



TRANSCRIPT

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Sandy (Operator):

Thank you for standing by. All parties are in listen-only mode. Until the question-answer session of today's call at that time to ask a question, please press star one on your phone. In addition, this call is being recorded. I would now like to turn the call over to John Bateman. Thank you and you may begin sir.

John Bateman:

Thanks so much, Sandy. Good morning and thank you for joining this monthly climate update call, a part of the suite of climate services that NOAA provides to government, business, academia, the media and the public to support informed decision making. I'm John Bateman with NOAA Communications and I'll be facilitating the call today. If you have additional questions after the conclusion of today's call, my colleague John Leslie and I can both be reached by email at, and I will spell it, N-E-S-D-I-S-P-A @ N-O-A-A.V-O-V. That's nesdis.pa, as in public affairs, @NOAA.gov. Today's update will feature two short presentations followed by an operator assisted question and answer session. And a copy of the presentation our speakers will follow can be downloaded from the link in the media advisory. And with that, I will introduce our speakers.

The first presenter is Russ Vose, chief of the Climate Monitoring and Assessment branch at NOAA MCEI who will provide a summary of the June 2024 US and Global Climate Report, as well as the latest Drought Monitor update. Our second presenter is Cory Baggett, a meteorologist with NOAA's Climate Prediction Center who will provide the latest El Niño, La Niña update as well as the US seasonal outlooks for temperature precipitation and drought for August, September and October. With that, we'll kick off this media briefing with Russ from NOAA MCEI.

Russ Vose:

Good morning gang. Thanks for spending some time with us here today. I've got about five slides that are going to touch on what's been going on globally and in the US, and I'm going to start with the globe in slide number two, which shows you what the temperature was across the globe in June of this year. By the way, our record dates back to 1850. It's 175 years, which even for me is hard to believe that we've got this much of record at this point in time. I think the main thing I'll direct your attention to is the map on the left. This map shows you the departure from the long-term average. So if you see something in red, those areas were warmer than the long-term average. And if you see something in blue, those areas were colder than the long-term average. And the average is for the period 1991 to 2020.

The big punchline here is that it was the warmest June on record for the globe. Again, the global anomaly was 1.22 degrees Celsius or 2.2 degrees Fahrenheit. It was also the warmest year on record or warmest June on record for the land by itself and for the ocean by itself. As you can tell, most of the land areas were above the long-term average with the exception of parts of Central Canada and Greenland and bits of northern Russia and Eastern Australia, parts of South America, and then a big chunk of Antarctica, which actually is consistent with Antarctica having the second-lowest sea ice extent on record for the month of June. But all in all, a very warm month this past month. And this is the 13th month in a row I believe, of each month setting a global record.

If we go to slide number three, this puts the year to date in perspective. So this information is an average for the period of January through June of 2024. And the punchline here again is that it was the warmest January through June period on record. It was 1.29 degrees Celsius or 2.32 degrees Fahrenheit above... Well, that was the average, above long-term average. And as you can see from the map that's shown on the left, almost all of the Earth's surface with the exception of parts of Eastern Antarctica and the Southern Ocean South and South America was above the long-term average. This map actually depicts something slightly different than the previous one. It puts things in terms of record warmest and record coldest, record warmest or areas in the bright red. And as you can see, a whole big chunk of the tropical Atlantic Ocean and northern South America and lots of the western tropical Indian Ocean and parts of Africa and parts of the tropical Western Pacific were all record warm for the period January through June.

The figure on the right is kind of a funky plot, but it shows you the 10 or 11 most recent years of global temperature. And each point is basically the year-to-date temperature. So if you look at the black line, it ends in June and that shows you the year-to-date temperature for this year. And as you can see, that black line is way above any the other lines that are on the plot. And what this is telling you is that it's the warmest year on record and it's been the warmest year on record to date throughout the year, well warmer than 2016 at this stage, which then of course begs the question, how likely is it that 2024 will be the warmest year on record? And right now our estimate is it's about 59% chance that it'll be the warmest year on record. And it's 100% chance it'll be in the top five and realistically, it'll probably rank either one or two unless something drastic happens like a major volcanic eruption or a comet slamming into the Earth's surface, which is hopefully not likely.

Go to slide number four. We're changing scale here. We're going to the contiguous United States. These maps show you on the left temperature and on the right precipitation for the month of June. The map on the left, again temperature, it's depicting the rank of each state for the month of June. So what you see is a number 130 for the states of Arizona and New Mexico. That means that those two states had the warmest June on record respectively for those states. But more generally, you see that most of the United States, except for parts of the northern plains which are in white, experienced above average temperatures for the month of June. And overall the contiguous US ranked second warmest June on record.

The map at the right shows you the same picture, but for rainfall if you will. Much more variations here, which is typical for rainfall. But if you see something in a green, a bluish green color, those areas are above the long-term average and ranked really highly. So New Mexico, Minnesota, Wisconsin and Michigan all ranked among the top 10 wettest years on record wettest month on record for June. The driest June on record for Virginia. Let's go to slide number four here now. This is the same piece of information, but for the year-to-date for the United States.

The map on the left again is temperature, which you can see is basically the entire thing with colors of orange and red, which means essentially the entire contiguous United States was above average or has been for the year-to-date temperature. We've had a few states like West Virginia, Pennsylvania, Vermont and New Hampshire that have had their warmest year-to-date period on record. The map on the right gives you the same sense of what's going on, but only for precipitation. And what you see is a good chunk of the country has been at least near normal, which is the white, or above normal, again, the blues and the greens. Overall it was the second warmest year-to-date temperature for the United States on record and 11th wettest so far. And finally-

John Bateman:

Hey Russ, if you don't mind me interrupting real quick, I apologize, the slide deck did not update to the online link that people can download from. So I've been getting some emails from some of the reporters. We're working on trying to get that now. For some reason they didn't update, they still show last month's. So we are trying to get that fixed for everyone. Feel free to continue with the briefing, Russ. But I just wanted both you and Cory and everyone else out there to know that we're working on that. If you need the slides after this, if they're not up in time, I can email them to you, so just reach out to me. But sorry to interrupt. You can continue, Russ.

Russ Vose:

Sure. Okay. I've just got one more slide, then I'll hand the mic off. The slide that you can't see for the moment is slide number six. It depicts the billion-dollar disasters for the year-to-date. So far this year, the United States has experienced 15 weather climate disasters, which include six severe storm episodes, all of which are concentrated in the central part of the country, five tornado outbreaks, two hail events, and two winter storm events. The cumulative damage so far this year is 37 billion dollars and this month we added four new disasters versus the previous month where we had a total of 11. So we're at 15 for the year and we're halfway through the year. Hopefully we won't see any more of these. But given that we're heading into the peak of the tropical cyclone season, we're likely to see more. This is where I stopped and I'll hand the mic off to Cory now.

Cory Baggett:

Yes. Thank you, Russ, and good morning everyone. This is Cory Baggett, meteorologist from the National Weather Service Climate Prediction Center. I'm not sure if you have access to the slides at this point, so I apologize as I refer to these. But we'll push forward regardless. So I would like to bring your attention to slide seven of this possible presentation you have in front of you, which shows the current sea surface temperature observations and forecasts for the El Niño Southern Oscillation, otherwise known as ENSO. The figure on the left shows the average sea surface temperature anomalies over the last four weeks. The blue shading in this figure represents areas where sea surface temperatures were below normal, while red areas correspond to above normal. We can see that the sea surface temperatures were above average across the Western Pacific Ocean. Further east along the equator, sea surface temperatures

were near to below normal. This pattern of warm in the Western Pacific and cool in the Eastern Pacific is typical of an emerging La Niña.

That said, we are still currently in ENSO-neutral conditions with sea surface temperature departures not yet reaching the threshold for full-fledged La Niña. Meanwhile, in the Atlantic Ocean sea surface temperatures were well above normal. Looking to the future, La Niña is actually favored to develop during the August through October season. In fact, La Niña watch has been issued. The chart on the right shows the ENSO forecast issued July 2024 valid through April 2025. This chart indicates the probability of La Niña in blue bars, neutral conditions in gray bars or El Niño in red bars during August through October. There is a 70% chance that La Niña will develop and a 79% chance that La Niña persists into the Northern Hemisphere winter through November through January 2024, '25. As we shift forward to slide eight, this is our monthly temperature and precipitation outlooks for August released just earlier this morning.

These outlooks represent the probabilities that the mean temperature or total precipitation for August will be below near or above normal. The red shading on the map to the left indicates where above normal temperatures are the most likely outcome, while any blue shading indicates where below normal temperatures are most likely. For precipitation on the right, green shading indicates we're above normal, precipitation is most likely, and brown shading indicates where below normal is most likely. Any regions that are white on either of these maps indicate equal chances that above, near or below normal values would be observed. In other words, 33% chance of each of these three categories, above, near or below normal. So looking at the temperature outlook for August, much of the lower 48 is expected to experience above normal temperatures. Maximum probabilities exceed 70% over portions of the north central Rockies in the west supported by the long-term trend, strong expected upper-level ridging and dry soil conditions. In the east, above normal temperatures are also favored exceeding 60% over an area centered on the southern Appalachians also due to low soil moisture and long-term trends. Probabilities are notably lower-

John Bateman:

Hey, Cory?

Cory Baggett:

Yes.

John Bateman:

Cory, I'm sorry to interrupt. I just want to let everyone to know real quick, we've got the slides in. You can download them from the media advisory online. I apologize for the confusion and the issues. I also emailed some of the slides to folks. So we should be good to go at this point. So thank you for your patience, Cory, please continue.

Cory Baggett:

Yeah. Thank you for the update, John. So for everyone, just we're referencing slide eight at this point. We're working on August temperature right now. So continuing, probabilities are lower across portions of the central US. This area has experienced considerable temperature variability so far this summer, which is modeled to continue. Meanwhile, over portions of the immediate west coast equal chances are favored due to below normal coastal sea surface temperatures that may grow in amplitude as the season progresses. In Alaska, the low normal temperatures over the southwest west mainland and Aleutians are forecast where coastal sea surface temperatures are cooler than normal. Above normal

temperatures are favored along the eastern portions of the no slope supported by strong long-term trends in that region.

So now looking at the August precipitation outlook, the figure on the right of slide eight, much of the west is favored to have reduced chances of precipitation under the influence of strong mid-level ridging and low soil moisture anomalies. In contrast, much of the southeast and the immediate east coast is favored to have above normal precipitation with probabilities reaching over 50% centered over Florida. This anticipated relatively wet pattern is in part due to Noah's 2024 Atlantic hurricane season outlook, which favors a very active Atlantic hurricane season. In Alaska, there is a tilt in the odds towards above normal precipitation for the southwestern portion of the state due to moist onshore flow that is anticipated.

So now looking further ahead to the three-month period from August through October 2024, I'd like to bring your attention to slide nine for the seasonal outlooks. During this period, the potential for early impacts from La Niña are considered as are statistical and dynamical models, coastal sea surface temperature anomalies, soil moisture anomalies, and the long-term trend. The August through October 2024 temperature outlook favors above normal temperatures nearly everywhere in the lower 48. Probabilities reached 60 to 70% over the Rockies where there was strong model agreement. The [inaudible 00:14:52] temperature trend is quite strong and below normal precipitation is favored.

Above normal temperatures are forecast along the Gulf and East coast owing to strongly positive coastal sea surface temperature anomalies along with long-term trends in New England. Equal chances are favored over the immediate west coast given cooler sea surface temperature anomalies and also due to the potential for impacts from maritime flow in that region. Also looking over the Pacific Northwest, there is a possibility that there will be early impacts of La Niña as the season progresses also supporting equal chances in that region. Odds for above normal temperature are weaker again in the central US as they were for the August outlook. Transient weather systems are expected to continue to bring in cooler air masses. For Alaska, sea surface temperature is anomalously cold along the southwestern coast leading to a slight tilt toward below normal temperatures over the southwestern part of the state. Probabilities transition to above normal toward the northeastern part of Alaska given dynamical model forecast and long-term trends.

So now the August through October 2024 precipitation outlook favors below normal precipitation over parts of the Western and central US. However, a small area of above normal precipitation is indicated in Western Washington state where La Niña influences may emerge towards the end of the season. 40-50% chances of below normal precipitation are favored in the central Rockies where model agreement was strongest. Enhanced probabilities for above normal precipitation are depicted over the southeast, along the eastern seaboard to New England with the highest probabilities reaching 50-60% centered over Florida owing to their anticipated active hurricane season. In Alaska, there is a slight tilt in the odds to above normal precipitation in the western portion of the state.

And finally we turn to the drought outlook on slide 10. The brown areas on this map indicate where drought is currently ongoing and expected to yellow indicates where drought development is likely 10 indicates where drought is predicted to remain but improve. And finally green indicates where drought removal is likely. The seasonal drought outlook for August through October 2024 favors drought persistence and development likely across northern portions of the west due to predicted below normal precipitation and above normal temperatures across much of the area as well as it being a climatologically dry time of year drought. Persistence and development are also forecast over portions of the southern plains due to forecasted below normal precipitation and above normal temperatures across much of the region. Portions of the southwest will be on the tail end of their climatologically wet or monsoon season. However, uncertainty remains greatest across portions of this region due to the

sporadic nature of monsoonal thunderstorm activity. Areas not seeing precipitation will likely experience degrading or expanding drought conditions. In the east after a period of very dry conditions above normal precipitation looks to either improve or remove drought in that region.

Alaska is likely to remain drought free due to favorable precipitation outlooks. For Hawaii, drought persistence is forecast with drought development likely along the leeward side of the islands given the predicted below normal precipitation, the antecedent dryness, the climatologically dry time of year and the potential for a transition toward La Niña conditions. Conversely, in Puerto Rico and the US Virgin Islands, antecedent wet conditions, very wet precipitation outlooks and the potential for tropical activity are likely to keep them drought free through the end of October. So that's it from the Climate Prediction Center. Back to you, John.

John Bateman:

All right. Thanks so much, Cory. And apologies again to everyone for the slide confusion earlier. It looks like we're back on track now. This is the time we're going to be taking specific questions from the call participants, so please be sure if you have a question who you might want to answer the question, whether it's Russ or Cory. And Sandy, could you please remind the call participants how they can ask a question and then please queue up the first question?

Sandy (Operator):

Certainly. If you'd like to ask a question, please press star one. Please unmute your phone and record your name clearly. When prompted, if you wish to withdraw your request, please press star two. One moment while we wait for the first question to come in. Our first question comes from Scott Dance from The Washington Post. You may go ahead sir.

Scott Dance:

Yeah, thank you. Yeah. This is sort of speaking to more current conditions and not necessarily... a little bit at June, but also into July. So a year ago now we were seeing absolute record high in terms of global heat. I'm curious, I know looking at now, I see on slide three it looks like we are still seeing that. But are there signs of La Niña starting to reduce the anomaly yet?

Russ Vose:

Hi Scott. This is Russ. I would say I haven't seen that creep into the global temperature signal yet. It's certainly a possibility, but usually there's a lag. The heat associated with El Niño tends to last in the upper atmosphere for a while and it takes the La Niña change, the transition to La Niña a while to work its way into the global temperature signal, if you will. So I wouldn't be surprised if we stay on the warm side for a bit longer.

Scott Dance:

Okay. And then just on that same slide, that 1.29 C, you said that was above average. Do you know what that translates to above pre-industrial?

Russ Vose:

Not off the top of my head. And I know where you're going there. There's a lot of interest in, is a certain month or a certain period above the 1.5 degree Celsius threshold that was talked about in the Paris Agreement? And I think the message I'd like to get across here is that the Paris Agreement really focuses

on the long-term average, like a period of say 20 years or something like that. Once you have a sustained period where global temperature is one and a half degrees Celsius above the pre-industrial period, that's basically what the Paris Agreement is trying to get to. Ideally, you want to keep the global temperature below that. People do talk about individual months or years being above that, but I think that's more of an interesting data point rather than a really important feature if you're talking about international agreements.

Scott Vance:

Okay, thank you.

Sandy (Operator):

As a reminder, if you'd like to ask a question, please press star one, unmute your phone and record your name. Our next question comes from Craig Miller. You may go ahead, sir.

Craig Miller:

And this may be on one of the slides that we didn't see earlier and looks like we may be on a track for close to 30 billion-dollar disasters this year. I know that's really hard to forecast. But what year currently holds the record for those and what was the number?

Russ Vose:

Hi Craig, this is Russ. The record year I believe was last year, but let me double-check that for you quickly.

Craig Miller:

Sure.

Russ Vose:

Actually, the record year was 2023 where there were 28 events.

Craig Miller:

28 events. Okay, good. Thank you, Russ.

Russ Vose:

[inaudible 00:22:49] look last year, yeah. And I sure hope you're wrong about the 30. Our job is to report these numbers and we were good at reporting these numbers, but at the same time we would just assume they'd be as small as they can be. [inaudible 00:23:06].

Craig Miller:

The trend line is certainly upward though, right, over the past several years?

Russ Vose:

Yeah. That's a fair characterization and there's a little bit of detail I'd like to get out about that. The first is that this product is really designed to tell you something about the impact of extreme weather events on the economy. And there are a few different things that will impact these, how things change through

time. One is that you might see more frequent extreme events. That's probably part of the story. But another part of the story is that you also have increases in what you might call exposure.

There's simply more things and people in the places where these events are taking place, like more people live near the coast, there are more buildings along the coast, so there are more damages that can take place now. And then there's also changes in which you might call it vulnerability, meaning the ability of individual communities to respond to these events and all three factors impact the trend, if you will. It's not just a trend in climate, it's a trend in the number of events you get, the number of extreme events you get, plus the exposure of assets to the events and that sort of thing. So it's a more nuanced picture. And if that doesn't make sense, I'm happy to elaborate.

Craig Miller:

No, I get that. More things in harm's way, right.

Russ Vose:

Exactly.

Craig Miller:

Yeah. Thanks for that perspective.

Sandy (Operator):

There are no additional questions.

John Bateman:

Okay. Thanks so much, Sandy. If there are no more questions, I will wrap up the call. First, I'd like to thank all of our speakers for their time and to everyone else for participating in this conference call. And I will remind all of you to mark your calendar for a few upcoming events. The release of the July 2024 US climate report and billion-dollar disaster summary is scheduled for August 8th. The release of the July 2024 global climate report is scheduled for August 14 and our monthly media climate call will be scheduled once again for next month on August 15th. Lastly, an audio file of this call will be posted on the NOAA.gov Media advisory site later today. And if you have any other further informational needs, please feel free to email me, John Bateman. Once again, my contact information is available at the top of the media advisory. Thanks so much.

Sandy (Operator):

That concludes today's conference. Thank you all for joining. You may disconnect. And have a wonderful rest of your day.