

## Mountain School Tech Tips: Websites for Winter Weather

*The trouble with weather forecasting is that it's right too often for us to ignore it and wrong too often for us to rely on it. ~ Patrick Young*

The accuracy of weather forecasts aside, we all know that weather - bad weather in particular - can make or break our outdoor adventures. But, getting good weather information has got more difficult since Environment Canada began, what I call, "dumbing down", their forecasts in the mid 1990s. That's when the synopsis disappeared from Environment Canada and you started having to pay for a "customized forecast" at \$3.99 minute. I recall calling the meteorologist once for a "customized forecast" the day we were planning to leave on a big ski traverse of the Caribou Mountains, only to get the "meteorologist" reading me the free bulletin! But, I digress, what I should be writing about is where to get more detailed weather information on the web. Below, I've presented some of the various weather products I use for winter (and summer) weather forecasts. There are lots more out there so look around and assemble your own folder of useful weather links.



*Nancy Calling The Weather or 1-800-GET-ME-THE-PUCK-OUTTA-HERE (Vicki Hart photo)*

### **Synopsis:**

The first thing I like to get is a synopsis of the major weather systems. Environment Canada no longer issues a synopsis, but, the US agency NOAA (National Oceanic and Atmospheric Administration) does. I usually use the zone area forecast for the Idaho panhandle (<http://forecast.weather.gov/MapClick.php?zoneid=IDZ001>) which is closest to our area as you can get. If you click on the <forecast discussion> link at the bottom right side of the page, you'll get a good synopsis along with some idea of how confident the forecaster feels.

In winter, but not in summer, you can get a synopsis for the Coast Mountains from

the Whistler-Blackcomb website

(<http://www.whistlerblackcomb.com/weather/forecast/index.htm>). As much of our weather approaches from the west, you can get a good idea of what systems are in the offering for our area from this forecast. Generally, I find that precipitation amounts are slightly less than forecast for the Coast, freezing levels are slightly lower, and the systems arrive slightly later. Red Mountain also gets a custom forecast in winter from the southeast fire centre, and during the ski hill operating season, you can find this custom forecast on the Red Mountain site.

Another winter only weather forecast is Environment Canada's high elevation forecast available here:

[http://www.weatheroffice.gc.ca/forecast/textforecast\\_e.html?](http://www.weatheroffice.gc.ca/forecast/textforecast_e.html?Bulletin=fpcn68.cwvr)

[Bulletin=fpcn68.cwvr](http://www.weatheroffice.gc.ca/forecast/textforecast_e.html?Bulletin=fpcn68.cwvr). This gives predicted freezing levels and precipitation amounts and starts in October/November and ends May 1.

### **Current Conditions:**

So now that you know what is supposed to happen, it's good to know what actually is happening. Red Mountain and Whitewater Ski Resort both have webcams that are operational during the winter months. Find these on their respective home pages. Drive BC

(<http://images.drivebc.ca/bchighwaycam/pub/html/www/5.html>) also has a series of webcams around the local area and you can also access remote weather station data (wind speed and direction, road temperature, and precipitation amount) here. Unfortunately, although MoT (Ministry of Transport) has weather stations on ridge tops, the only data made publicly available is from the road side monitoring stations. Note that wind speed and direction are for the valley and, as such, are highly influenced by local topography. Also, precipitation amounts are in water equivalents. An average conversion for water equivalent to snow is 1 mm water equivalent equals 1 cm snow.

The CAA has a series of links to other remote data loggers on their web-site (<http://www.avalanche.ca/cac/pre-trip-planning/weather/real-time-weather-dataloggers>). None of these are in the West Kootenays, but they do provide some useful information.

### **Freezing Levels/Precipitation/Wind Speed and Direction:**

Knowing the freezing level can mean the difference between a day of great powder skiing versus a miserable day spent soaked to the bone while skiing elephant snot - I know which I prefer! Information on forecast wind speed and direction is also useful for avoiding windslabs and choosing destinations that are appropriate to the current conditions. Some useful sites for this type of information are:

- [http://www.flightplanning.navcanada.ca/Latest/gfa/anglais/Latest-gfacn31\\_turbc\\_000-e.html](http://www.flightplanning.navcanada.ca/Latest/gfa/anglais/Latest-gfacn31_turbc_000-e.html), where you'll find current and forecast (6 and 12 hours) freezing level data;
- [http://www.flightplanning.navcanada.ca/cgi-bin/AfficherFDL180.pl?Langue=anglais&hreFdcn01=2004+02+20+06+UTC&hreFdcn02=2004+02+20+12+UTC&rwt\\_uprWindsCharts180=fdcn02-](http://www.flightplanning.navcanada.ca/cgi-bin/AfficherFDL180.pl?Langue=anglais&hreFdcn01=2004+02+20+06+UTC&hreFdcn02=2004+02+20+12+UTC&rwt_uprWindsCharts180=fdcn02-)

090&hrcFdcn03=2004+02+21+00+UTC&Region=OUEST, has wind speed and direction at 2,800 metres;

- [http://squall.sfsu.edu/gif/jetstream\\_pac\\_h12\\_00.gif](http://squall.sfsu.edu/gif/jetstream_pac_h12_00.gif), more wind speed and direction data this time at the 300 mbar (about 9,000 metres ASL) level, which is pretty much the jet stream winds;
- [http://www.nwrfc.noaa.gov/weather/10\\_day.cgi](http://www.nwrfc.noaa.gov/weather/10_day.cgi) is another NOAA product with precipitation amounts, minimum and maximum temperatures, and freezing levels for the entire Columbia basin.

### **Imagery:**

For the real weather geeks, there is great satellite imagery available on the web. The GOES West imagery has a series of infrared satellite images with isobars and the current systems superimposed over the top. At [http://squall.sfsu.edu/gif/sathts\\_pac\\_snd\\_00.gif](http://squall.sfsu.edu/gif/sathts_pac_snd_00.gif), you'll find the sea level data, while [http://squall.sfsu.edu/gif/sathts\\_pac\\_500\\_00.gif](http://squall.sfsu.edu/gif/sathts_pac_500_00.gif) has data from the 500 mbar level (about 5,500 metres) which is the upper level flow pretty much unaffected by topography. <http://www.atmos.washington.edu/cgi-bin/latest.cgi?fronts-ir> shows the current systems and fronts overlaid the satellite imagery, and [http://www.atmos.washington.edu/~ovens/loops/wxloop.cgi?fronts\\_ir+/48h/](http://www.atmos.washington.edu/~ovens/loops/wxloop.cgi?fronts_ir+/48h/) has a time sequenced version.

NOAA has visible and infrared imagery available for our area at <http://sat.wrh.noaa.gov/satellite/loopsat.php?wfo=pdt&area=nw&type=vis&size=4> for visible satellite imagery and <http://sat.wrh.noaa.gov/satellite/loopsat.php?wfo=pdt&area=nw&type=ir&size=4>, for the infrared (and I find more useful) imagery.

There is also some very cool microwave imagery available at <http://cimss.ssec.wisc.edu/tropic/real-time/tpw2/epac/main.html> which quite clearly shows the tropical moisture feed we get going with a pineapple express.

If all this is way too geeky, Environment Canada has a nice simple diagram of the major systems at [http://www.weatheroffice.gc.ca/jet\\_stream/index\\_e.html](http://www.weatheroffice.gc.ca/jet_stream/index_e.html). Another one of my favorites, which is very specific for our local area comes from the Weather Network at [http://www.theweathernetwork.com/weather/maps/?ref=topnav\\_weatherindex\\_maps](http://www.theweathernetwork.com/weather/maps/?ref=topnav_weatherindex_maps), which shows past and predicted precipitation and seems to be remarkably accurate.

This is by no means an exhaustive list, rather, it's a collection of my favorite web-sites that I find most useful for knowing what's going on out there - short of getting out there myself. The CAA has also gathered together a bunch of useful sites on their webpage (<http://www.avalanche.ca/cac/pre-trip-planning/weather>) where they also have a tutorial on understanding the various satellite imagery. Spend an afternoon wandering around the web visiting these (and other) sites and pretty soon you'll find yourselves hooked on weather just like me.