

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE SEATTLE WA
1130 AM PST TUE DEC 22 2009

...2009...WESTERN WASHINGTON WEATHER YEAR IN REVIEW...

THE YEAR WAS HIGHLIGHTED BY A WIDE RANGE OF WEATHER CONTRASTS. THERE WERE DRY SPELLS AS WELL AS PERIODS OF HEAVY RAINFALL AMOUNTS AND SUBSEQUENT FLOODING. THEN TEMPERATURES RANGED FROM THE RECORD HEAT WAVE IN LATE JULY TO THE MEMORABLE COLD SNAP IN EARLY DECEMBER.

DURING THE YEAR...ADVERSE WEATHER RESULTED IN FOUR FATALITIES AND FOUR INJURIES. TWO OF THE DEATHS WERE THE RESULT OF THE HEAT WAVE. WEATHER ALSO PRODUCED \$75.1 MILLION DOLLARS IN PROPERTY DAMAGE THROUGH OCTOBER. PROPERTY DAMAGE RESULTS WERE NOT YET AVAILABLE FOR NOVEMBER AND DECEMBER.

THE YEAR BEGAN WITH THE CARRY OVER FROM THE DECEMBER 2008 SEQUENCE OF SNOW EVENTS WITH WIDESPREAD SNOW COVER AROUND THE REIGON. HEAVY RAINFALL STARTED ON JANUARY 6TH AND CONTINUED THROUGH THE 8TH RESULTING IN WIDESPREAD FLOODING THROUGH WESTERN WASHINGTON. MAJOR FLOODING OCCURRED ON 18 RIVERS WITH RECORD OR NEAR RECORD CRESTS ON SIX RIVERS.

LANDSLIDES ALSO OCCURRED IN MANY PARTS OF THE AREA. MANY LOW LYING HIGHWAYS AND ROADWAYS WENT UNDER WATER INCLUDING INTERSTATE 5 FOR THE FOURTH TIME SINCE 1990. DAMAGES FROM THE FLOODING TOTALLED OVER \$72 MILLION. IN ADDITION...THE HOWARD HANSON DAM RIGHT ABUTMENT WAS DAMAGED IN THE DAMS SUCCESSFUL EFFORT TO HOLD BACK FLOOD WATERS ON THE GREEN RIVER. YET AS THE RESULT OF THE DAMAGE...THE DAM WILL NOT BE ABLE TO HOLD BACK SUCH HIGH RIVER FLOWS FOR AT LEAST THE NEXT FEW YEARS UNTIL THE CORPS OF ENGINEERS IS ABLE TO APPLY A PERMANENT FIX.

IN CONTRAST...MID MAY TO MID JUNE WAS UNUSUALLY DRY. SEATAC AIRPORT HAD 29 CONSECUTIVE DAYS FROM MAY 20 THROUGH JUNE 17 WITHOUT MEASURABLE PRECIPITATION ...TYING THE DRIEST SPRING STRETCH SET IN 1982 FROM MAY 28 THROUGH JUNE 25.

THEN NOVEMBER WAS QUITE WET. QUILLAYUTE AND HOQUIAM RECORDED THEIR SECOND WETTEST NOVEMBERS ON RECORD. QUILLAYUTE RECEIVED 26.55 INCHES OF RAIN DURING THE MONTH...AMOUNTING TO THE FOURTH WETTEST MONTH ON RECORD – THE RECORD WAS 29.14 INCHES SET IN NOVEMBER 1983. HOQUIAM RECEIVED 18.53 INCHES IN NOVEMBER ...SECOND TO THE WETTEST NOVEMBER WITH 21.17 INCHES IN 2006. THE NOVEMBER RAIN TOTAL WAS ALSO THE SIXTH WETTEST MONTH ON RECORD – THE RECORD WAS 23.46 INCHES SET IN JANUARY 2006.

THE OLYMPIC PENINSULA RECEIVED COPIOUS AMOUNTS OF RAIN DURING NOVEMBER RESULTING IN PERIODS OF FLOODING ON PENINSULA RIVERS SUCH AS SKOKOMISH...ELWHA ...DUNGENESS...BOGACHIEL AND SATSOP RIVERS.

ANOTHER KEY WEATHER STORY DURING THE YEAR WAS THE HEAT WAVE IN LATE JULY. SEVERAL ALL-TIME RECORD HIGH TEMPERATURES WERE SET. SEATAC AIRPORT REACHED 103 DEGREES ON THE 29TH BREAKING THE PREVIOUS ALL-TIME HIGH RECORD OF 100 SET IN JULY 1994...104 DEGREES AT OLYMPIA TYING THE ALL-TIME RECORD SET IN JULY 1994 AND

BELLINGHAM AT 96 DEGREES BREAKING THE OLD RECORD OF 94 DEGREES.

A NUMBER OF OTHER DAILY RECORDS WERE SET AROUND THE REGION DURING THE HEAT WAVE INCLUDING THE SCORCHING 105 DEGREES ON THE 29TH AT THE NATIONAL WEATHER SERVICE FORECAST OFFICE IN SEATTLE. SEATAC AIRPORT AVERAGES THREE DAYS A YEAR OF 90 DEGREES OR MORE BUT HAD SEVEN SUCH DAYS THIS YEAR WITH FIVE DURING THE WARM JULY. IN FACT...THE AVERAGE JULY TEMPERATURE OF 69.5 DEGREES WAS THE WARMEST JULY ON RECORD AT THE AIRPORT GOING BACK TO 1945...AND TYING THE ALL-TIME WARMEST JULY SET IN 1941 AT THE DOWNTOWN FEDERAL BUILDING. OLYMPIA AND BELLINGHAM ALSO WERE ALSO AMONG THE TOP FIVE WARMEST JULYS ON RECORD.

IN CONTRAST...THE COLDEST TEMPERATURES OF THE YEAR OCCURRED IN EARLY DECEMBER DESPITE THE SUNSHINE AND LACK OF SNOW ON THE GROUND. A NUMBER OF DAILY RECORD LOWS FELL AROUND THE REGION INCLUDING THREE CONSECUTIVE DAYS OF 6 ABOVE ZERO AT OLYMPIA ON THE 8TH...9TH AND 10TH.

GIVEN THE SPREAD OF TEMPERATURES DURING THE YEAR...MOST LOCATIONS ENDED UP 2 TO 4 DEGREES BELOW AVERAGE THANKS PRIMARILY TO THE COOL JANUARY THROUGH APRIL AND AGAIN DECEMBER. PRECIPITATION EVENED OUT OVER THE YEAR WITH WESTERN WASHINGTON LOCATIONS CLOSE TO AND/OR BALANCING ON EITHER SIDE OF AVERAGE.

WELCOME NEWS WAS FOUND IN THE MOUNTAINS DURING THE YEAR. FOR THE FIRST TIME IN MANY YEARS...THERE WERE NO AVALANCHE FATALITIES OR REPORTED INJURIES. AVALANCHE SAFETY PROGRAMS MUST BE PAYING DIVIDENDS.

FOR THE FIRST TIME IN THREE YEARS...A TORNADO OCCURRED IN WESTERN WASHINGTON AND IT WAS A UNIQUE EVENT. THE SEPTEMBER 6 TORNADO TOUCHED DOWN NEAR BUCKLEY AND TRACKED NORTHEAST FOR ALMOST 10 MILES AND 16 MINUTES TO OUTSIDE OF ENUMCLAW. MOST WESTERN WASHINGTON TORNADOES LAST FOR ONLY A FEW MINUTES OVER MUCH SHORTER DISTANCES. THE TORNADO HAD PEAK WINDS UP 100 TO 110 MPH AND WAS RATED AS AN EF1 TORNADO. THERE WERE NO FATALITIES OR INJURIES WITH THE TORNADO BUT IT DID ABOUT \$180000 IN DAMAGES. WASHINGTON AVERAGES BETWEEN ONE AND TWO TORNADOES PER YEAR.

A LIST OF SIGNIFICANT 2009 EVENTS IN WESTERN WASHINGTON IS GIVEN BELOW...AS WELL AS RECORD TEMPERATURES AND PRECIPITATION FOR SELECTED LOCATIONS.

SIGNIFICANT EVENTS

TORNADOES/WATERSPOUTS/FUNNEL CLOUDS

APR 28 – NEAR MAPLE VALLEY – KING COUNTY
A FUNNEL CLOUD WAS BRIEFLY OBSERVED.

SEP 6 – NEAR BUCKLEY TO OUTSIDE OF ENUMCLAW – PIERCE AND KING COUNTIES
AN EF1 TORNADO TRACKED FROM NEAR BUCKLEY NORTHEAST TO OUTSIDE OF ENUMCLAW WITH PEAK ESTIMATED WINDS OF 100 TO 110 MPH. THE TORNADO WAS INTERMITTENTLY ON THE GROUND FOR 16 MINUTES OVER A 9.6 MILE DISTANCE. NO FATALITIES OR INJURIES BUT PROPERTY DAMAGE REACHED \$180000.

NOV 6 – BUCKLEY – PIERCE COUNTY
A FUNNEL CLOUD WAS OBSERVED FOR A FEW MINUTES.

LIGHTNING

SEP 6 – AUBURN – KING COUNTY

LIGHTNING STRUCK A TREE NEXT TO A HOME WITH THE CHARGE FEEDING INTO THE HOME DAMAGING THE HOMES SIDING AND MUCH OF THE ELECTRONICS INSIDES. DAMAGE WAS \$20000.

HAIL

NO SEVERE SIZED HAIL – 1 INCH OR GREATER DIAMETER – WAS REPORTED DURING THE YEAR ALTHOUGH THERE WERE A NUMBER OF REPORTS OF 0.25 TO 0.5 INCH DIAMETER HAIL ACROSS MUCH OF WESTERN WASHINGTON.

HIGH WINDS

MAR 20 – SNOHOMISH AND ISLAND COUNTIES

WINDS UP TO 40 MPH BLEW THROUGH THE REGION. A WOMAN WAS KILLED IN THE MONROE AREA WHEN A TREE FELL ON THE MINIVAN SHE WAS DRIVING. THE EVENT PRODUCED \$20000 IN DAMAGE.

JUL 24 – NEAR GLACIER – WHATCOM COUNTY

STRONG THUNDERSTORM WINDS UP TO 68 MPH BLEW DOWN A COUPLE DOZEN TREES ACROSS THE BAKER LAKE HIGHWAY TRAPPING ABOUT 50 CARS ON THE ROAD UNTIL THE TREES WERE CLEARED.

OCT 13 – CASCADE FOOTHILLS

STRONG WINDS UP TO 55 MPH IN GUSTS KNOCKED DOWN TREES ACROSS ROADS AND INTO POWER LINES IN EAST KING COUNTY. A TEENAGER WAS INJURED WHEN A TREE LIMB FELL ACROSS HER LEGS. THE EVENT PRODUCED \$5000 IN DAMAGE.

OCT 23 – SNOHOMISH AND ISLAND COUNTIES

STRONG WINDS UP TO 50 MPH IN GUSTS KNOCKED POWER TO ABOUT 6500 PEOPLE IN SNOHOMISH COUNTY. A TREE FELL ON A SHELTER NEXT TO A HOME DAMAGING THE ROOF. THE EVENT PRODUCED \$20000 IN DAMAGE.

NOV 5 – CENTRAL AND NORTH PUGET SOUND REGIONS

STRONG WINDS UP TO 50 MPH IN GUSTS KNOCKED POWER OUT TO ABOUT 20000 CUSTOMERS FROM TACOMA TO BELLINGHAM. A LARGE TREE LIMB FELL ON A MAN WALKING HIS DOG IN SHORELINE KILLING HIM. NO DAMAGE ESTIMATES WERE AVAILABLE YET.

WINTER STORMS

FEB 10-11 – WESTERN WASHINGTON INTERIOR

SNOW FELL IN PARTS OF THE REGION. THE GREATEST AMOUNTS FELL IN THE HOOD CANAL REGION WITH 4 TO 8 INCHES. AMOUNTS ELSEWHERE RANGED FROM A TRACE TO 4 INCHES.

FEB 25-26 – WESTERN WASHINGTON INTERIOR

SNOW FELL IN PARTS OF THE REGION. THE GREATEST AMOUNTS FELL IN THE EASTERN STRAIT OF JUAN DE FUCA RANGING FROM 8 TO 14 INCHES IN THE PORT ANGELES AND SEQUIM AREAS. ELSEWHERE WHATCOM COUNTY RECEIVED 4 TO 6 INCHES AND A TRACE TO 4 INCHES FURTHER SOUTH THROUGH THE SOUTHWEST INTERIOR.

MAR 9 – SNOHOMISH AND KING COUNTIES

UP TO 7 INCHES OF SNOW FELL OVER THE SNOHOMISH COUNTY LOWLANDS AND IN THE EAST PUGET SOUND LOWLANDS OF KING AND SNOHOMISH COUNTIES.

MAR 15 – WESTERN WASHINGTON INTERIOR

SNOW FELL IN PARTS OF THE REGION. THE GREATEST AMOUNTS WERE ON THE KITSAP PENINSULA AND HIGHER TERRAIN OF THE SOUTHWEST INTERIOR WITH 2 TO 4 INCHES. ELSEWHERE AMOUNTS RANGED FROM A TRACE TO 1 OR 2 INCHES.

MAR 28-29 – EAST PUGET SOUND LOWLANDS

UP TO 6 INCHES OF SNOW FELL IN THE CASCADE FOOTHILLS WITH THE GREATEST AMOUNTS BETWEEN EATONVILLE AND ENUMCLAW.

DEC 4-13 – WESTERN WASHINGTON

A COLD SNAP GRIPPED THE REGION WITH THE COLDEST TEMPERATURES OF THE YEAR. A NUMBER OF RECORD LOW TEMPERATURES FELL. OLYMPIA DROPPED TO 6 DEGREES ABOVE ON DEC 8...9 AND 10...THE COLDEST THIS DECADE. THOUGH DAMAGE RESULTS FROM THE COLD SPELL WERE NOT AVAILABLE YET...ONE LOCAL INSURANCE COMPANY DESCRIBED THE EVENT AS ONE OF THE TOP 6 SEVERE COLD WEATHER EVENTS IN THE LAST 25 YEARS WITH \$4.3 MILLION IN CLAIMS.

AVALANCHE

NO AVALANCHE DEATHS OR REPORTED INJURIES THIS YEAR THROUGH DECEMBER 21ST...FIRST TIME THIS HAS HAPPENED IN AT LEAST A DECADE.

FLOODS/HEAVY RAIN/MUDSLIDES

JAN 6-9 – MUCH OF WESTERN WASHINGTON

RAIN FALL OF 8 TO 20 INCHES IN THE MOUNTAINS AND 1 TO 9 INCHES IN THE LOWLANDS OCCURRED. FLOODING WAS WIDESPREAD WITH RECORD FLOODING ON THE SNOQUALMIE...TOLT AND NORTH FORK OF THE STILLAGUAMISH RIVERS AND NEAR RECORD FLOODING ON THE SNOHOMISH...NEWAUKUM AND SKOOKUMCHUCK RIVERS. MAJOR CATEGORY FLOODING OCCURRED ON 18 RIVERS IN ALL. NEARLY 500 RESIDENCES WERE DESTROYED OR SUFFERED MAJOR DAMAGE AND ANOTHER 2340 RESIDENCES THAT NEEDED REPAIR. OVER 44000 PEOPLE WERE EVACUATED BECAUSE OF FLOODING AND LANDSLIDES. MANY HIGHWAYS AND LOCAL ROADWAYS WENT UNDER WATER INCLUDING INTERSTATE 5 IN LEWIS COUNTY FOR THE FOURTH TIME SINCE 1990. ESTIMATED DAMAGES WERE \$72.1 MILLION.

APR 3 – ISLAND COUNTY

HEAVY RAIN OVER WHIDBEY ISLAND FROM A STATIONARY PUGET SOUND CONVERGENCE ZONE PRODUCED ENOUGH RAIN AND FLOW ON GLENDALE CREEK TO BURST A BEAVER DAM. THE WATER AND DEBRIS PLUGGING A CULVERT ON GLENDALE ROAD LED TO PART OF THE ROAD WASHING AWAY AND DAMAGING 8 HOMES DOWNSTREAM. ESTIMATED DAMAGES WERE \$10000.

JUL 29 – NEAR MARBLEMOUNT IN SKAGIT COUNTY

HEAVY RAINFALL FROM A THUNDERSTORM PRODUCED A FLASH FLOOD AND DEBRIS FLOW THAT COVERED STATE ROUTE 20. THE DEBRIS WAS 300 YARDS WIDE AND MORE THAN 10 FEET DEEP. TWO PEOPLE WERE TREATED FOR MINOR INJURIES FROM THE DEBRIS FLOW. DAMAGES TOTALLED ABOUT \$4000.

NOV – OLYMPIC PENINSULA

A SERIES OF WET PACIFIC STORMS CAUSED SEVERAL PERIODS OF FLOODING ON A NUMBER OF OLYMPIC PENINSULA RIVERS DURING THE MONTH INCLUDING THE SKOKOMISH...BOGACHIEL...ELWHA...DUNGENESS AND SATSOP RIVERS. PRELIMINARY DAMAGE ESTIMATES WERE NOT YET AVAILABLE.

HEAT

JUL 27-30 – WESTERN WASHINGTON

STRONG HIGH PRESSURE ALOFT LED TO A MAJOR HEAT WAVE ACROSS THE REGION. SEVERAL ALL-TIME RECORD HIGH TEMPERATURES WERE SET ON THE 29TH INCLUDING 103 DEGREES AT SEATAC AIRPORT ...104 AT OLYMPIA AND 96 DEGREES AT BELLINGHAM. A NUMBER OF OTHER DAILY RECORD HIGH TEMPERATURES WERE SET DURING THIS EVENT. THE HEAT WAVE LED TO TWO HEAT RELATED FATALITIES IN SEATTLE AND TACOMA.

RECORD TEMPERATURES AND PRECIPITATION SET IN 2009

SEA-TAC AIRPORT

HIGH	LOW	PRECIPITATION
02/04 63(T)	03/21 29(T)	01/06 1.22(T)
04/20 74	12/09 18	01/07 2.29
06/03 89	12/10 16	04/01 0.39(T)
06/04 91		04/02 0.92
07/28 97(T)		04/12 0.83
07/29 103 – ALL TIME		05/05 0.59
07/30 96		05/06 0.89
08/02 89(T)		08/11 0.32
08/27 88(T)		09/06 0.93
09/11 87		10/17 1.24
12/20 57(T)		11/26 1.34

OLYMPIA AIRPORT

HIGH	LOW	PRECIPITATION
02/03 60(T)	03/09 23	01/07 4.82
02/04 60	03/10 20	04/12 1.05
06/03 89(T)	04/04 25	05/04 0.78
06/04 92(T)	10/06 30(T)	05/13 0.83
07/28 101	10/11 28(T)	08/11 0.18
07/29 104 – ALL TIME(T)		09/06 1.54
08/02 92	12/02 23	10/17 1.19(T)
08/27 92(T)	12/09 6	
09/12 86		
12/20 56(T)		

QUILLAYUTE AIRPORT

HIGH	LOW	PRECIPITATION
01/15 58	03/09 25	01/07 2.88
01/16 57(T)	04/24 30	01/10 2.13
01/17 62	05/01 34(T)	08/10 1.01
01/19 62	06/27 38	11/16 3.31
06/04 90(T)	12/05 23	12/20 1.77
07/27 88	12/09 17	
08/18 79(T)		
08/19 85(T)		
09/11 87		
09/22 89(T)		
11/25 54(T)		

BELLINGHAM AIRPORT

HIGH	LOW	PRECIPITATION
04/06 69(T)	03/12 11	01/06 1.52
06/04 84	06/23 43(T)	01/07 1.47
07/28 90	07/01 44	05/13 0.66
07/29 96 ALL TIME	07/09 48(T)	05/18 0.48
11/25 59	10/12 25	08/10 0.48
		08/11 0.56
		10/23 1.06

HOQUIAM AIRPORT

HIGH	LOW	PRECIPITATION
01/20 58(T)	02/12 28	01/07 3.48
07/28 93	03/08 28(T)	01/10 1.45
08/19 89	03/09 28(T)	03/14 1.08
	03/13 30(T)	04/12 1.50
	05/21 38(T)	05/05 0.64
	06/27 42(T)	05/13 0.93
	10/03 36	10/16 1.55
	10/04 34	11/05 2.05
	10/05 37(T)	11/16 2.79
	12/09 15	

SEATTLE FORECAST OFFICE AT SAND POINT - SEATTLE

HIGH	LOW	PRECIPITATION
04/20 71(T)	01/19 28(T)	02/09 0.36
04/21 69	02/04 32	03/25 0.49
06/01 77(T)	03/06 28	04/01 0.52
06/02 84	03/09 27	04/02 0.73
06/04 85	03/10 27	04/12 0.66
06/10 76(T)	03/11 28	05/02 0.28
07/05 86	03/13 30	05/05 0.89
07/16 83	03/21 31	05/06 0.43
07/25 87(T)	03/26 33(T)	05/13 0.33
07/27 90(T)	04/04 31	05/18 0.48(T)
07/28 95	04/15 36(T)	05/19 0.69
07/29 105 ALL TIME	04/24 34	07/12 0.11
07/30 100	05/24 44	08/10 0.22
08/01 87	06/27 47	08/11 0.28
08/02 91	06/29 48(T)	09/05 0.37
08/18 84	06/30 47	09/06 0.72
08/19 87	07/01 49	09/07 0.12(T)
09/11 84	07/08 52	09/19 0.62
09/12 83	07/09 53(T)	10/16 1.12
09/23 83	08/15 51	10/17 0.90
11/25 55	08/26 49	10/23 0.63
12/20 57	09/28 44(T)	10/29 0.41
	09/29 46(T)	11/16 0.84
	10/05 42(T)	11/17 0.53
	10/06 41	
	12/07 21	
	12/08 19	
	12/09 17	
	12/10 19	
	12/11 23	
	12/12 25	

ALL OF THE ABOVE INFORMATION FOR THE YEAR WAS THROUGH MID DECEMBER. DAMAGE ESTIMATES FOR EVENTS LATE IN THE YEAR WERE NOT AVAILABLE YET.

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/GUY

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