

From: Eric Solorio
To: Docket Optical System
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Subject: Fwd: comment about climate data

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>>> Janet Westbrook <jwest@iwvisp.com> 1/7/2010 12:29 AM >>>
Thanks for a most interesting two days of information sharing!!

After reading the staff requests for data and finding out that the climate data used was for Mojave, not for anything anywhere near your chosen site, and talking with Mike about the HTF which freezes at 54°F, I am concerned that you realize just how often our temperatures here are below 54°F. While the Inyokern airport has data going way back, it is a bit lower than the site. NAF has data going back 50 years, but it is in the bottom of the valley and the temperatures there are NOT the same as temperatures at your site. We have quite an inversion layer in effect during cold times, (unless the wind blows). Winter temperatures can get down in the low teens at NAF, but at my house at 2500 ft. it's always 10° warmer at night than down there. Your site may be subject to cool air draining downhill from the El Pasos, but the chart below is more realistic than any other data available.

I would like to make you aware of some data which is much more relevant to the site - Eric Frisbee's house is about 2600 ft, and his Davis weather station has been very reliable for 10 years. I have a very accurate rain gauge, but don't record other than rain.

See http://www.ericfrisbee.com/weather/weather_span.php?span=365&year=0

this should pull up a chart for our weather from 2009. Temperatures here are below 54° from early October until Mid May. We have freezing (32°F) nights from mid Nov. until late March.

Just wanted to be sure that you size your propane needs to meet these data. We're hot only 1/2 the year - you won't need to add any heat from mid-May to mid-Sept. (except this past year we had a cold spell in June). Such is life in the higher Mojave Desert.

I know Dan Harris talked to you about wind. Be sure you design your stuff to withstand winds of 100mph. I've lost several anemometers from my roof, and had it peel back several times when winds reach 75mph (it's literally tied down now). Winds of 50mph are way too common, and 60-70 happen more than we'd like. Eric's house is somewhat sheltered by low hills, but he's recorded gusts well above 50 a lot. The prevailing winds are from the SW, but sometimes we get Owens Lake dust down here from strong North winds. Your site is going to be subject to the north winds, but the hills will change the direction of the SW winds. You can see that spring tends to be pretty windy. Only way to really know is to put a weather station out there ASAP and get some good data to work with.

2009 was a dry year. Eric and I recorded only 1.8" of rain. 2005 we got 9.77" and the flowers were amazing, especially on your site. 2007 was .61", last year 2.14". Our average is somewhere around 4.5", but of course in no year since 1980 that my rain records go back to have we ever gotten 4.5", it's feast or famine, El Nino years being "feast" - 1992 was 10.75", 1983 9.5", but mostly 1-2-3". And snow - we get snow occasionally. We had snow on the ground here (my house and your site) Dec. 10. Not much, but it'd disturb the mirrors. I've skied the hill up to the college from my house. We used to ski down B Mountain (on the base) on a regular basis in the 70's, but it's warmer and drier than it was then.

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