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PUBLIC INFORMATION STATEMENT NATIONAL WEATHER SERVICE SEATTLE WA 130 PM PST WED DEC 19 2007

...2007...WESTERN WASHINGTON WEATHER YEAR IN REVIEW...

THE YEAR WAS PUNCTUATED BY THE SECOND MAJOR DECEMBER STORM EVENT IN TWO YEARS. THE DECEMBER 1-3 STORM OFFERED NEARLY EVERY WINTER SEASON HAZARD – SNOW...STRONG WINDS...HEAVY RAINFALL...MAJOR FLOODING...LANDSLIDES... AVALANCHES...AND HIGH COASTAL SURF AND COASTAL FLOODING. THIS STORM RESULTED IN FIVE DEATHS...FIVE REPORTED INJURIES AND FIVE STILL MISSING.

OVERALL...ADVERSE WEATHER DURING THE YEAR RESULTED IN SEVEN DEATHS...18 INJURIES AND SIX MISSING. THE FATALITIES OCCURRED IN TWO AVALANCHE INCIDENTS...THE OCTOBER 18 WIND STORM ALONG WITH THE EARLY DECEMBER STORM. WEATHER RELATED PROPERTY DAMAGES TOTALED ABOUT \$10.5 MILLION THROUGH OCTOBER. THE NOVEMBER AND DECEMBER TOTALS WERE NOT YET AVAILABLE AND WILL LIKELY BE QUITE SUBSTANTIAL ONCE ALL THE DAMAGES ARE ACCESSED.

THE YEAR BEGAN WITH A VARIETY OF WINTER WEATHER. A WIND STORM STRUCK PARTS OF WESTERN WASHINGTON ON JANUARY 5 AND 6...KNOCKING POWER OUT TO OVER 100000 CUSTOMERS IN THE NORTH SOUND. JUST DAYS LATER...A COLD SNAP RESULTED IN LOWLAND SNOW FOR SOME AREAS WITH UP TO 10 INCHES OF SNOW...HIGHLIGHTED BY A MASSIVE MULTIPLE VEHICLE PILE-UP ON I-90 WEST OF SNOQUALMIE PASS. OLYMPIA REPORTED ITS COLDEST DAYS OF THE YEAR WITH LOWS OF 12 DEGREES ON BOTH JANUARY 11 AND 12.

THE SUMMER OFFERED A WIDE VARIETY OF WEATHER AS WELL. JULY 11TH WAS THE WARMEST DAY OF THE YEAR WITH SEATAC AIRPORT HITTING 98 DEGREES...OLYMPIA 99 DEGREES AND HOQUIAM REACHING AN ALL-TIME RECORD HIGH OF 99. THEN JUST A WEEK LATER...MOISTURE FROM A FORMER TROPICAL STORM DRENCHED WESTERN WASHINGTON ...PRODUCING CLOSE TO 200 PERCENT OF NORMAL RAINFALL FOR JULY. DESPITE THE APPEARANCE SUMMER WAS COOL...IT TURNED OUT TO BE AN AVERAGE SUMMER FOR TEMPERATURES. FOR INSTANCE...SEATTLE AVERAGES 25 DAYS A YEAR WITH READINGS OF 80 DEGREES OR MORE AND THE SUMMER OF 2007 HAD 26 DAYS. IN ADDITION...SUMMER ENDED ABRUPTLY WITH THE LAST 70 DEGREE DAY ON SEPTEMBER 13TH...THE SECOND EARLIEST THIS HAS EVER HAPPENED. THE SUMMER OF 2007 WAS IN SHARP CONTRAST TO THE BEST SUMMER SINCE 1967...THE SUMMER OF 2006.

THE ANTICIPATED LA NINA WINTER GOT OFF TO A WINDY START ON OCTOBER 18TH WITH THE SEASONS FIRST WIND STORM...KNOCKING DOWN HUNDREDS OF TREES AND POWER OUTAGES TO ABOUT 300000 CUSTOMERS. A WIND SURFER DROWNED IN LAKE WASHINGTON NEAR SAND POINT DURING THE STORM. ANOTHER WIND STORM STRUCK THE REGION ON NOVEMBER 12TH...AGAIN DOWNING A NUMBER OF TREES AND KNOCKING OUT POWER TO ABOUT 250000 CUSTOMERS.

THEN...THE EARLY DECEMBER STORM HIT. THE COMBINATION OF SNOW...STRONG WINDS... HEAVY RAINFALL...FLOODING AND LANDSLIDES RESULTED IN A PRESIDENTIALLY DECLARED DISASTER. THREE RIVERS REACHED ALL-TIME FLOOD RECORDS – THE CHEHALIS ...ELWHA AND SKOKOMISH. RISING WATER FROM THE CHEHALIS FLOODED MUCH OF THE CENTRAL CHEHALIS VALLEY INCLUDING A 20-MILE STRETCH OF INTERSTATE-5...AND HUNDREDS OF HOMES AND BUSINESSES. STRONG PERSISTENT WINDS LEFT 100000 CUSTOMERS WITHOUT POWER ALONG THE COAST. LANDSLIDES CLOSED MANY ROADS AND HIGHWAYS IN THE REGION. PRELIMINARY ESTIMATES SHOW THAT PRECIPITATION AMOUNTS WERE NEAR 100-YEAR RAIN FREQUENCY LEVELS ACCORDING TO THE STATE CLIMATOLOGIST. BREMERTON SET A NEW ALL-TIME DAILY RECORD WITH 7.5 INCHES OF RAIN ON DECEMBER 3.

FOR THE FIRST TIME SINCE 2002...THERE WERE NO TORNADOES IN WESTERN WASHINGTON ALTHOUGH THERE WERE TWO FUNNEL CLOUDS REPORTED AS WELL AS A WATERSPOUT OVER PUGET SOUND. WASHINGTON AVERAGES BETWEEN ONE AND TWO TORNADOES PER YEAR.

WITH THE STREAKS OF WARM AND COOL WEATHER...TEMPERATURES WERE CLOSE TO AVERAGE IN WESTERN WASHINGTON THROUGHOUT THE YEAR. PRECIPITATION VARIED ACROSS THE REGION. FOR INSTANCE...FORKS WAS OVER EIGHT INCHES ABOVE AVERAGE FOR THE YEAR WHILE OLYMPIA WAS CLOSE TO THREE INCHES BELOW NORMAL. SEATTLE FINISHED CLOSE TO AVERAGE.

A LIST OF SIGNIFICANT 2007 EVENTS IN WESTERN WASHINGTON IS GIVEN BELOW...AS WELL AS RECORD TEMPERATURES FOR SELECTED LOCATIONS.

SIGNIFICANT EVENTS

## TORNADOS/WATERSPOUTS/FUNNEL CLOUDS

FEB 21 – NEAR ORTING – PIERCE COUNTY A FUNNEL CLOUD THAT LASTED LESS THAN A MINUTE WAS SPOTTED NEAR ORTING.

APR 24 – 5 WEST OF EVERETT – SNOHOMISH COUNTY A FUNNEL CLOUDS WAS SIGHTED OVER PUGET SOUND WEST OF EVERETT FOR 3 MINUTES.

JUN 24 – OFF MCNEIL ISLAND – PIERCE COUNTY A WATERSPOUT DEVELOPED OFF MCNEIL ISLAND AND LASTED FOR ABOUT 5 MINUTES.

### LIGHTNING

APR 18 – KITSAP COUNTY LIGHTNING STRIKES STARTED TWO SEPARATE HOUSE FIRES AS REPORTED BY KITSAP COUNTY EMERGENCY MANAGEMENT. TOTAL DAMAGES WERE ESTIMATED AT \$80000.

JUN 24 – SEDRO WOOLLEY – SKAGIT COUNTY THUNDERSTORMS DROPPED UP TO 1/2 INCH DIAMETER HAIL AND PRODUCED LIGHTNING. LIGHTNING STRUCK A TREE NEAR SEDRO WOOLLEY AND THE CURRENT HIT PEOPLE SHELTERING UNDER A GAZEBO NEXT TO THE TREE. ALL FIVE WERE TAKEN TO THE HOSPITAL.

JUL 13 – KIRKLAND – KING COUNTY LIGHTNING STRUCK A HOME IN KIRKLAND CAUSING ABOUT \$5000 DAMAGE.

HAIL

OCT 19 – NEAR MT RAINIER – PIERCE COUNTY ISOLATED THUNDERSTORMS NEAR AND OVER THE CASCADES BRIEFLY PRODUCED LARGE HAIL. A TRAINED NWS SPOTTER REPORTED NICKEL SIZED HAIL (0.88 INCH DIAMTER).

HIGH WINDS

JAN 2 – NORTH INTERIOR AND CENTRAL PUGET SOUND AREA STRONG WINDS WITH GUSTS UP TO 60 MPH KNOCKED POWER OUT TO ABOUT 25000 CUSTOMERS FROM THE CENTRAL PUGET AREA NORTH TO THE CANADIAN BORDER AND CAUSED ABOUT \$100000 IN DAMAGE.

### JAN 5-6 – ISLAND AND SNOHOMISH COUNTIES

A STRONG PACIFIC FRONTAL SYSTEM PRODUCED DAMAGING WEST WINDS OF 25 TO 35 MPH WITH GUSTS TO 50 IN ISLAND AND SNOHOMISH COUNTY BLOWING DOWN DOZENS OF TREES ONTO ROADWAYS AND HOMES AND KNOCKING POWER OUT TO AT LEAST 100000 CUSTOMERS AREAS. DAMAGE WAS CLOSE TO \$1.65 MILLION.

JAN 9 – NORTH INTERIOR STRONG WINDS OF UP TO 54 MPH KNOCKED POWER TO ABOUT 40000 CUSTOMERS AS A PACIFIC FRONTAL SYSTEM MOVED THROUGH THE REGION. DAMAGE WAS CLOSE TO \$100000.

MAR 11 – AREAS NEAR THE EAST ENTRANCE TO THE STRAIT OF JUAN DE FUCA STRONG WEST WINDS WITH GUST TO 54 MPH BLEW THROUGH THE REGION NEAR THE EAST ENTRANCE TO THE STRAIT OF JUAN DE FUCA. THE WIND KNOCKED OVER A TREE THAT DAMAGED TWO HOMES NEAR OAK HARBOR AND ANOTHER TREE FELL ON A SHED NEAR STANWOOD. ABOUT 1100 HOMES LOST POWER ON WHIDBEY ISLAND AND NEARLY 3000 CUSTOMERS LOST POWER IN SNOHOMISH COUNTY. TOTAL DAMAGE WAS ESTIMATED AT \$7000.

### OCT 18 – MUCH OF WESTERN WASHINGTON

A DEEP LOW PRESSURE SYSTEM PRODUCED STRONG WINDS WITH GUSTS UP TO 80 MPH THROUGHOUT MUCH OF WESTERN WASHINGTON KNOCKING DOWN HUNDREDS OF TREES AND POWER OUT TO ABOUT 300000 CUSTOMERS. ONE MAN DIED WHILE KITE SURFING NEAR SAND POINT IN SEATTLE DURING THE WIND STORM. A WOMAN WAS INJURED AFTER BEING STRUCK BY A FALLEN TREE. A NUMBER OF HOMES WERE DAMAGED BY FALLING TREES. DAMAGES WERE ESTIMATED AT \$2.5 MILLION.

### NOV 12 – MUCH OF WESTERN WASHINGTON

A STRONG LOW PRESSURE SYSTEM PRODUCED DAMAGING WINDS THROUGHOUT MUCH OF WESTERN WASHINGTON KNOCKING DOWN DOZENS OF TREES AND POWER OUT TO NEARLY 250000 CUSTOMERS. TOTAL DAMAGE ESTIMATES ARE NOT YET AVAILABLE.

### DEC 2-3 – WASHINGTON COAST AND OLYMPIC MOUNTAINS

AN INTENSE PACIFIC FRONTAL SYSTEM PRODUCED STRONG SOUTHELY WINDS WITH GUSTS UP TO 93 MPH KNOCKED DOWN HUNDREDS OF TREES AND POWER OUT TO ABOUT 100000 CUSTOMERS PRIMARILY ALONG THE COAST. AN ELDERLY MAN NEAR MONTESANO DIED WHEN HIS OXYGEN POWER SUPPLY WAS CUT OFF. ANOTHER ABERDEEN MAN WAS STRUCK AND KILLED BY A FALLING TREE. FOUR UTILITY WORKERS WERE HURT DURING THE STORM. TOTAL DAMAGES ESTIMATES WERE NOT AVAILABLE...GRAYS HARBOR COUNTY PUD REPORTED AT LEAST \$15 MILLION IN DAMAGES TO THEIR POWER INFRASTRUCTURE.

### WINTER STORMS

# JAN 10-11 – PUGET SOUND AREA NORTHWARD

A MODIFIED ARCTIC FRONT MOVED SOUTH FROM BRITISH COLUMBIA THROUGH WESTERN WASHINGTON BRINGING HEAVY SNOW TO MANY LOWLAND AREAS FROM THE PUGET SOUND AREA NORTHWARD. SNOW AMOUNTS VARIED FROM A FEW INCHES UP TO 10 INCHES IN WHATCOM COUNTY. THE LATE AFTERNOON COMMUTE ON THE 10<sup>TH</sup> WAS VERY SLOW...SOME PEOPLE ENDED UP WALKING INSTEAD. MANY SCHOOL DISTRICTS WERE CLOSED ON THE 11TH. DAMAGE TOTALS WERE CLOSE TO \$55000.

## FEB 28 – PUGET SOUND AREA NORTHWARD AND THE CASCADES

A VERY COLD UPPER LEVEL LOW BROUGHT AREAS OF HEAVY SNOW TO PARTS OF WESTERN WASHINGTON LOWLANDS AND INTO THE CASCADES. A PUGET SOUND CONVERGENCE ZONE ENHANCED SNOWFALL AND MOST OF THE HEAVY SNOW FELL IN THE EVERETT AND VICINITY ZONE FORECAST AREA UP TO 8 INCHES. SEVERAL SCHOOLS HAD THEIR TRANSPORTATION ADVERSELY IMPACTED. AS MANY AS 60 VEHICLES WERE INVOLVED IN A PILE UP WEST OF SNOQUALMIE PASS WITH 7 PEOPLE HURT...4 SERIOUSLY. THE PASS WAS CLOSED FOR ABOUT 6 HOURS. DAMAGE TOTALS WERE ESTIMATED AT \$108000.

### DEC 1-2 – MUCH OF WESTERN WASHINGTON

WARM MOIST AIR SPREAD OVER AN EXISTING COOL AIR MASS RESIDING IN WESTERN WASHINGTON PRODUCING SNOW ACROSS MUCH OF THE REGION. SNOW AMOUNTS WERE GENERALLY A TRACE TO 3 INCHES EXCEPT FROM 5 TO 8 INCHES IN PARTS OF THE HOOD CANAL AND KITSAP PENINSULA REGION...AND UP TO A FOOT IN PARTS OF THE PUGET SOUND LOWLANDS NEAR THE CASCADE WEST SLOPES.

AVALANCHE

FEB 24 – MT RAINIER NATIONAL PARK A SKIER WAS BURIED AND KILLED JUST WEST OF CRYSTAL MOUNTAIN.

DEC 2 – NEAR ALPENTAL SNOQUALMIE PASS THREE HIKERS WERE CAUGHT IN A SNOW SLIDE. ONE MAN WAS PARTIALLY BURIED AND INJURED WHILE ANOTHER MAN AND WOMAN WERE BURIED AND DIED.

DEC 2 – NEAR CRYSTAL MOUNTAIN THREE SNOWBOARDERS WERE MISSING AND PRESUMED DEAD IN AN AVALANCHE JUST OUTSIDE THE CRYSTAL MOUNTAIN SKI AREA BOUNDARY.

DEC 19 – MOUNT RAINIER A HIKER DISAPPEARED IN AN AVALANCHE WHILE RETURNING FROM A HIKE TO CAMP MUIR. AT THE TIME OF THIS PUBLICATION...HE WAS MISSING.

FLOODS/HEAVY RAIN/MUDSLIDES

JAN 2-3 – PARTS OF WESTERN WASHINGTON THE STILLAGUAMISH...BOGACHIEL...SKOKOMISH...TOLT AND SOUTH FORK OF THE NOOKSACK RIVERS FLOODED AS A RESULT OF HEAVY RAINFALL.

JAN 7-8 – PARTS OF WESTERN WASHINGTON HEAVY RAINFALL PRODUCED FLOODING ON THE SKOOKUMCHUCK...CHEHALIS...DESCHUTES AND SKOKOMISH RIVERS. THE RAINFALL ALSO PRODUCED WIDESPREAD URBAN AND SMALL STREAM FLOODING JEFFERSON...KITSAP...MASON...KING...LEWIS...PIERCE AND GRAYS HARBOR COUNTIES.

MAR 12-13 – MUCH OF WESTERN WASHINGTON MUCH ABOVE NORMAL PRECIPITATION LED TO FLOODING ON THE BOGACHIEL...SKOKOMISH ...NISQUALLY...NOOKSACK...SKAGIT...STILLAGUAMISH...SKYKOMISH...SNOQUALMIE AND WHITE RIVERS.

MAR 24-25 – PARTS OF WESTERN WASHINGTON CONTINUED MUCH ABOVE NORMAL RAINFALL PRODUCED FLOODING ON THE NISQUALLY... NOOKSACK...SKAGIT...STILLAGUAMISH...SKYKOMISH...SNOHOMISH...TOLT...SNOQUALMIE AND PUYALLUP RIVERS.

### JUL 20-22 – PARTS OF WESTERN WASHINGTON

A STORM IN THE MIDDLE OF JULY HELPED PRODUCE MONTHLY RAINFALL AMOUNTS THAT WERE CLOSE TO 200 PERCENT ABOVE NORMAL IN PARTS OF WESTERN WASHINGTON... PRIMARILY ALONG THE COAST...THE OLYMPIC PENINSULA AND PUGET SOUND REGION. EVEN THE SKOKOMISH RIVER GOT QUITE CLOSE TO FLOOD STAGE ON JUL 22.

### DEC 2-3 – MUCH OF WESTERN WASHINGTON

A PERIOD OF HEAVY RAINFALL IN THE REGION PRODUCED FLOODING ON 17 RIVERS IN WESTERN WASHINGTON...THREE THAT REACHED RECORD FLOOD LEVELS – THE CHEHALIS...SKOKOMISH AND ELWHA RIVERS. PRECIPITATION RANGED FROM 10 TO 15 INCHES IN THE WILLAPA HILLS AND PARTS OF THE OLYMPICS AND KITSAP PENINSULAS ...AND BETWEEN 3 AND 6 INCHES OF RAINFALL ELSEWHERE. MANY SMALL STREAMS ALSO FLOODED. A 20-MILE STRETCH OF INTERSTATE 5 IN LEWIS COUNTY WENT UNDER WATER AS THE CHEHALIS ROSE TO ITS ALL-TIME RECORD LEVEL. THERE WERE A NUMBER OF LANDSLIDES AND SINKHOLES THAT CLOSED ROADS AND HIGHWAYS SUCH AS US HWY 101 IN SEVERAL LOCATIONS AND SR 92 NEAR MILL CREEK. A MAN NEAR HOODSPORT WAS BURIED AND KILLED IN HIS HOME BY A LANDSLIDE. AN ELDERLY MAN NEAR WINLOCK WAS MISSING AFTER A LANDSLIDE NEAR HIS HOME. ANOTHER MAN REMAINED MISSING NEAR THE TAHUYA RIVER IN MASON COUNTY. THE GOVERNOR DECLARED A STATE OF EMERGENCY FOR THE REGION AND THE PRESIDENT DECLARED SEVERAL COUNTIES A DISASTER AREA. TOTAL DAMAGE ESTIMATES WERE NOT AVAILABLE...BUT LEWIS COUNTY REPORTED AT LEAST \$165 MILLION IN FLOOD DAMAGE ALONE.

### HEAT

### JUL 11 – WESTERN WASHINGTON

A HEAT WAVE OCCURRED IN WESTERN WASHINGTON...PUSHING TEMPERATURES WELL INTO THE 90S. SEATAC AIRPORT REACHED 98 DEGREES AND OLYMPIA HIT 99...BOTH RECORD HIGHS FOR THE DATE.

### **RECORD TEMPERATURES AND PRECIPITATION SET IN 2007**

### SEA-TAC AIRPORT

HIGHS	5	LOWS	PRECI	PITATION
01/02	56(T)	NONE	01/02	1.77
03/06	68		01/03	1.01 (TIED-1963)
04/06	78		05/20	0.56
05/15	85		07/18	0.29
05/30	87	(TIED 87-1956)	07/20	0.45
07/11	98		07/21	0.29
09/10	85	(TIED 85-1946)	08/20	0.16
09/11	84		10/02	0.80
			11/15	1.09
			12/03	3.77

OLYMPIA	AIRPORT
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HIGHS		LOWS		PRECIPITATION		
01/23	56(T)	01/15	15	03/24	1.31	
02/17	62	04/03	25	05/20	0.42	
03/06	70			07/17	0.61	
04/06	79			07/19	0.36	
05/15	85			07/20	0.29	
07/11	99			10/02	1.06	
09/11	87			10/19	1.26	
12/04	56(T)			12/02	2.12	
				12/03	3.19	

QUILLAYUTE AIRPORT (NEAR FOR	KS)
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HIGHS		LOWS		PRECIPITATION	
01/27	55	01/12	17	01/05	2.60
03/04	61	04/03	26	03/10	1.96
04/05	68	05/14	33	03/11	3.05
04/06	69	10/05	32(T)	03/23	3.52
05/29	78			03/24	2.78
07/09	85			04/24	0.91
07/10	93			07/18	0.49
07/11	86(T)			07/20	0.73
10/23	72			07/21	1.60
				07/22	0.42
				07/23	0.26

# 09/03 1.27 10/02 0.98

# HOQUIAM AIRPORT

110 40					
HIGHS	5	LOWS		PRECI	PITATION
04/05	75	01/14	25	03/23	1.62
05/29	87	10/05	37(T)	03/24	1.91
07/10	99			05/20	0.88
08/14	81			07/21	0.99
08/29	84			07/22	0.79
09/10	88			09/30	1.22
10/23	73			12/02	2.63
12/05	55				

# BELLINGHAM AIRPORT

HIGHS		LOWS	LOWS		PRECIPITATION	
03/06	68	01/13	15	03/11	1.49	
04/06	74	01/14	10	03/24	0.58	
07/10	86	05/22	39	09/30	0.73	
07/11	94	05/29	39			
10/23	69(T)					
12/03	59(T)					

# STAMPEDE PASS

HIGHS		LOWS	PRECIPITATION
01/01	44	NONE	01/05 3.29
01/02	50		01/07 7.81
01/09	45		01/08 4.71
02/04	49		03/24 2.32
02/06	49		08/20 0.39
06/01	75		
06/02	78		
07/10	85(T)		
07/11	89		
07/12	86		
12/03	47		

# NWS SEATTLE – SAND POINT

HIGHS		LOWS		PREC	PRECIPITATION	
01/27	55	01/12	20	01/02	0.89	
02/17	62	01/13	25	04/18	0.19	
03/05	60	01/14	22	05/20	0.52	
03/06	71	01/15	26(T)	05/21	0.42	
03/16	66	03/21	32	06/25	0.02	
04/05	74	04/03	34	07/18	0.30	
04/06	80	04/20	37	07/20	0.44	

05/15	84	05/12	41(T)	07/21	0.22
05/30	83	05/14	42	07/22	0.44
06/02	79	05/27	45	07/23	0.07
06/03	86	05/28	45	08/08	0.13
07/03	82(T)	06/25	50	08/19	0.42
07/05	79(T)	06/26	50	09/30	0.79
07/06	77(T)	07/01	53(T)	10/07	0.24
07/11	95	08/11	53(T)	10/19	0.65
08/01	83(T)	10/25	38	12/02	1.48
08/02	84	10/26	35	12/03	4.15
09/11	83	12/08	27		
11/03	60(T)	12/09	27		

FOR ADDITIONAL INFORMATION IN WESTERN WASHINGTON...CONTACT NWS SEATTLE...OR NWS PORTLAND FOR AREAS IN EXTREME SOUTHWEST WASHINGTON ALONG THE COLUMBIA RIVER. FOR INFORMATION IN EASTERN WASHINGTON...CONTACT EITHER NWS SPOKANE OR NWS PENDLETON.

### BUEHNER/GRUB/DAMICO/NEHER

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