

Pacific NW Storm - December 17, 2012

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Meteorological Overview: The most intense storm of the early 2012-2013 winter season moved ashore as an area of deep low pressure in western Washington early on December 17, 2012. This system was associated with a rapidly moving shortwave trough that moved eastward across the eastern Pacific (Fig. 1) and was associated with a 972 hPa surface low that came ashore around 09z on 17 December before heading eastward and weakening over the complex terrain of Washington (Fig. 2-3).

The main effects of the storm were heavy rain, high winds and high elevation snow. As the storm moved inland, numerous advisories and warnings were issued for much of the western United States (Fig. 4), including winter storm and blizzard warnings, storm warnings along the west coast as well as high wind warnings across the Portland, OR metropolitan area.

Some of the high wind reports included 101 mph at Marys Peak, OR, and 94 mph at Crystal Mountain, WA, at high elevations. Winds also exceeded hurricane force in places along the Oregon and Washington coast as well, including 84 mph at Cape Disappointment, WA, 81 mph in Lincoln City, OR, 76 mph in Newport, OR and 69 mph in Seattle, WA.

Some snowfall totals exceeded a foot across northern California and Idaho, 20 inches at Santiam Pass, OR and over 18 inches near Leavenworth, WA, with as much as 2 to 3 feet in the Cascades. Rainfall totals were mostly under 4 inches because of the fast movement of the storm.

Impacts: This storm was responsible for generating high waves along the the Washington and Oregon coasts, where winds gusted in some areas above hurricane force. Power outages were common across western Washington and Oregon, in and around Seattle and Portland. Travel across the Cascades was dangerous to near impossible during the storm (Fig. 5).

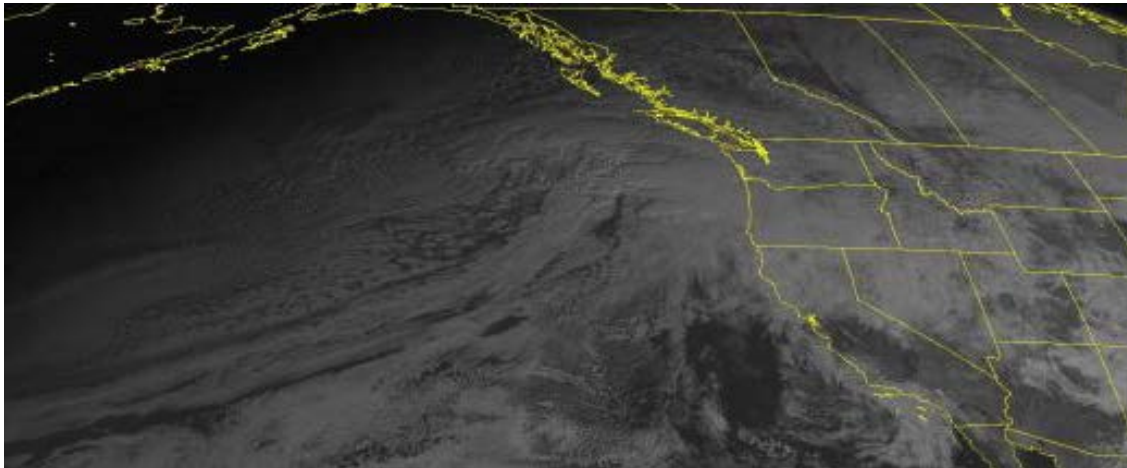


Figure 1: Satellite image during the late afternoon of December 16, 2012 showing the storm system moving toward the Washington coast.

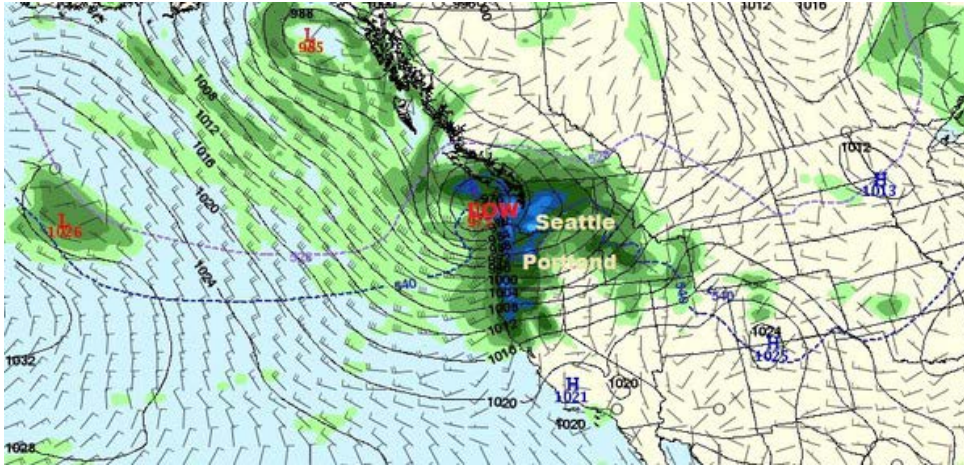


Figure 2: GFS forecast verifying early on December 17, 2012

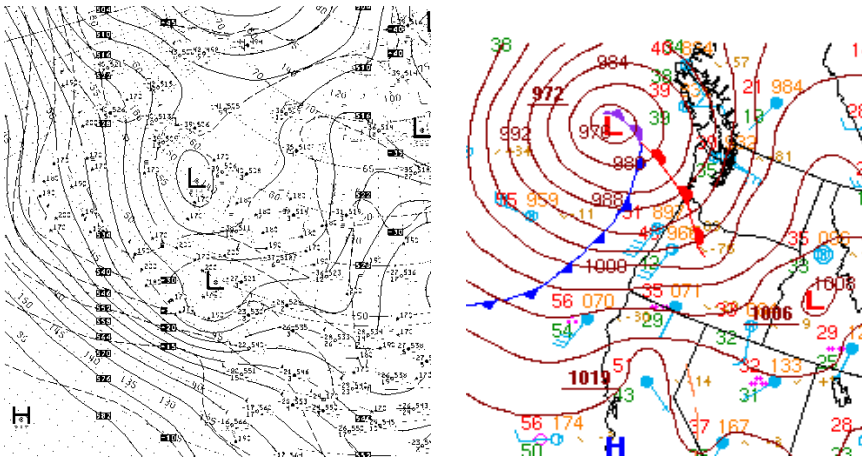


Figure 3: 500 mb chart and WPC Surface Analysis for 00Z on 17 December, 2012.

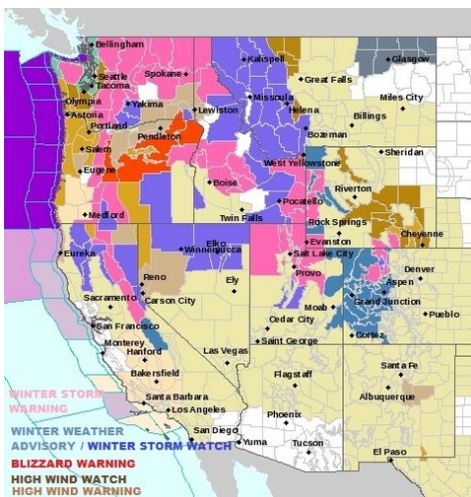


Figure 4: NWS advisories, watches and warnings



Figure 5: Snoqualmie Pass, WA