

**Western Regional Environmental Conditions and Impacts Coordination Webinar
March 21, 2016**

Roll Call:

Name	Affiliation
Andrea Bair	NWS Regional Office
Christopher Krembs	Washington State Department of Ecology
Dan McEvoy	Western Regional Climate Center (WRCC)
George Hart	Navy Region Northwest
Karin Bumbaco	JISAO/Assistant WA State Climatologist
Kathie Dello	Oregon Climate Change Research Institute
Kelly Redmond	Western Regional Climate Center
Michael Milstein	NMFS West Coast Regional Office
Mike Anderson	CA State Climatologist
Simone Alin	OAR Pacific Marine Environmental Lab
Timi Vann	NOAA Regional Coordinator
Chris Harvey	NMFS Northwest Fisheries Science Center
Jan Newton	Northwest Association of Networked Ocean Observing Systems
Michelle Stokes	NWS Colorado Basin River Forecast Center
Roger Pierce	NWS Weather Forecast Office, San Diego
Ruth Howell	NMFS Northwest Fisheries Science Center
Toby Garfield	NMFS Southwest Fisheries Science Center
Valerie Were	NOAA PPI
Rebecca Smyth	NOS Office for Coastal Management
Alicia Marrs	OAR ESRL Physical Sciences Division
Dave Lott	NOS Office of National Marine Sanctuaries
Derek Arndt	NESDIS National Centers for Environmental Information
Julie Thomas	Southern California Coast Ocean Observing System
Aric Bickl	Central and Northern California Ocean Observing System (CeNCOOS)
Julia Bos	Washington State Department of Ecology

Summary:

Dan McEvoy, Western Regional Climate Center, welcomed attendees to the meeting, conducted roll call and reviewed the agenda. Dan provided an overview of El Niño conditions and the regional climate brief.

The climate overview highlighted temperature departures from average for the first two weeks of March, and for the water year (October 2015 to March 2016). Over the last month, the Northern Rockies were exceptionally warm, with Montana registering 3-6 degrees above normal for much of the year.

Looking across the region over the first two weeks of March, there was a strong wet precipitation pattern from Northern California to the Pacific Northwest with some places registering 300% of normal. The Desert Southwest remained very dry, and Southern California, Arizona and New Mexico are all behind the average for precipitation. An example of this is shown in Slide 7 for Phoenix, AZ, which shows cumulative precipitation for the city during the 2016 event relative to the other strong El Niño events. Dan noted that the current El Niño is very different for the desert southwest relative to past events and that although there may be some shift in precipitation through May, it is doubtful the values will

approach normal. Dry conditions are also depicted for AZ and NM in the current snow water equivalent, percent of normal for the basins (slide 8). Statewide across California, the Snow Water Equivalent (SWE) is 88% of normal. Dan also noted that warm temperatures across the region accelerated snow melt, with little rebound expected.

Dan discussed the El Niño flow patterns and different pressure anomalies across the 1983, 1998 and 2016 events for the October to March periods. The 1983 and 1998 events look very similar, with negative pressure extending into southern tier states. In the current El Niño event, the negative anomaly is observable in the Gulf of Alaska, but the spatial extent is not nearly as broad. There are positive pressure anomalies extending into the southern tier states in the 2016 graphic (slide 11), and Dan explained that the high and low pressure systems really steer the weather patterns and jet stream. The jet stream anomalies are more subtle (slide 12), but partially explain why Southern California and the Desert Southwest have been so dry.

There is no major change in the El Niño forecast from last months report. The current event is still considered strong but is weakening, and conditions may transition to La Nina during the Fall time frame (close to a 50% probability going into fall).

Dan reviewed the April forecasts for temperature and precipitation, noting that what we've experienced in the region this year did not entirely match predictions. There was some group discussion of the NOAA Climate Prediction Center (CPC) forecast verification. Each month the CPC verifies the monthly and seasonal forecasts. The negative skill for precipitation is not terribly unusual, but there is work underway to "Hot Wash" on the 2015-2016 El Niño event to better understand what happened with the forecasts. Andrea Bair noted there will be an article in the Bulletin of the American Meteorological Society (BAMS) that will come out in July/August describing what happened.

Jan Newton, Executive Director of the Northwest Association of Networked Ocean Observing Systems (NANOOS) reported observations from the NANOOS Climatology application, which a user can query to pull up data from a range of buoy assets, and other observation platforms. Jan highlighted two buoys – one offshore and one onshore. The onshore buoy is registering warmer conditions; warmer than this time last year (slide 25). Both buoys show warmer water, but have a cooling trajectory to them. The water level observations (slide 27) are derived from NOAA Ocean Service water level assets. The 2016 data show elevated water levels, which is to be expected, but also a fair degree of regional difference.

Timi Vann provided an overview of regional impacts on places and people in the region, as they showed up via media sources. She also noted the first edition of the NOAA West Watch which was directly distributed to ~ 250 people including Congressional offices in region, was met with a lot of positive feedback. The next issue will likely come out later this week, and focus on coastal impacts (marine transportation, coastal erosion, and economic impacts – including the outdoor recreational industry). The group was encouraged to distribute this story collection through their networks.

The next webinar is scheduled for: **April 25, 2016 1:00 to 2:00 pm Pacific.**