



2007  
Qualifying Storm Events

December 2, 2007

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## Event Description

### Date of event

December 2, 2007

### Event Type

Snow, extreme rain, flooding.

### Service Areas Affected

This event began with heavy snow in Kitsap County and transitioned to extremely heavy rain and related flooding in several parts of PSE's service area. Nearly 10 inches of rain fell in areas of western Washington (Bremerton = 9.67 inches) over a 24 hour period. Though PSE experienced a significant number of outages, with high winds and heavy rain, southwestern Washington and Oregon bore the brunt of this weather event. A stretch of I-5 through Chehalis in Lewis County was closed for several days due to flooding.

### Number of Customers Affected

More than 67,250 electric service customers lost power during this event.

### Summary of System Impacts

<b>Total Number of Outages</b>	<b>535</b>
Distribution Circuits Totally Out	15
Distribution Circuits Partially Out	520
Transmission Circuits Affected	4
Substations Totally Off-line	3

### Mobilization Summary

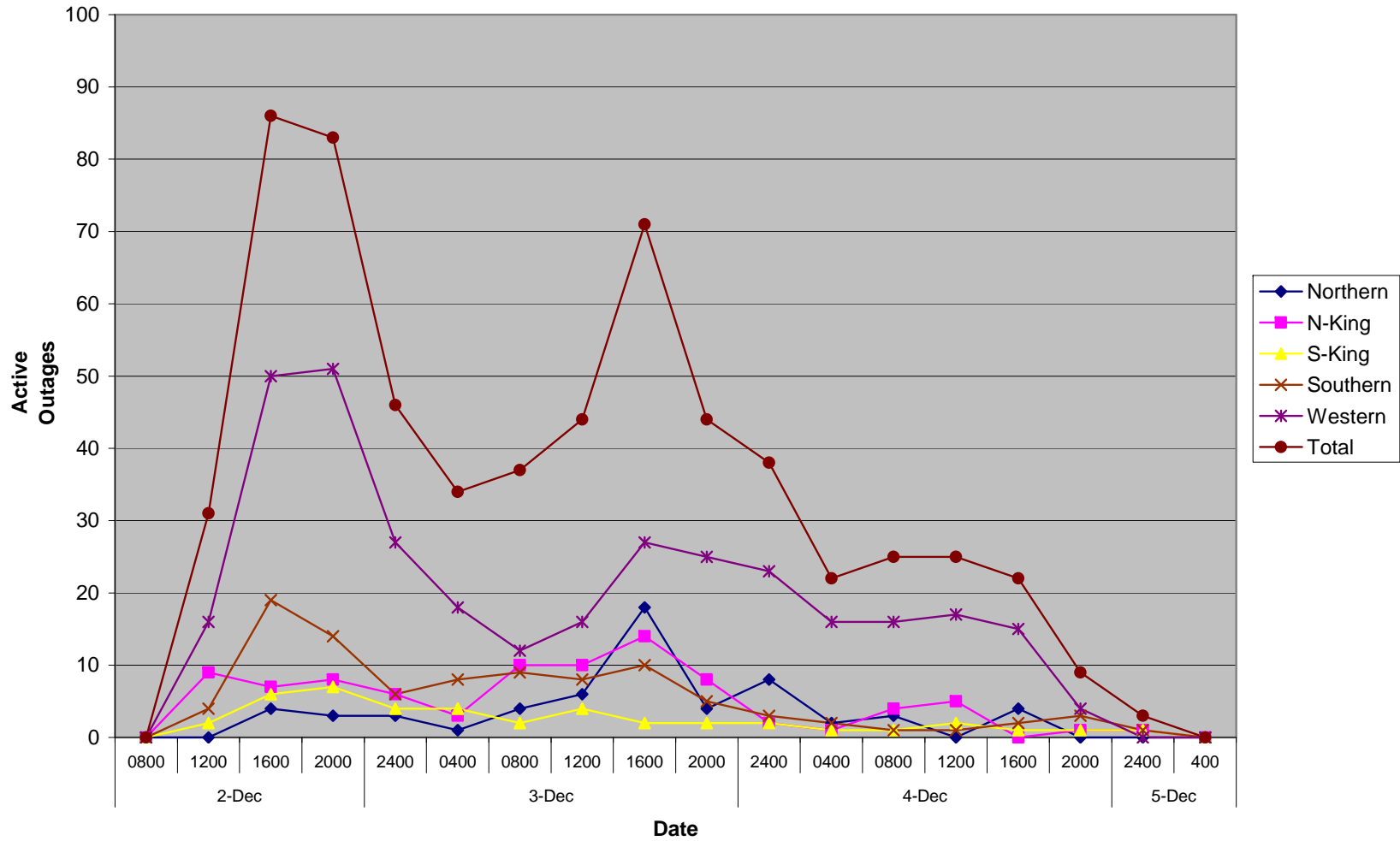
#### Operating bases

Base	Date Opened	Time Opened	Date Closed	Time Closed
Kitsap	12/2	11:30	12/4	22:30
Thurston	12/2	14:30	12/3	20:30
N-King	12/2	15:30	12/4	00:30
Skagit	12/3	16:15	12/4	00:15

#### Emergency Operations Center

EOC	Date Opened	Time Opened	Date Closed	Time Closed
	12/2	16:30	12/4	00:00

### Outage Events - December 2, 2007



## Major Event Day – Qualification

### IEEE 1366 Method

IEEE 1366 was established to present a set of terms and definitions which can be used to foster uniformity in the development of distribution service reliability indices, to identify factors which affect the indices, and to aid in consistent reporting practices among utilities. Also, it provides guidance for new personnel in the reliability area, and tools for internal as well as external comparisons. The Major Event Day definition was created as part of IEEE 1366 to allow for consistent calculation of reliability metrics between utilities, and enable more valid comparisons with other utility reliability metrics.

#### IEEE Major Event Day Calculation (2.5 BETA METHOD)

1. A threshold on daily SAIDI is computed once a year, following year end.
2. Assemble the 5 most recent years of historical values of SAIDI/day.
3. Discard any days in the data set that has a SAIDI/day of zero.
4. Find the natural logarithm of each value in the data set.
5. Compute the average Alpha and the standard deviation (Beta) of the natural logarithms computed in step 3.
6. Compute the threshold Tmed where  $Tmed = \exp(\text{Alpha} + 2.5 * \text{Beta})$
7. Any day in the next year with SAIDI > Tmed is a major event day.

**Puget Sound Energy's Major Event Threshold for 2007: 6.87 Minutes**

### Qualified Events - 2007

#### Current Event – Calculation Detail

Event Date	Total Customer Minutes	Average Customer Count	Daily SAIDI – Customer Minutes /Customer Count
12/2/2007	8,321,103	1,060,764	7.84

#### Cumulative list of events that have qualified

Date(s)	T-med Score	O&M – Deferrable Accumulation
1/2/2007	8.41	\$1,339,165
1/5/2007	11.62	\$2,395,508
1/9/2007	23.66	\$7,000,000
10/18/2007	57.28	\$0
11/12/2007	40.12	\$0
12/2/2007	7.84	\$0

## Event Restoration – Cost Summary

### Restoration Cost Detail by Qualifying Event

Date	Qualified Events Deferred Account	Capital	C&D Costs Recoverable from Direct Billings (Costs Not Yet Billed)	O&M – Not Deferrable	O&M – Deferrable Accumulation	Total O&M	Total
1/2/2007	\$0	\$56,550	\$0	\$38,044	\$1,338,765	\$1,376,809	\$1,433,359
1/5/2007	\$0	\$111,336	\$0	\$67,273	\$2,328,235	\$2,395,508	\$2,506,844
1/9/2007	\$316,014	\$171,146	\$0	\$113,115	\$3,333,000	\$3,446,115	\$3,933,275
10/18/2007	\$5,081,358	\$224,262	\$0	\$272,937	\$0	\$272,937	\$5,578,557
11/12/2007	\$4,779,888	\$311,867	\$0	\$192,630	\$0	\$192,630	\$5,284,385
12/2/2007	\$2,978,130	\$100,982	\$0	\$116,993	\$0	\$116,993	\$3,196,105

### YTD Storm Restoration Cost Detail – Through December 2, 2007

Qualified Events Deferred Account	Capital	C&D Costs Recoverable from Direct Billings (Costs Not Yet Billed)	O&M – Not Deferrable	O&M Deferrable Accumulation	Total O&M	Total
\$13,155,390	\$976,142	\$0	\$800,992	\$7,000,000	\$7,800,992	\$21,932,524

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## Detail Documents

**Restoration Cost Detail – Current Event**

**Detailed List of Distribution Circuits with Outages**

**Terms, Codes & Definitions Used on Detail Reports**

**Newsprint Media Coverage**

**Restoration Cost Detail – Current Event**

<b>Puget Sound Energy December 2, 2007 Storm Damage Repair Costs</b>							
	Qualifying Events Deferred Account	Capital	C&D Recoverable from Direct Billings (Costs Not Yet Billed)	O&M - Not Deferrable	O&M - Deferrable Accumulation	Total O&M	Total
Labor							
ST					\$ 20,302	\$20,302	\$20,302
OT					\$ 254,519	\$254,519	\$254,519
Total Labor	\$0	\$0	\$0	\$0	\$ 274,821	\$274,821	\$274,821
Labor OH					\$ 86,856	\$86,856	\$86,856
Materials		\$46,239.02			\$ 86,935	\$86,935	\$133,174
Contractors		\$52,722.16			\$ 2,459,331	\$2,459,331	\$2,512,053
Other Direct Charges					\$ 13,642	\$13,642	\$13,642
Fleet					\$ 21,776.56	\$21,777	\$21,777
Other Assessments		\$ 2,020.73		\$ 116,992.56	\$ 34,769	\$151,761	\$153,782
Deferred Expenses	\$2,978,130				\$ (2,978,130)	(\$2,978,130)	\$0
	\$2,978,130	\$100,982	\$0	\$116,993	\$0	\$116,993	\$3,196,105



### IEEE-1366 - Detailed List of Distribution Circuits with Outages

Notification	Date	Time	Circuit	Area	Cause	Equipment	Cust Outs	Cust Mins
10785360	12/2/2007	1:39:00	AVO-15	EBE	EF	OTR	2	746
E913537600	12/2/2007	2:15:00	DUV-12	EBD	TO	OCO	1	528
E991077291	12/2/2007	3:13:00	HOB-15	EBI	TF	OCO	15	1,395
E703586709	12/2/2007	3:57:00	TOL-17	EBD	TO	OCO	4	964
E676643778	12/2/2007	5:34:00	CUM-13	EBI	TF	OFU	2	192
E264529084	12/2/2007	5:41:00	MIR-15	EBF	EF	OTF	1	295
E224132118	12/2/2007	5:57:00	HOB-15	EBI	TF	OFU	13	1,835
E991258311	12/2/2007	6:04:00	ROC-16	ECC	TO	OCO	1	387
E598919068	12/2/2007	6:11:00	PET-15	EAC	CP	OPO	836	32,028
E321280961	12/2/2007	6:29:00	MIL-22	ECE	TO	OFU	32	4,672
E107828195	12/2/2007	6:33:00	SIL-15	ECD	TO	OFU	46	37,122
E522695882	12/2/2007	6:39:00	FAL-15	EBF	TF	OCO	25	5,719
E161639542	12/2/2007	7:33:00	HOB-17	EBI	TO	OFU	30	4,272
E935823608	12/2/2007	7:34:00	HOB-16	EBI	TO	CDH	57	25,616
E780636437	12/2/2007	7:40:00	PRI-21	ECC	TF	OCO	2	252
E290898167	12/2/2007	8:13:00	VIS-26	EAA	EF	OFU	30	1,816
E204724187	12/2/2007	8:22:00	MOT-14	ECC			24	7,485
E275108094	12/2/2007	9:01:00	DUV-15	EBD	TF	OCO	472	37,288
E440272945	12/2/2007	9:36:00	FNW-17	ECD	TF	OFU	13	1,902
E878880452	12/2/2007	9:40:00	SNQ-17	EBF	TO	OCO	20	14,697
E340841422	12/2/2007	9:42:00	HOB-15	EBI	TO	OCO	1	54
E203266133	12/2/2007	9:42:00	HAS-15	ECF	TF	OTF	3	332
E868398822	12/2/2007	9:54:00	MWD-16	EBE	EF	OCN	2	696
E802270876	12/2/2007	10:05:00	SKY-23	EBD	TF	OCO	5	1,290
E395025426	12/2/2007	10:22:00	BDI-15	EBI	TF	OSV	2	432
E438738508	12/2/2007	10:35:00	AIR-23	ECC	TF	OTF	1	115
E396560634	12/2/2007	10:42:00	NBE-13	EBF	TO	OCO	1	827
E325064973	12/2/2007	10:44:00	FAL-15	EBF	EF	OCO	40	5,640
10787564	12/2/2007	10:45:00	VAS-13	EBL	TO	OFU	1,822	1,067,692
E725003988	12/2/2007	10:51:00	SIN-25	ECD	TO	OCO	79	111,706
E980933402	12/2/2007	10:51:00	IRO-15	ECF			223	29,882
E732121060	12/2/2007	11:05:00	MST-23	EBI	EF	USV	1	97
E112493475	12/2/2007	11:07:00	PGA-13	ECE			161	55,545
E647206846	12/2/2007	11:09:00	CHR-25	ECE			500	65,500
10788328	12/2/2007	11:14:00	MIL-17	ECE	TO	OCO	1,664	134,784
E954606100	12/2/2007	11:20:00	CHI-12	ECD	TO	OFU	80	17,280
E262138714	12/2/2007	11:21:00	SWD-13	ECE	TO	OCO	85	74,375
E406651673	12/2/2007	11:24:00	PRI-21	ECC	CP		50	31,800
E955527364	12/2/2007	11:30:00	EPO-13	ECD	TO	OFU	1	120
E368251863	12/2/2007	11:31:00	POU-15	ECE	TO	CDH	1,329	638,552
E108219126	12/2/2007	11:44:00	RPT-17	ECD	TF	OFU	25	2,566
E819774890	12/2/2007	12:01:00	SKE-22	ECE	TO	OCO	99	84,910
E158362213	12/2/2007	12:04:00	CHR-22	ECE	TO	OCO	136	39,120
E061608743	12/2/2007	12:14:00	SIL-13	ECF	TO	OCO	78	36,036
E393060989	12/2/2007	12:23:00	MIL-22	ECE			341	94,457
E153018602	12/2/2007	12:27:00	WLK-15	ECA	TO	OFU	2	190
E296911049	12/2/2007	12:28:00	SKE-23	ECE	TO	OCO	104	75,088
E490558643	12/2/2007	12:30:00	IRO-16	ECF			3	1,335
E809401051	12/2/2007	12:32:00	RAI-13	ECC	TF	OCO	8	1,144
10788111	12/2/2007	12:36:00	TLN-0089	ECE	TO	OFU	4,092	94,116
E299715977	12/2/2007	12:36:00	PMA-16	ECE			56	26,264
E249838953	12/2/2007	12:36:00	LON-22	ECC			50	31,400
E620431952	12/2/2007	12:37:00	WLK-13	ECA	TO	OCO	25	22,625
E166810665	12/2/2007	12:38:00	PTL-16	ECF	TO	OCO	130	95,355
E065059211	12/2/2007	12:38:00	PTL-16	ECF	TO	OCO	500	247,000
E386740745	12/2/2007	12:45:00	BHL-12	ECE	TF	OCO	145	58,975

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Notification	Date	Time	Circuit	Area	Cause	Equipment	Cust Outs	Cust Mins
E444189081	12/2/2007	12:48:00	CHI-12	ECD	TO	OFU	50	8,850
E316026715	12/2/2007	12:54:00	TRA-22	ECE	TO	OCO	1,551	271,425
E891793732	12/2/2007	12:58:00	SWI-13	ECC			912	25,536
E301775696	12/2/2007	13:00:00	MIL-17	ECE	TO	OCO	1,664	519,168
E218664205	12/2/2007	13:00:00	MIL-16	ECE	TO	OFU	80	37,760
E650941924	12/2/2007	13:04:00	ENU-17	EBI	TO	CDH	29	5,974
E184150805	12/2/2007	13:05:00	BHL-16	ECE	TO	OFU	50	10,950
E273275162	12/2/2007	13:05:00	CLA-13	EBI	TF	OCO	7	10,031
E524279875	12/2/2007	13:08:00	SIL-13	ECE	UN	OFU	13	5,109
E126418868	12/2/2007	13:14:00	YEL-27	ECC			75	33,150
E245188442	12/2/2007	13:14:00	LAC-13	ECC	TO		122	58,072
10788330	12/2/2007	13:16:00	SWD-14	ECE	TO	OFU	922	47,022
E357009463	12/2/2007	13:17:00	RAI-11	ECC	TF	OCO	31	5,084
E810424770	12/2/2007	13:18:00	BLU-13	ECC			250	75,500
E211041883	12/2/2007	13:18:00	PGA-15	ECF	TF	OCO	309	224,643
E694918812	12/2/2007	13:18:00	TAN-16	ECC	TF	OCO	7	2,478
10788329	12/2/2007	13:20:00	SWD-12	ECE	TO	OFU	30	1,410
E584924771	12/2/2007	13:20:00	CHR-25	ECE	TO	OCO	277	110,800
E698066399	12/2/2007	13:20:00	BLU-16	ECC	TF	OCO	138	26,220
E356512008	12/2/2007	13:20:00	ORT-23	ECA	EF	OCO	60	38,460
E504926798	12/2/2007	13:20:00	SHE-17	ECE	TO	OCO	9	5,490
E920034247	12/2/2007	13:22:00	LTA-18	ECA	TO	OCO	1,382	99,504
E916830885	12/2/2007	13:22:00	PGA-12	ECE	TO	OFU	348	114,144
E602122759	12/2/2007	13:27:00	PIN-26	EBF	EF	USV	1	117
E739222169	12/2/2007	13:27:00	LUH-14	ECC			35	8,855
E696995719	12/2/2007	13:27:00	PTL-13	ECF	TO	OFU	32	21,344
E849131839	12/2/2007	13:28:00	ANA-15	EAC	EF	OTF	1	30
E714387104	12/2/2007	13:32:00	IRO-15	ECF	TO	OHR	752	123,328
E871122946	12/2/2007	13:40:00	KAP-16	ECA	EF	OCO	30	36,870
E478623504	12/2/2007	13:42:00	ELD-25	ECC	TF	OCO	2,055	203,445
E137921109	12/2/2007	13:44:00	WIN-13	ECE			22	14,454
E330423530	12/2/2007	13:44:00	LON-23	ECC	TO		10	5,710
E369467013	12/2/2007	13:44:00	TIL-23	ECA	EF	OTF	2	136
E736903396	12/2/2007	13:49:00	MVW-17	EBJ	EF	OFU	11	1,276
E417970583	12/2/2007	13:52:00	RPT-23	ECD	TO	OSV	1	708
E231109168	12/2/2007	13:53:00	QUI-25	ECF	TO	OCO	33	33,396
E768638884	12/2/2007	13:54:00	BIG-15	EAC	EF	OFU	1	132
E102200409	12/2/2007	13:54:00	QUI-26	ECF	TO	OFU	152	59,271
E453472138	12/2/2007	14:01:00	SIL-15	ECE	TF	OCO	2	2,128
E741295106	12/2/2007	14:01:00	MCA-13	ECC	TF	OCO	71	16,259
E172958697	12/2/2007	14:04:00	AIR-26	ECC			25	10,200
E733145301	12/2/2007	14:06:00	PMA-15	ECE			102	34,578
E771045071	12/2/2007	14:06:00	WIN-12	ECE			80	48,720
E250284070	12/2/2007	14:06:00	MUR-16	ECE			153	22,032
E094003622	12/2/2007	14:07:00	MUR-13	ECE			34	17,442
E469605923	12/2/2007	14:07:00	PMA-13	ECE			45	30,690
E754150849	12/2/2007	14:08:00	CHI-13	ECD	TO	CDH	16	9,760
E608088806	12/2/2007	14:08:00	MUR-15	ECE			0	0
10788112	12/2/2007	14:08:00	TLN-0192	ECE	TO	OFU	4,387	21,935
E949306497	12/2/2007	14:13:00	BUC-16	ECA	TO	OFU	35	3,570
E751460678	12/2/2007	14:14:00	SWD-11	ECE	TO	OCO	8	3,848
E151260774	12/2/2007	14:14:00	SWD-14	ECE	TO	CDH	922	327,296
E159536783	12/2/2007	14:14:00	SWD-12	ECE	TO	OCO	80	26,480
10784720	12/2/2007	14:20:00	ING-13	EBD	EF	USV	1	279
E531662037	12/2/2007	14:25:00	EDG-15	ECA			300	32,700
E285956849	12/2/2007	14:37:00	VAS-12	EBL	TO	OCO	61	56,303
E902831369	12/2/2007	14:39:00	STA-16	EBJ	TF	OCO	5	1,480
E541682103	12/2/2007	14:41:00	MCK-15	EAA	UN	OFU	1	66
E896981879	12/2/2007	14:41:00	EGT-12	EBE	TF	OFU	1	112
E779521723	12/2/2007	15:01:00	SOO-25	EBI	EF	OCN	1	193

Qualifying Storm Event  
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Notification	Date	Time	Circuit	Area	Cause	Equipment	Cust Outs	Cust Mins
E456716421	12/2/2007	15:10:00	SNQ-13	EBF	TO	OCO	17	14,327
E159086255	12/2/2007	15:14:00	CEK-14	ECE	TO	OCO	7	2,702
E877077938	12/2/2007	15:25:00	VAS-23	EBL	TO	OFU	18	9,000
E320678854	12/2/2007	15:30:00	HKX-13	EAC	TO	OFU	1	76
E955889368	12/2/2007	15:37:00	CLV-16	EAD	TF	OTF	1	82
E606671248	12/2/2007	15:40:00	IRO-13	ECF	TO	OFU	47	235
E184687641	12/2/2007	15:40:00	ASB-17	EBJ	TO	OFU	2	93
E640655537	12/2/2007	15:44:00	FRG-26	ECC	TF	OCO	3	753
E767670368	12/2/2007	15:45:00	CHI-12	ECD	TO	OFU	100	11,260
E002567341	12/2/2007	15:53:00	BLA-13	EAA	TO	OFU	15	4,740
E025416560	12/2/2007	15:56:00	CHI-12	ECD	TO	OFU	60	12,180
10785408	12/2/2007	15:57:00	MCK-15	EAA	TF	OCO	5	1,585
E203190454	12/2/2007	16:03:00	EGT-16	EBE	EF	OTF	2	168
E640233218	12/2/2007	16:05:00	LGY-16	EAD	TO	OCO	1	446
E379733830	12/2/2007	16:07:00	POU-16	ECE	TO	OFC	44	19,492
E247770541	12/2/2007	16:12:00	PIN-17	EBD	EF	OSV	1	199
E817361668	12/2/2007	16:18:00	GWR-13	EBI	TO	OCO	479	364,998
E502628975	12/2/2007	16:26:00	CHR-25	ECE	TF	OCO	27	7,668
E064959932	12/2/2007	16:45:00	NLM-16	EAC	EF	OSV	7	630
E055815759	12/2/2007	16:50:00	KNT-23	EBJ	EF	OTF	1	48
E980295327	12/2/2007	17:07:00	DUV-15	EBD	EF	OCO	1	260
E544826265	12/2/2007	17:19:00	CHR-22	ECE	TO	OCO	20	7,100
E478503017	12/2/2007	17:24:00	MCA-15	ECC	TF	OTF	1	46
E962258548	12/2/2007	17:25:00	SKY-23	EBD	EF	OCO	1	300
E226131819	12/2/2007	17:26:00	MIL-17	ECE	TO	OCO	175	93,275
10788113	12/2/2007	17:28:00	TLN-0098	ECD	TO	OFU	27,225	862,093
E737000849	12/2/2007	17:34:00	VAS-22	EBL			21	7,959
E792386074	12/2/2007	17:37:00	STA-15	EBJ	TO	OTF	1	109
E218559703	12/2/2007	18:31:00	GRI-13	ECC	TO		9	1,881
E594492507	12/2/2007	18:33:00	BTR-22	EBE	TF	OCO	129	10,191
E729575331	12/2/2007	18:34:00	PRI-21	ECC	AO	OPO	2,351	314,920
E880230893	12/2/2007	18:45:00	DGR-17	EBJ	PO	USV	1	113
E218712816	12/2/2007	18:51:00	MOT-14	ECC	TF		10	2,490
E531593695	12/2/2007	19:18:00	LUH-14	ECC	TO	OCO	13	2,015
E998787661	12/2/2007	19:22:00	CHI-12	ECD	TO	OCO	28	8,456
E735715105	12/2/2007	19:29:00	HOB-16	EBI	TF	OCO	3	1,431
E564398571	12/2/2007	19:33:00	MIL-16	ECE	TO	UTC	10	2,720
E615898974	12/2/2007	19:37:00	KAP-15	ECA	TF	OSV	2	147
E602054310	12/2/2007	19:44:00	GRA-25	EBJ	PO	USV	1	213
E936884148	12/2/2007	19:49:00	POU-15	ECE			29	5,974
E248144396	12/2/2007	19:56:00	SWD-12	ECE			17	68
E444101028	12/2/2007	19:56:00	SIL-13	ECF	TO	OCO	114	82,536
E078378594	12/2/2007	19:56:00	SIL-13	ECE			1	64
E599049751	12/2/2007	19:58:00	EPO-16	ECD	TO	OFU	562	7,868
E611603883	12/2/2007	19:58:00	EPO-15	ECD	TO	OFU	1,149	19,533
E521626425	12/2/2007	19:58:00	EPO-12	ECD	TO	OFU	1,359	40,770
E688303868	12/2/2007	19:58:00	EPO-13	ECD	EF	OPO	1,659	74,214
E908589814	12/2/2007	20:02:00	SCH-13	EAA	TO	OCO	11	2,957
E057291471	12/2/2007	20:10:00	SIL-13	ECF			11	715
E012424864	12/2/2007	20:13:00	FLD-12	EAD	TF	OSV	2	265
E815383286	12/2/2007	20:26:00	SIL-15	ECD			4	76
E139902284	12/2/2007	20:41:00	YEL-27	ECC	TO		14	4,340
E173577627	12/2/2007	21:01:00	FRA-16	ECD			0	0
E120343287	12/2/2007	21:10:00	SIL-15	ECD			0	0
E384517979	12/2/2007	21:15:00	BLU-13	ECC	TO		4	1,100
E907554897	12/2/2007	21:27:00	VAS-13	EBL	TO	OFU	51	32,283
E995169424	12/2/2007	21:30:00	SIL-13	ECF			0	0
E793571335	12/2/2007	21:31:00	SIL-15	ECD			0	0
E616669084	12/2/2007	21:31:00	EGT-11	EBE	PO	USV	1	1,174
E895902952	12/2/2007	21:37:00	RAI-13	ECC	TF	OTF	8	344

Qualifying Storm Event  
December 2, 2007

Notification	Date	Time	Circuit	Area	Cause	Equipment	Cust Outs	Cust Mins
E351980353	12/2/2007	21:46:00	SIL-15	ECD	TO	OFU	4	160
E751385752	12/2/2007	21:53:00	VAS-13	EBL	TO	OFU	4	2,540
E403694497	12/2/2007	21:54:00	SIL-13	ECE			0	0
E336918199	12/2/2007	22:16:00	SIL-13	ECF			0	0
E824780570	12/2/2007	22:19:00	SIL-15	ECD			0	0
E017926657	12/2/2007	22:22:00	KEA-14	ECF	EF	OJU	38	17,860
E724099567	12/2/2007	22:22:00	PGA-12	ECE	UN	OFU	2	788
E812311343	12/2/2007	22:37:00	SIL-15	ECD			3	24
E175015305	12/2/2007	23:15:00	CHR-22	ECE	EF	OFU	3	207
E634961499	12/2/2007	23:21:00	POU-15	ECE	TO	OFU	6	2,040
E116887429	12/2/2007	23:37:00	LGY-13	EAD	TO	OCO	78	7,227
E939852011	12/2/2007	23:39:00	BHL-16	ECE	TO	OSV	5	1,010
E092825097	12/2/2007	23:49:00	SIL-13	ECE	TO	OFU	11	8,272
E097525035	12/2/2007	23:58:00	COT-13	EBD	TF	OCO	13	1,859

## Terms, Codes and Definitions Used on Detail Reports

<b>Notification</b>	<b>[Notification Number]</b> A number assigned by SAP, identifying the outage record
<b>Date</b>	The date of the outage
<b>Time</b>	The time of the outage
<b>Circuit</b>	<b>[Reference Circuit]</b> The circuit identifier for the affected circuit
<b>F/LOC</b>	<b>[Functional Location]</b> The grid number where the outage occurred. If the grid number is not available, the Reference Circuit identifier occupies this field
<b>EQT NBR</b>	<b>[Equipment Number]</b> A number used to tie the equipment involved in the outage to the related information in SAP. This number does not represent the physical number of the equipment

<b>Area</b>	<b>[Maintenance Planner Group]</b> A code representing the energy, region and service center	
	EAA – Bellingham	EBJ – South King
	EAB – Lynden	EBK – Southwest King
	EAC – Skagit	EBL – Vashon
	EAD – Whidbey	ECA – Puyallup
	EBD – Redmond	ECC – Olympia
	EBE – Factoria	ECD – Port Orchard
	EBF – Snoqualmie	ECE – Poulsbo
	EBI – Enumclaw	ECF – Port Townsend

<b>Cause</b>	Cause of Outage	
	AO – Accident Other	EF – Equipment Failure
	BA – Bird or Animal	EO – Electrical Overload
	CP – Car Pole	FI – Faulty Installation
	CR – Customer Request	TF – Tree Off Right-of-Way
	DU – Dig-up Underground	TO – Tree On Right-of-Way
	SO – Scheduled Outage	UN – Unknown

<b>Equipment</b>	Affected by, or involved in the outage	
	OCN – Connector	OSW – Overhead Switch
	OCO – Overhead Conductor	OTF – Overhead Transformer Fuse
	OCR – Crossarm	OTR – Overhead Transformer
	OFC – Overhead Cut-out	OUP – OH to UG Primary
	OFS – Overhead Fire Signal	OUS – OH to UG Secondary Service
	OFU – Fuse Link/OH Line Fuse	SBF – High-side Bank Fuse
	OGS – Span Guy	SCB – Power Circuit Breaker
	OHR – Overhead Recloser	UOT – Underground Outdoor Term
	OIN – Insulator	UPC – Underground Primary Cable
	OJU- Jump Wire	UPT – Padmount Transformer
	OPI – Overhead Pin Insulator	USV – Underground Service
	OPO – Pole	UTC – Underground Terminal Fuse
	OSV – Overhead Service	UTR – Submersible Transformer
	ORE – Regulator	

### Codes, Definitions – Continued

<b>CUST OUT</b>	<b>[Customer Out]</b> The number of customers without power for any given outage record
<b>CUST MIN</b>	<b>[Customer Minutes]</b> The total number of minutes customers were without power for any given record
<b>CODE</b>	<b>[Storm Code]</b> An event descriptor
	NON – Non Storm / Normal Conditions
	WTH – Weather Related (eg: wind storm, showers, etc)
	MAJ – Major event

## Media Coverage



Monday, Dec 3, 2007 at 6:10 AM PST

Part 3 of stormy trilogy brings heavy rain and strong wind  
By [Scott Sistik](#)

SEATTLE - The largest of three consecutive storms was moving through Western Washington Monday, bringing heavy rain, damaging wind, and potential for major flooding along Olympic Mountain-fed rivers.

The Washington and Oregon coast were already getting severely battered by the storm Monday morning. Wind speeds have been clocked at 85 mph in Astoria and 81 mph in Hoquiam. Meanwhile, an unofficial report out of Bay Center, Wash. (near Long Beach) had a measured gust of 119 mph. (They stick out on a headland a bit and have a free shot at strong wind.)

But these aren't occasional gusts -- there have been steady gusts in the 65-75 mph range in those areas all morning. Meanwhile, weather instruments at Tatoosh Island and Destruction Island along the coast are reporting sustained winds of 70 mph, gusting to 85 mph.

Power outages and hazardous driving conditions have forced many school districts to delay or cancel classes.

The Washington State Patrol says most major roadways in Grays Harbor and Pacific Counties are closed or blocked due to high winds and numerous trees and power lines down across the counties. It is not known when roads will reopen.

Two Grays Harbor PUD power line workers were injured late Sunday night near Aberdeen when a tree fell onto their truck. They were out in the storm attempting to restore power knocked out by the high winds.

The two were transported to Grays Harbor Community Hospital, but their conditions are not known.

The utility says they have at least 33,000 people without power, but won't be able to further assess the damage until daylight. In the interim, they have pulled all their crews off the streets until the winds calm down.

Here are the myriad of warnings and watches in effect for the storm:  
A HIGH WIND WARNING remains in effect for the coast, Admiralty Inlet area, northwestern Olympic Peninsula area, the greater Everett/Snohomish County area, the Hood Canal area, the lower Chehalis Valley, and the area around Port Townsend through 4 p.m. Monday.

This storm is expected to bring sustained winds of 40-50 mph, gusting as high as 80-100 mph along the coast and Sekiu/Clallam Bay, Neah Bay area. For the rest of the places listed in that warning, gusts are expected as high as 60 mph.

The largest gusts are expected until around 7 a.m. along the coast, then the winds are expected to abate a bit through the morning (still very windy though), and then perhaps another wave of wind toward late morning/midday, but not quite as strong as before.

As to why the seemingly sporadic locations for the Wind Warning, this storm is poised to bring out a local wind-generating effect, which I'll get to a little later in this discussion.

For the rest of Western Washington, including the greater Seattle-Tacoma (but not Everett since that's in the warning) area, A WIND ADVISORY is in effect for the same time frame. (A Wind Advisory is a notch below a High Wind Warning). Here, winds are expected to gust as high as 40-50 mph. Yes, while the coast is going gang-busters, this does not look like a big wind event for the I-5 corridor, save for perhaps the Snohomish County area, as the Olympics are providing a barrier to strong wind here.

A WINTER STORM WARNING remains in effect in the Cascades through Monday morning. Conditions have warmed considerably, but pockets of cold air near the surface means continuing snow for Stevens Pass, and freezing rain problems in Snoqualmie Pass.

FLOOD WARNINGS are now in effect for all rivers that feed of the Olympic Mountains. That includes the Bogachiel, Skokomish, Elwha, Dungeness, Satsop, Deschutes, and Chehalis Rivers. A FLOOD WARNING has also been issued for the Puyallup River near Orting.

As much as 6-10 inches of rain are expected in the Olympic Mountains, and some Olympic-fed rivers could see record flooding with this event. If you live in this flood plain, take immediate precautions and finalize them as soon as possible. Flooding will likely begin Monday and continue through Tuesday and possibly into Wednesday as the water flows downstream.

The Cascades will also see rain approaching 5 inches, so flooding is expected on Cascade rivers as well, but hopefully not to the extent the Olympics will get it.

A FLOOD WATCH remains in effect for all other mountain-fed rivers in Western Washington in anticipation of Monday's heavy rain, but many Cascade rivers could go on Flood Warning soon.

A HIGH WIND WARNING is also in effect for the mountains, where ridgetop winds could reach 80-100 mph gusts -- especially in the Olympics. This is not a time to be hiking or mountain climbing. Pass travel will also be very difficult.

A HIGH SURF WARNING is in effect for the coast, where seas have been recorded as high as 40-45 feet off the north Oregon coast, and 39 feet off the south and central Washington coast.

And in a related warning, a COASTAL FLOOD WATCH is in effect from Sunday evening through Monday evening for problems associated with high surf and beach erosion.

Finally, an AVALANCHE WARNING is in effect for the Cascades through Monday as conditions are very dangerous in the mountain backcountry.

### **The Wind Timeline**

Strong winds will pick up along the coast in the wee hours of Monday morning, and continue to blow through the day. This is not a typical windstorm where we have the low center pass through and we get 2-5 hours of wind. This is an extended event where strong winds are expected from 6-10 hours in the areas listed in the wind warning.

So high winds are expected to blow through the day Monday and then taper off Monday afternoon or early evening.