

# Seasonal Weather Outlook: Planning for November

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Our rainy season is off to a very wet start this year. We measured 14.43 inches at the Thurston County Courthouse by the end of October. Our typical average is only 4.15 inches. That means the month of October was the wettest October on record going back as far as I could find monthly data. Certainly wettest since 1948, and probably the wettest since 1898 when official National Weather Service records are available for the Olympia area. That would make it the wettest October in this century!

## **My prediction: Expect a wet & warmer than normal Thanksgiving**

We are currently in a La Nina cycle, and typically, La Nina brings cooler temps and more rain – which is exactly what we don't need because that can bring floods and landslides.

I have my fingers crossed that this is what we can expect: La Nina is fairly weak, so it may not affect North America much. And since November is usually our wettest month, let's go with normal rain and above average temperatures for the rest of November. This is because we are getting a consistent southerly airflow from tropical origins.

## **What computer models predict**

There are conflicting models at this point. Some weather models indicate that the next three months – November, December and January - are likely to be our wettest months of the year. But that concerns me because by the end of this past summer we already had sufficient storage in the soil and atmosphere to absorb most of this record rainfall, but now we don't have any further capacity to absorb large or intermediate rain events. There is little wiggle room to absorb more rain into the ground or into our streams. We don't typically reach this point until late November in most years.

This logically leads to the assumption that we could follow a wet trend and have flooding and landslide problems this year. Statistically that is likely to happen to some degree, but to what degree is very uncertain. We had similar conditions in 2003 and 2013 – both years started out very wet, but managed to dry out in December before major flooding occurred. Back then, those wet starts to the rainy season were not forecast and did not lead to flooding that you might expect.

Such unexpected outcomes are an indication that although weather models are great, they have limitations.

## **The supercomputer models recent track record**

The computer models used by meteorologists did not predict that we would have a record wet October 2016. On the contrary, some models indicated a drier than normal October.

The computer models also predicted a major wind storm was headed for a direct hit with Thurston County last month (October 2016). Most of us braced ourselves, but the storm veered off its predicted path, and most areas in Western Washington had little to no wind. I followed the same models as the forecasters, and I, too, was convinced that a wind storm was coming. I saw the models and thought it would be a monster.

The moral of the story is that we can't always rely on these models to tell us everything. And yet, they are remarkably good when you consider how complex the atmosphere, sea and land interact. In the end, nature is always more complex than the best models we can generate to predict it. If you'd like to know why the models are haywire this year, I explain that toward the end of this article.

## **Snow *this* year?**

My daughter wants to know if we'll get snow, so I'm already thinking ahead. For all the snow lovers, the good news is that La Nina winters are the most likely to produce snow events. Even if the current predictive models don't currently agree with me, I think we will get some later on in December. I hope we will!

## **Weather prediction models are off: here's why**

The weather models that are used to predict what's coming in the next one-to-three months have become noticeably less reliable over the past six years or more. Keep in mind that weather, even a few days out, is very difficult to predict using even the most powerful supercomputers. If you add in more water vapor or changing temperatures, it becomes even more difficult.

Data from all points of the globe show that temperatures have been increasing steadily. This puts more water vapor and heat into the atmosphere. Water vapor and heat exchange are crucial to weather, and so changing these factors has profound and difficult-to-predict effects across the globe.

Looking at where we currently are in our wet season, and looking at the amount of additional heat and water that is currently in the atmosphere from last season's unprecedented El Nino, I predict that we will be wetter than normal from now until our wet season ends in 2017. I'm making the Farmer's Almanac prediction here because sometimes it works like a charm.

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