

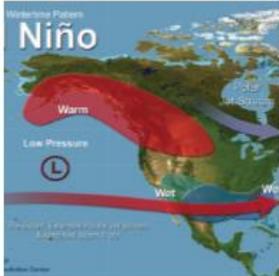
# SUNCOAST OBSERVER

A quarterly newsletter brought to you by the National Weather Service Tampa Bay Area, FL

www.weather.gov/tampa

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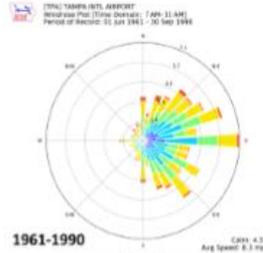
## Top stories in this newsletter



Developing El Niño Expected to Impact Florida's Weather



TBW Incident Meteorologist provides Support to Western Wildfires



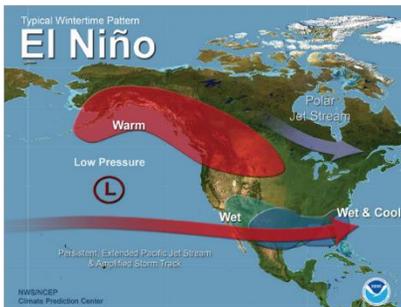
What Happened To Our Typical "Set Your Watch By Them" Summer Thunderstorms



NWS Technicians Replace Air Conditioning Units at Doppler Radar Site

## Developing El Niño Expected to Impact Florida's Weather

By: Dan Noah



On periods ranging from about 2 to 7 years, the surface waters across a large swath of the tropical Pacific Ocean warm or cool by 1 to 3 degrees Celsius. The warm phase is called El Niño.

El Niño deflects the Pacific Jet Stream across Florida more often. This jet stream steers weather systems and increases wind shear. Thunderstorms that form in these conditions develop differently than our summer storms and can lead to long lived violent tornadoes. El Niño does not cause violent tornadoes in Florida, but it enables them. El Niño sets the stage as environmental conditions become more favorable more often.

During the 2015/2016 El Niño, a violent tornado slammed into Siesta Key and Sarasota on January 17, 2016 at 310 am. It caused two injuries and \$12 million in damage. The same storm set down a second violent tornado east of Bradenton near Duette, which killed 2 and injured 4.

Because of El Niño, Florida may see a handful or more of times when violent tornadoes are possible. What can you do? Be informed and have a plan. Be sure to have a NOAA Weather Radio and sign up for alerts from [www.alertflorida.com](http://www.alertflorida.com) or your favorite media outlet. Check out FEMA's Ready website at <https://www.ready.gov/make-a-plan> to make a simple family emergency plan.

# Tampa Bay Incident Meteorologist Provides Decision Support Services to Western Wildfires

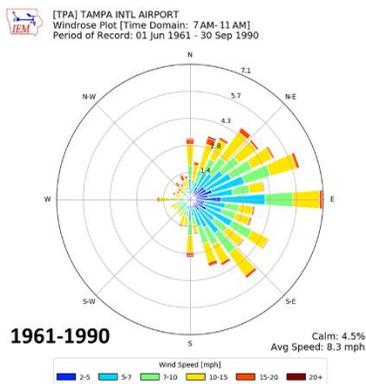
By: Rick Davis



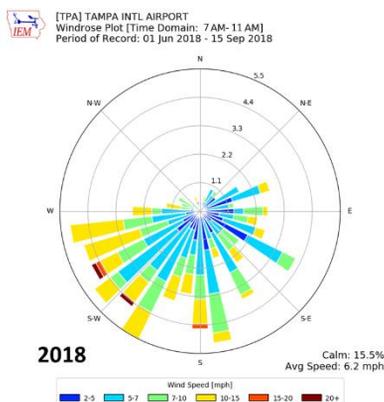
Rick Davis provided on-site IMET and Impact-Based Decision Support Services at the Dollar Ridge Wildfire in North Central Utah in July and at the Mendocino Complex Wildfire in West Central California dispatched in August and early September 2018. Rick worked with numerous incident command teams from different multi-agency and multi-jurisdictional teams ranging in complexity levels. Critical and specific weather forecasts, numerous briefings, and weather updates, alerts and warnings were provided to a wide variety of Federal, State and Local responders, fire crews, operations personnel, private cooperators and land owners. Some challenges during the wildfire assignments were a flash flooding with debris flow event including search and rescue operations for nearly 100 people, at the Dollar Ridge Wildfire due to heavy monsoon rainfall over the burn scar area in the Pinnacles and Strawberry River locations during a busy state holiday weekend. The Mendocino Complex is the largest wildfire in California history at nearly 460,000 acres; this produced significant media attention, structure loss and injuries, along with smoke producing poor and unhealthy air quality impacting large populations in the region daily.

## What Happened To Our Typical “Set Your Watch By Them” Summer Thunderstorms?

By: Paul Close



For much of this past summer we saw winds coming from a southerly to westerly direction, which is in contrast to what has been considered our more typical summertime east to southeast flow. Since about the mid-1990's West Central and Southwest Florida has seen many more summer days with winds coming from the south to west than a few decades ago when they were mainly from the east. This shift can be attributed to the fact that with the warming of the Pacific Ocean, the North Pacific High has gotten stronger, leading to a deeper trough over eastern North America. This has in turn caused the western edge of the Bermuda High to be moved slightly further east, leading to more south to west winds over the Florida peninsula.



This can be seen in the wind rose images to the left, where the summer average for 1961 to 1990 indicates winds mostly with an easterly component, while this summer we've seen numerous days with a southerly to westerly component. This caused the timing of our daily thunderstorms to shift to earlier in the day, with convection developing during the morning hours near the west coast, then moving well inland and across to the eastern side of the Florida peninsula during the afternoons. When we have easterly winds we get our more classic “set your watch by it” late day and evening thunderstorms that we did see on several days during the last two weeks of August into early September.

# NWS Technicians Replace Air Conditioning Units at Doppler Radar Site

By: Steve Duaine



Facilities Technician, Dan Collis and Electronics Technician, Bob Gianino are pictured at our Doppler radar site as they work to remove aging air conditioning units and install new packaged wall-mount units. Having trustworthy and efficient air conditioning is especially important for these systems, because inside the pictured building is the radar transmitter, receiver, and primary processing hardware critical to NWS forecast and warning operations. Like most computer technology, if exposed to heat above 72°F or humidity above 50%, the systems quickly begin to degrade and have problems functioning. Bob and Dan noted the improvement to cooling and dehumidification inside the building immediately after completing the installation.



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