

National Weather Service, Juneau, Alaska

# COOP Corner

## Special points of interest:

- Observer of the Year
- The Beaufort Scale
- September and October Observer's of the Month
- Aye-Aye, Captain! Meeting the Hopkins

## 2010 — Observer of the Year

2010 was another great year with great observers. This year every station did an excellent job...so everyone, give yourself a big pat on the back!

When reviewing the B - 9 1 ' s for completion, correctness, and timeliness it made the selection of Observer of the year difficult, as many of the stations fulfilled these requirements. Then there are the stations that go above and beyond taking a daily observation - those observers that let us know what is going on while it is happening.

The Pelican station does all that. One excellent example is when John and his family have provided

up-to-the-minute snow depth measurements during winter storms. With Pelican located upstream from areas like Hoonah and Juneau when

these storms move through them, it provides useful information for the current and next forecast products.

John is a dedicated man, but I'm pretty sure he does take a vacation from time to time. Yet from looking at the observation forms you couldn't tell. When John is away, Allen steps in and ensures that the observations continue.



**Much thanks goes to this**

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## Time for Training:

Now that winter is in full swing, there are additional things to remember.

- Fill in the precipitation, snowfall, and snow depth every day...even when the value is zero or missing. This ensures that the information is known to be zero and not missing. Below is a great example of how no precipitation fell on the 1st through the 3rd and yet all of the columns are filled out. Then on the 5th it rained, but did not snow and the zero snow amount was again entered. This confirms, beyond any doubt, that no snow fell on that day.

DATE	TEMPERATURE			24 HR AMOUNTS		AT OB
	24 HRS ENDING AT OBSERVATION		AT OBSN	Rain, melted snow, etc. (in and hundredths)	Snow, ice pellets, hail (ins. and tenths)	Snow, ice pellets, hail ice on ground (in)
	MAX	MIN				
1	25	17	17	0.00	0.0	6
2	19	14	14	0.00	0.0	6
3	15	13	15	0.00	0.0	6
4	36	9	35	0.12	1.0	5
5	41	35	41	0.56	0.0	T

- Take the funnel off and the inner tube out any time there might be snow. If there is snowfall

and the funnel and inner tube are still in place, there is a chance for an inaccurate precipitation total.

- When melting the snow in the canister, use warm water...not hot! Using hot water can reduce the precipitation amount due to evaporation.
- **Check out the September-October 2010 newsletter for snow melting training.**
- Estimating daily snowfall and snow depth - We do not live in a perfect world, so there will be times that these elements will need to be estimated. Use the remarks to add any details about doing this. Example: estimated snowfall due to blowing and drifting snow overnight.
- When it snows but melts on contact of the ground, this still counts as snowfall. It is measured as a trace and entered on the form as a "T" (trace).
- There are also times that it will snow and accumulate and then it is gone before the daily measurement. When possible, take a measurement of the snow during the day to try to measure the maximum snow depth before it melts or blows away...do NOT clear the snow board, except at the normal observation time.

## Estimating Wind Speeds Using the Land and Sea

The Beaufort Wind Scale (pronounced "bo-fort"), invented in 1806 by Sir Francis Beaufort, is a method of estimating wind speed based on observed effects. Before its invention, there was no standardized method for estimating wind speeds, since doing so is

very subjective—a "moderate breeze" to one person may be felt as a "strong breeze" to another. Originally developed for use at sea, it was later adapted for land use, and can be used by observers to estimate winds when they don't have wind instrumentation.

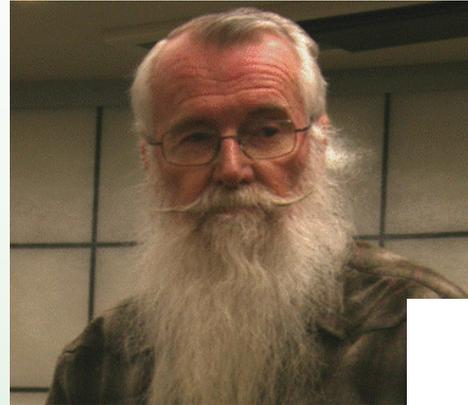
Beaufort Number	Description	Wind Speed	Sea Conditions	Land Conditions
0	Calm	<1 mph <1 kt	Sea surface smooth and mirror-like.	Smoke rises vertically.
1	Light Air	1-3 mph 1-2 kt	Scaly ripples, no foam crests.	Direction of wind shown by smoke drift only.
2	Light Breeze	4-7 mph 3-6 kt	Small wavelets, crests glassy, no breaking.	Wind felt on face, leaves rustle, vanes moved by wind.
3	Gentle Breeze	8-12 mph 7-10 kt	Large wavelets, crests begin to break, scattered whitecaps.	Leaves and small twigs in constant motion, wind extends light flag.
4	Moderate Breeze	13-17 mph 11-15 kt	Small waves 1-4 ft. becoming longer, numerous whitecaps.	Raises dust, loose paper, small branches move.
5	Fresh Breeze	18-24 mph 16-20 kt	Moderate waves 4-8 feet. Many whitecaps, some spray.	Branches of a moderate size move. Small trees in leaf begin to sway
6	Strong Breeze	25-30 mph 21-26 kt	Larger waves 8-13 ft, whitecaps common, more spray.	Large branches in motion, umbrellas used with difficulty.
7	High Wind	31-38 mph 27-33 kt	Sea heaps up, waves 13-20 ft, white foam streaks off breakers.	Whole trees in motion, inconvenience felt walking against the wind.
8	Gale	39-46 mph 34-40 kt	Moderately high (13-20 ft) waves of greater length, edges of crests begin to break into spindrift, foam blown in streaks.	Twigs break off trees, impedes walking progress.
9	Strong Gale	47-54 mph 41-47 kt	High waves (20 ft), sea begins to roll, dense streaks of foam, spray may reduce visibility.	Slight structural damage occurs.
10	Storm	55-63 mph 48-55 kt	Very high waves (20-30 ft) with overhanging crests, sea white with densely blown foam, heavy rolling, lowered visibility.	Trees uprooted, considerable damage occurs.
11	Violent Storm	64-72 mph 56-63 kt	Exceptionally high (30-45 ft) waves, foam patches cover sea, visibility more reduced.	Widespread damage.
12	Hurricane	$\geq$ 73 mph $\geq$ 64 kt	Air filled with foam, waves over 45 ft, sea completely white with driving spray, visibility greatly reduced.	Extreme destruction.

## A Fishy Tale

### September Observer of the Month—Auke Bay

Auke Bay has got to be one the most interesting sites to visit. Where else can you get to see hundreds of different ocean creatures in jars? Dr. Bruce Wing is always eager to share his extensive knowledge of the specimens.

Although it is not uncommon to have observers that were present when the station was installed, it is uncommon when the station was installed in 1963. Read more about Bruce in the January-February 2010 Newsletter.



**Dr. Wing**

### October Observer of the Month-Hidden Falls

It is no surprise that the crew at Hidden Falls Hatchery are good at collecting weather data—they are scientists. They are usually collecting data about salmon, but they have taken to weather collection like a fish to water.

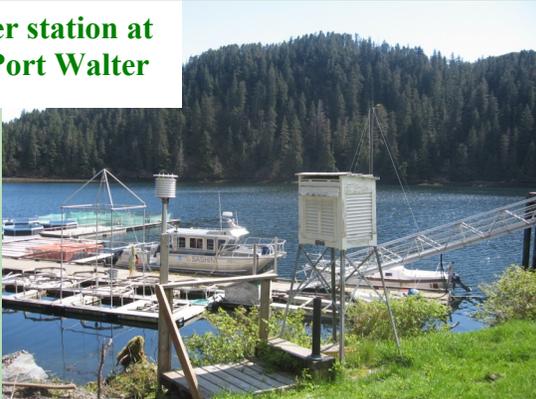
A big thank you goes to the entire crew that makes sure that the data is collected and entered. Getting the stations data every day helps us know what has been occurring in an otherwise data-void area.



**Cruis'n Hidden Falls**

### November Observer of the Month-Little Port Walter

**Weather station at Little Port Walter**



Little Port Walter is a beautiful place also tucked away along the eastern side of Baranof Island.

While visiting this summer I had the chance to watch the largest charm of hummingbirds I had ever seen.

Sadly, Brad, our long time observer at Little Port, moved. Angela has taken his place and has been doing a great job. I know she was already a busy person with all their research, yet she has dutifully made sure our weather data continues.

## Observer Spotlight: Marine Highway of Roses By: Nikki Becker

Bill and Wynn are COOP observers and weather spotters from Ketchikan, which averages around 13 feet of rainfall and melted snow a year. Their attention to detail has been very useful in daily operations at the Weather Forecast Office in Juneau. This probably stems from their choice of careers and hobbies over the years and amazing views of Clarence Strait.

Bill was a pilot of the Alaska Marine Highway System from Seattle to Dutch Harbor for many years. Weather is very important to mariners; it is one of the elements that can change the course of everything in seconds that the Captain has no control over. Bill used his knowledge and experiences while navigating the waterways of Alaska to write a few books. He first published a navigational aid book for the Wrangell Narrows, or to some the “Twisting Nightmare”, to share his knowledge of the Narrows for young mariners in 2006. Then the following year, he published a five volume set of short stories based on real events to enlighten the imagination about Alaska’s seas, people, and adventures.<sup>1</sup> Since his retirement from the Marine Highway system, Bill spends his leisure time with his wife, two children, three dogs, and two cats. He also enjoys hiking, reading, writing, getting out on the water now and again.



Enjoying family time with their kids and pets around Ketchikan.

His wife, Wynn, also does some of the daily weather reports. Wynn spent many years as a full time school teacher for K to

12<sup>th</sup> grade, and she still does substitute teaching. She received degrees from various colleges in Zoology and Education over the years, including one from Sheldon Jackson College in Sitka, Alaska, which was closed in 2007 and turned into a Native American museum.<sup>2</sup> When she is not spending her spare time with family and pets, she enjoys gardening, swimming, and reading.



There are estimated to be around 100 rose species in the world. This flower is a twilight rose from Wynn’s Garden which blooms at twilight.<sup>3</sup>

Weather Forecast Office in Juneau hopes to continue to get the collection of weather reports from Bill and Wynn for many more years to come.

1. Source: “Alaska Sea Stories, Book Description,” Paperback Book Swap, 2010. <http://www.paperbackswap.com/Alaska-Sea-Stories-Captain-William-M-Hopkins/book/1930043597/>
2. Source: “History of the Sheldon Jackson Museum,” State of Alaska, 2007. [http://www.museums.state.ak.us/sheldon\\_jackson/sjhours.html](http://www.museums.state.ak.us/sheldon_jackson/sjhours.html)
3. Source: “Late Summer,” All American Rose Selections, 2010. [http://www.rose.org/site/epage/82273\\_766.htm](http://www.rose.org/site/epage/82273_766.htm)

If you have any questions, comments, or concerns about this or any other COOP matter, please feel free to contact us.

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