 \$5,559	\$15,571 \$3,852	\$70,934 \$23,385	
20	Total Environmental deferrals with interest	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	
21 22 23	Insurance proceeds									(36,497)	(4,207)	(40,704)	
24	Net Environmental costs	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	(\$21,177)	\$15,215	\$53,615	
25 26													
27 28	<b>Environmental Deferrals Earnings Test Scenarios:</b> these scenarios co that exceeding the threshold results in a writeoff of costs to the extent that												
29 30	Pre tax amount of ROE compared to 10.2%	(\$14,492)	(\$5,379)	(\$3,535)	\$878	(\$233)	(\$1,327)	\$8,719	\$6,940	\$7,643	(\$1,707)	<u>Totals</u> (\$2,493)	writeoff as % of enviro cost
31 32	write off to extent of earnings exceeded 10.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$878 \$878	\$0 \$0	\$0 \$6,166	\$8,719 \$0	\$6,940 \$5,889	\$0 \$0	\$0 \$0	\$16,537 \$12,932	30.8% 24.1%
33	using deadband that existed in relevant Spring Earnings Test [a]												
34 35	write off to extent of earnings exceeded deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$599 \$0	\$0 \$0	\$0 \$0	\$599	1.1% 0.0%
36	100 bps deadband												
37 38	write off to extent of earnings exceeded 11.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	0.2% 0.0%
39	50 bps deadband												
40 41	write off to extent of earnings exceeded 10.7% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$1,775	\$4,417 \$0	\$3,074 \$2,022	\$0 \$0	\$0 \$0	\$7,491 \$3,797	14.0% 7.1%
42	-50 bps deadband											. ,	
43 44	write off to extent of earnings exceeded 9.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$536 \$536	\$5,008 \$5,008	\$4,067 \$4,067	\$3,064 \$8,165	\$9,967 \$0	\$10,807 \$9,756	\$0 \$0	\$2,360 \$0	\$35,808 \$27,531	66.8% 51.3%
45	-100 bps deadband	7-	7-	,,,,,	4-/	4 //	4-7	,,,	4-7	7-	-	7-1/552	
46 47	write off to extent of earnings exceeded 9.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$2,151 \$2,151	\$4,606 \$4,606	\$6,560 \$6,560	\$8,367 \$8,367	\$7,454 \$8,165	\$9,967 \$1,377	\$13,675 \$13,622	\$0 \$0	\$6,426 \$2,615	\$59,206 \$47,464	110.4% 88.5%
.,	Variable bps deadbands:	ΨŪ	42,131	4 1,000	40,500	40,507	ψ0/103	41,577	<b>413/022</b>	40	42,013	4117101	00.570
48 49	100 write off to extent of earnings exceeded 11.2% deadband	\$0	\$0	\$0	\$0	\$0	\$0	\$115	\$0	\$0	\$0	\$115	0.2%
50	writeoff if WACOG sharing excluded from all earnings tests	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0 \$0	\$0	\$0	\$0	0.0%
51	-100	÷0	<b>#2.151</b>	±4.505	+C FC0	÷0.267	±7.454	+0.067	#12.C7E	40	÷C 42C	450 205	110.40/
52 53	write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$2,151 \$2,151	\$4,606 \$4,606	\$6,560 \$6,560	\$8,367 \$8,367	\$7,454 \$8,165	\$9,967 \$1,377	\$13,675 \$13,622	\$0 \$0	\$6,426 \$2,615	\$59,206 \$47,464	110.4% 88.5%
54	SRRM Application of Insurance Proceeds per Stipulation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	(\$3,650)	(\$4,070)	(\$7,720)	
55	SRRM Credit - Company Responsibility	\$0	\$27	\$257	\$1,322	\$622	\$526 +7.620	\$8,283	\$6,593	\$7,261	\$439	\$25,330	
56	SRRM Amortization - Customer Responsibility	\$1,034	\$2,178	\$8,952	\$5,238	\$8,140	\$7,639	\$1,684	\$7,081	\$4,410	\$14,913	\$61,269	
57	ROE given SRRM application	8.05%	9.48%	9.73%	10.15%	10.10%	9.99%	10.25%	10.24%	10.25%	9.82%		
58 59	SRRM Band - ROE less 75 bps up to ROE SRRM Band - ROE to 50 bps over ROE	\$0	\$27	\$257	\$620 \$702	\$622	\$526	\$645 \$3,442	\$580 \$3,093	\$579 \$3,090	\$439		
60	SRRM Band - Over 50 bps over ROE							\$4,196	\$2,920	\$3,591			

NW Natural Rates & Regulatory Affairs Analysis of Oregon Earnings Tests (\$000's)

#### Insurance Spread: None entered - open for testing

of Oregon Earnings Tests	1	2	3	4	5	6	7	8	9	2042		
Per Results of Operations ("ROO") as filed: data is from filed ROOs, or	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		
Net Operating Revenue	\$61,541	\$71,694	\$78,821	\$82,753	\$83,957	\$83,918	\$89,513	\$84,845	\$86,680	\$82,251		
Total Rate Base	\$814,052	\$858,497	\$940,148	\$958,767	\$975,963	\$978,907	\$986,180	\$967,308	\$993,165	\$1,028,353		
teturn on Rate Base	7.56%	8.35%	8.38%	8.63%	8.60%	8.57%	9.08%	8.77%	8.73%	8.00%		
eturn on Equity	8.05%	9.49%	9.77%	10.31%	10.17%	10.05%	11.21%	11.10%	11.19%	9.87%		
authorized ROE	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.20%	10.08%		
OE Threshold for each year's Spring Earnings Test	13.27%	13.27%	13.32%	13.44%	13.40%	13.14%	11.54%	11.02%	10.92%	10.92%		
invironmental costs:											<u>Totals</u>	
nvironmental deferrals (as actually recorded each year) nterest on deferrals (as actually recorded each year)	\$1,034 \$0	\$2,205 \$0	\$9,209 \$0	\$5,290 \$1,270	\$6,754 \$2.008	\$5,415 \$2,750	\$6,464 \$3,503	\$9,231 \$4,444	\$9,762 \$5,559	\$15,571 \$3,852	\$70,934 \$23,385	
otal Environmental deferrals with interest	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	
nsurance proceeds											0	
let Environmental costs	\$1,034	\$2,205	\$9,209	\$6,560	\$8,762	\$8,165	\$9,967	\$13,675	\$15,320	\$19,423	\$94,319	
invironmental Deferrals Earnings Test Scenarios: these scenarios co	nsider the pre-tay	amount exceedir	ng an eyample th	reshold ROE and	d calculate the an	nount of environ	mental costs that	t would be writte	n off if the test i	is interpretated		
nat exceeding the threshold results in a writeoff of costs to the extent that											Totala	of or
re tax amount of ROE compared to 10.2%	(\$14,492)	(\$5,379)	(\$3,535)	\$878	(\$233)	(\$1,327)	\$8,719	\$6,940	\$7,643	(\$1,707)	<u>Totals</u> (\$2,493)	of envi
write off to extent of earnings exceeded 10.2% deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$878 \$878	\$0 \$0	\$0 \$6,166	\$8,719 \$0	\$6,940 \$5,889	\$7,643 \$5,172	\$0 \$0	\$24,180 \$18,105	
sing deadband that existed in relevant Spring Earnings Test [a]												
write off to extent of earnings exceeded deadband  1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$599 \$0	\$2,081 \$0	\$0 \$0	\$2,680							
.00 bps deadband												
write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	
50 bps deadband												
write off to extent of earnings exceeded 10.7% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$1,775	\$4,417 \$0	\$3,074 \$2,022	\$3,780 \$1,309	\$0 \$0	\$11,271 \$5,107	
50 bps deadband	40	40	Ψ	40	40	42,773	40	<i>Ψ2,</i> 022	41/303	40	45/207	
write off to extent of earnings exceeded 9.7% deadband	\$0 \$0	\$0 \$0	\$536 \$536	\$5,008 \$5,008	\$4,067 \$4,067	\$3,064 \$8,165	\$9,967 \$0	\$10,807	\$11,506	\$2,360 \$0	\$47,314 \$36,567	
1 writeoff if WACOG sharing excluded from all earnings tests	<b>\$</b> U	\$0	βουδ	\$5,008	\$4,00/	\$8,165	<b>\$</b> 0	\$9,756	\$9,035	\$0	\$30,567	
100 bps deadband write off to extent of earnings exceeded 9.2% deadband	\$0	\$2,151	\$4,606	\$6,560	\$8,367	\$7,454	\$9,967	\$13,675	\$15,320	\$6,426	\$74,527	
1 writeoff if WACOG sharing excluded from all earnings tests	\$0	\$2,151	\$4,606	\$6,560	\$8,367	\$8,165	\$1,377	\$13,622	\$12,898	\$2,615	\$60,362	
/ariable bps deadbands: 100												
write off to extent of earnings exceeded 11.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	\$0 \$0	\$0 \$0	\$0 \$0	\$115 \$0	
-100												
write off to extent of earnings exceeded 9.2% deadband 1 writeoff if WACOG sharing excluded from all earnings tests	\$0 \$0	\$2,151 \$2,151	\$4,606 \$4,606	\$6,560 \$6,560	\$8,367 \$8,367	\$7,454 \$8,165	\$9,967 \$1,377	\$13,675 \$13,622	\$15,320 \$12,898	\$6,426 \$2,615	\$74,527 \$60,362	
SRRM Application of Insurance Proceeds per Stipulation	per line 22	per line 22	per line 22									
SRRM Credit - Company Responsibility	\$0	\$27	\$257	\$1,322	\$622	\$526	\$8,283	\$6,593	\$7,261	\$439	\$25,330	
SRRM Amortization - Customer Responsibility	\$1,034	\$2,178	\$8,952	\$5,238	\$8,140	\$7,639	\$1,684	\$7,081	\$8,059	\$18,983	\$68,989	
ROE given SRRM application	8.05%	9.48%	9.73%	10.15%	10.10%	9.99%	10.25%	10.24%	10.25%	9.82%		
SRRM Band - ROE less 75 bps up to ROE SRRM Band - ROE to 50 bps over ROE	\$0	\$27	\$257	\$620 \$702	\$622	\$526	\$645 \$3,442	\$580 \$3,093	\$579 \$3,090	\$439		•
SRRM Band - Over 50 bps over ROE				4,02			\$4,196	\$2,920	\$3,591			