



Office of the Washington State Climatologist Newsletter

February 28, 2007

New at OWSC

Recently, our FAQ has been updated and a few features have been released, including the ability to rank and graph precipitation totals by calendar year, water year or by season. Another feature is our WA streamflow map that displays all of the WA Dept. of Ecology and USGS streamflow gauges on a single map. Next month, we will discuss the availability of a new feature used to analyze temperature and precipitation trends around the Northwest.

Wind, Rain, & Snow Oh My!

The wild weather of November and December, continues into 2007.

One, Two Punch- Wind & Heavy Rain

By January 2, the first windstorm of the year struck the Puget Sound region with wind gusts of 45-65 mph, knocking out electrical power to more than 18,000 customers.

Accompanying the wind, were heavy rains and mild temperatures that resulted in a minor avalanche on Highway 2 near Stevens Pass. For the day, Seattle tied the record maximum temperature of 56F (2003) and broke the daily maximum rainfall record of 1.51 inches (1997) by 0.26 inches (the following day, the Jan. 3 record would be tied with 1.01”).



Fallen Tree on Everett Home.
Source: <http://www.komotv.com>

Only 3 days later, another bout of wind and heavy rain in the region would knock out power to more than 134,000 customers in the North Sound area as wind gusts exceeded 60 mph. Wind was less of a problem in the central and south sound regions, but heavy rains and saturated soil caused landslides and urban flooding in various locations. Meanwhile, miserable mountain pass conditions made driving treacherous as strong winds combined with heavy snowfall. More than 2 feet of snow would fall for much of the cascade mountains over the next couple of days.

In this Issue

- ☼ **Page 1**
 - New at OWSC
 - One, Two Punch- Wind & Heavy Rain
- ☼ **Page 2**
 - Palouse Heavy Snow
 - Hurricane Force Winds
 - Cold Arctic Air + Moisture = Snow
- ☼ **Page 4**
 - January Climate Summary
- ☼ **Page 5**
 - Outlook

Palouse Heavy Snow

Around the same period, January 4, a short-wave trough produced a small-scale snowstorm that moved over the Palouse area of Southeast Washington where 4-6 inches of snow fell in a period of 4 hours from Colfax to Pullman (8" in Moscow, ID). During the event, the state patrol reported hundreds of accidents on area highways, forcing the highways to close for up to 3 hours.

Hurricane Force Winds

Along the eastern slopes of the cascades, a strong frontal system on January 10, produced very strong winds that toppled trees and produced widespread power outages. Peak wind gusts exceeded 70 mph in several locations and hurricane force winds were recorded on the summit of the Mission Ridge ski resort (6740 ft), which was forced to close with sustained winds of 87-93 mph and gusts over 138 mph. Chelan County commissioners declared Chelan County a disaster area due to the widespread damage and power outages.

Peak Wind Gusts (mph)

Chelan 3W	80	Leavenworth 2NW	67	Bayview 13 ESE	54
Manson	74	East Wenatchee 7S	64	Carlton 5E	53
Pangborn Field Wenatchee	72	Winchester 12SE	54	Worley 3N	53

Cold Arctic Air + Moisture = Snow

The day before the cold air settled in the region (Jan. 9), temperatures were in the 50's as a strong cold front moved through bringing strong winds of 45-64 mph around Puget Sound and later produced a heavy band of rain, lightning, and hail in the North Sound. Soon after the front passed, temperatures quickly dropped and by the late afternoon the following day, temperatures would be cold enough to wreak havoc on the evening commute as snow fell throughout the region.

By the end of the night, the snow came to an end with totals ranging from 2 to 13 inches while an arctic front moved south dropping temperatures overnight. For the next six days, things would remain icy as low temperatures remained in the teens to low twenties with daytime highs in the low to mid 30's and a few more snow showers produced 1-2 inches of localized accumulations.



13 inches of Snow fell in Fall City January 10.
Source: <http://www.flickr.com/photos/capnqwest>

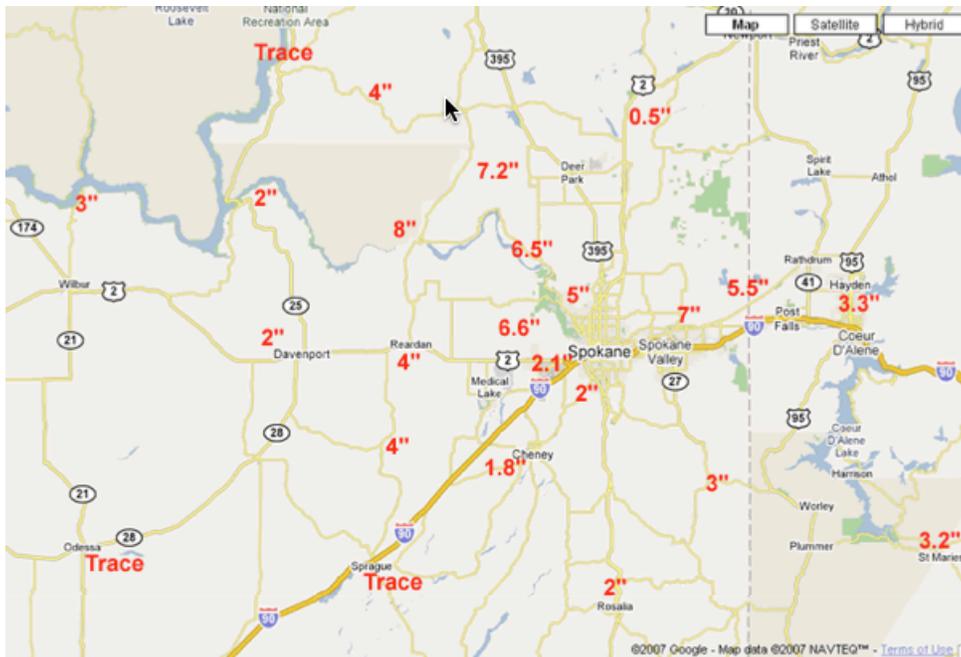
Continued on page 3...

January 10 Snow Totals (Puget Sound Area)

Fall City	13"	Orcas Island	9"	Sequim	6.5"
Ferndale	11"	Renton	7.5"	Issaquah	6"
Gold Bar	10.5"	Bellingham	7"	Maple Valley	6"
Sultan	10"	Duvall	7"	Des Moines	5"
Snoqualmie Ridge	9"	Tacoma	7"	Anacortes	4"

**These snow totals are unofficial and are not certified by OWSC.*

The same system that produced the low-land snow around Puget Sound on January 10 moved eastward producing localized heavy bands of snow around the Spokane area. Snowfall rates of 2-3 inches/hour were observed in some areas with accumulations of 1-6 inches around the Spokane metro area. Temperatures would also remain cold for the next 6 days with lows at or below 0 and highs in the teens and low 20s.

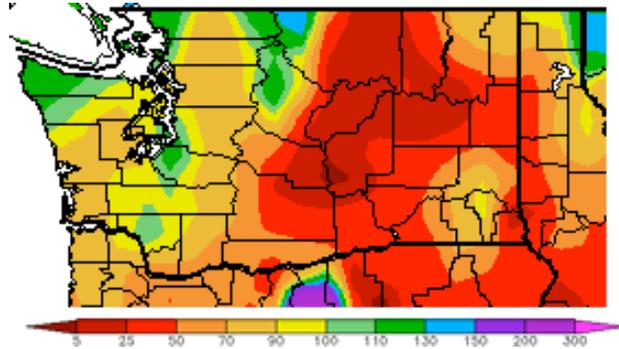


January 10 Spokane & Vicinity Snowfall totals.
 Source: Spokane NWS <http://www.wrh.noaa.gov/otx>

January Climate Summary

Despite the cold arctic air that hit the state in the middle of the month, average temperatures statewide were 0.4F warmer than the 1901-2000 average (30.1F) and rank in the 39th percentile of warmest January's. Meanwhile, precipitation was below normal for much of the state with a statewide total of 4.56" of precipitation, making it the 46th driest on record. The driest areas were confined to Eastern Washington where many areas received less than 50% of normal precipitation.

Mountain snow-pack remains healthy as of Feb. 1, with totals greater than 90% of normal for the lower elevation regions and greater than 110% for the higher elevation areas in the Cascades and Olympic mountains.



January Percent of Normal Precipitation.
Source: High Plains Regional Climate Center
<http://www.hprcc.unl.edu/index.html>

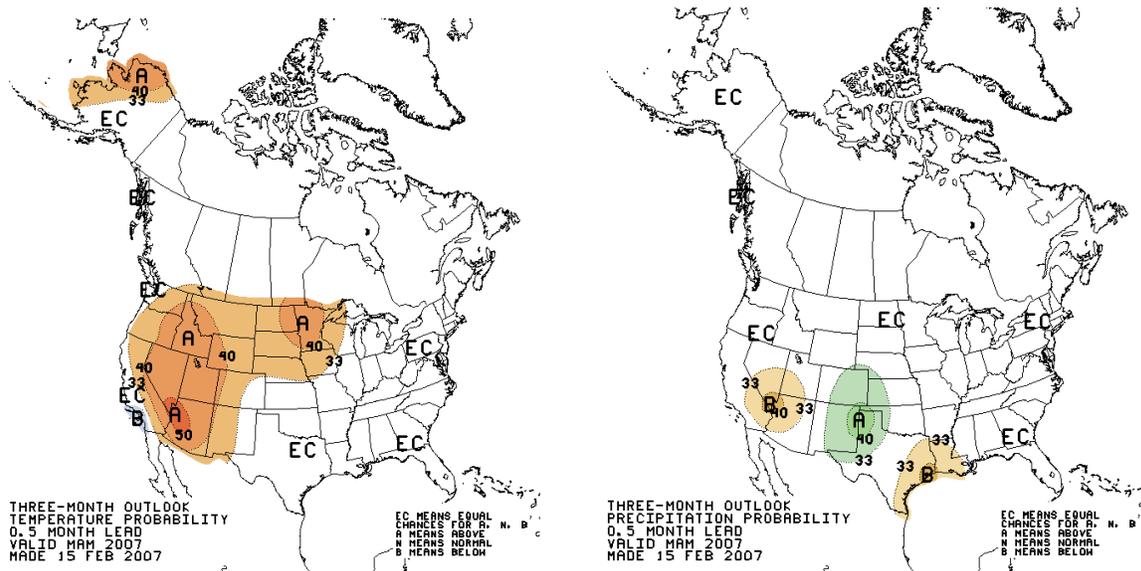
January Climate Summary for Various Cities

City	Temperature (F)			Precipitation (inches)		
	Average	Normal	Departure from Normal	Total	Normal	% of Normal
Bellingham	36.4	38.0	-1.6	4.85	4.59	106%
Hoquiam	42.3	42.0	+0.3	8.35	9.79	85%
Mt. Rainier (Paradise)	26.6	26.4	+0.2	13.61	18.11	75%
Quillayute	38.9	40.5	-1.6	15.54	13.66	114%
Seattle	38.0	40.9	-2.9	6.22	5.13	121%
Stampede Pass	29.6	25.6	+4.0	12.39	12.04	103%
Spokane	24.8	27.3	-2.5	0.67	1.82	37%
Wenatchee	26.3	27.8	-1.5	0.18	1.14	16%
Yakima	27.8	29.8	-2.0	0.30	1.20	25%

Outlook

The Climate Prediction Center's seasonal outlooks (see images below) for the spring suggest equal chances of above or below normal temperatures for Western Washington and greater probability of above normal temperatures for Eastern Washington. With weakening El Niño conditions, there is an equal chance of above or below normal spring precipitation with the odds in favor of near normal conditions. For other seasonal outlooks, see <http://climate.washington.edu>.

Climate Prediction Center March-April-May Outlook



EC Means Equal Chances for A, N, B
 A Means Above
 N Means Normal
 B Means Below
 Source: <http://cpc.ncep.noaa.gov>