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TRANSCRIPT

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Media advisory about briefing:

https://www.noaa.gov/media-advisory/noaa-monthly-us-global-climate-report-call-november-16

Vanessa (Operator):

Thank you for standing by. At this time, all participants are in a listen-only mode until the question and answer session of today's conference. At that time, you may press star one, unmute your phone, and record your name to ask a question.

I would like to inform all parties that today's conference is being recorded. If you have any objections, you may disconnect at this time.

I would now like to turn the conference over to your host, Mr. John Bateman. Thank you. You may begin.

John Bateman:

Thanks, Vanessa. Good morning, and thank you all for joining this Monthly Climate Update Call: part of the suite of climate services that NOAA provides the 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 dot P-A at N-O-A-A dot G-O-V. That's nesdis.pa, for public affairs, @noaa.gov.

Today's update will feature three short presentations followed by an operator-assisted question-and-answer session at the end. A copy of the presentation our speakers will follow can be downloaded from the link in the media advisory. And with that, I'll introduce our speakers.

Our first presenter is Karin Gleason, monitoring section chief from NOAA's National Centers for Environmental Information, who will provide a summary of the October 2023 US and Global Climate Report, as well as the latest Drought Monitor Update.

Our second presenter is Jeff Graschel, the service coordination hydrologist at the Lower Mississippi River Forecast Center, who will provide a review of the causes and impacts of the record low-water levels along parts of the Mississippi River last month.

And our third speaker is Johnna Infanti, a meteorologist at NOAA's Climate Prediction Center, who will provide the latest El Niño update, as well as the US temperature, precipitation, and drought outlook for December, January and February.

Our first speaker will be Karin Gleason from NOAA NCEI.

Karin Gleason:

Thank you, John, and thanks to everyone for joining our call today. Let's begin by turning to slide number two in the slide deck, and looking at the global temperature data for October 2023.

We see that the global surface temperature anomaly was 1.34 degrees Celsius above the 20th-century average, making it the warmest October on record and the fifth consecutive month of record global temperatures.

This departure value was 0.24 degrees Celsius above the previous record from October 2015. The past 10 Octobers, from 2014 to 2023, have all been the warmest Octobers on record.

Global ocean temperatures in October set a record for the seventh consecutive month, with a departure value of 1.01 degrees Celsius. And when looking at land only, we see the 2.09 degrees Celsius warm anomaly value is also a record for the month.

Continents that ranked record warm during the month of October include South America and Asia, while North America, Africa, and Europe ranked second-warmest. Record warm temperatures, which can be seen in the dark red areas in the map on the right, covered nearly 11% of the world's surface: which is the highest percentage for October since the start of records in 1951.

Shifting our attention now to slide number three, we see the global temperature percentile map for the January to October period, and the 2023 year-to-date temperature comparison to the 10 warmest years on record.

The January-to-October global surface temperature was 1.13 degrees Celsius above average, which is the warmest January to October in the 174-year record.

Looking at the time series on the right-hand side of the slide, we see that 2023 has convincingly pulled ahead of 2016, which is the current record holder for the warmest year on record.

And according to NCEI's temperature ranking outlook statistical analysis, it is virtually certain, with two months remaining in the year, that 2023 will be the warmest year on record.

Moving on to slide number four in the slide deck and zooming in a little closer to home, we see that October temperatures averaged 56.1 degrees Fahrenheit, which is two degrees Fahrenheit above average. That translates to a ranking of 18th warmest.

Looking at the temperature map on the left, we see that in general, temperatures were above average across much of the contiguous United States, with near-average temperatures across parts of the Central and Northern Plains, as well as across portions of the Southeast. Maine ranked second-warmest, while New Hampshire and Vermont were third-warmest for October.

For precipitation, the contiguous US average was 2.14 inches during the month of October, which is 5/100ths of an inch below the long-term mean. This translates to a near-average month.

Looking at the precipitation map on the right, we see that precipitation was below average from the lower Mississippi Valley to parts of Mid-Atlantic, portions of the West, as well as the Southwest. Above-average precipitation occurred from the Northern Rockies to the Great Lakes, and in parts of the South and Northeast. North Carolina had its 10th-driest October on record.

All right, moving on to slide number five. We see the year-to-date temperatures, where the CONUS averaged 56.9 degrees Fahrenheit, which was nearly two degrees Fahrenheit above the long-term mean. That equates to a ranking of 11th-warmest.

We see that in the map on the left, of temperature ranks for the first 10 months, temperatures were above average across the Northern Tier, the Southwest, and from the Plains to the East Coast. Near- to below-average temperatures occurred from the West Coast to parts of the Northern Plains.

Texas, Louisiana, Mississippi, and Florida each ranked warmest on record while Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, and Maryland ranked second-warmest.

Precipitation for this period averaged 25.5 inches, which is 0.14 inches above the historical average, which is a near-average year-to-date period.

Looking at the Precipitation Ranks Map on the right, we see above-average precipitation across the Northeast, from California to the Plains, and across portions of the Great Lakes and Southeast.

Dry conditions prevailed across the Northwest, South, Midwest, parts of the Southeast, and Mid-Atlantic states. Wyoming and Massachusetts ranked fourth-wettest for this period, while Nevada, Maine, and Connecticut ranked fifth-wettest. Conversely, Maryland ranked seventh-driest and Washington 10th-driest for the first 10 months of this year.

Turning our attention now to slide number six and the latest US Drought Monitor Map released this morning: we see that approximately 37.5% of the contiguous US is currently in drought. This is down by about 2-1/2% when compared with early October.

Drought conditions lessened and/or diminished across portions of the Northwest, the Northern Tier, Texas, the Central Plains, and across parts of the Midwest and Upper Midwest.

Drought expanded and/or intensified across portions of the Southwest, Southeast, and Mid-Atlantic states. Outside of the contiguous US, we saw drought coverage expand and intensify across the main islands of Hawaii, and contract across Puerto Rico.

Looking at slide number seven and our latest update to the Billion-Dollar Weather and Climate Disasters Map, we see that 25 disasters have been confirmed through the end of October. This is the most events identified not only for this 10-month period, but also the most events during a single calendar year since we began tracking these records in 1980.

One newly identified event was added to the map this month, after southern hailstorms brought severe weather to parts of the Southern Plains on September 23rd and 24th. This brings the year-to-date summary totals to 19 severe storm events, two flooding events, one tropical cyclone, one winter storm, one wildfire event, and one drought heat wave event. The total cost of these events so far in 2023 exceeds 73.8 billion, and has resulted in 464 direct and indirect fatalities.

And with that, I'll turn the presentation over to Jeff.

Jeff Graschel:

Thank you, Karin. This is Jeff Graschel from the Lower Mississippi River Forecast Center. We're on slide eight now, and this is a map that shows you the drainage area for the Mississippi River.

The Mississippi River, especially as you look at it down on the lower end near the New Orleans area, is made up of over 100 different river systems across the country. The drainage area covers over 41% of the country as well, so it's a very large drainage system to allow the water that we see at the lower part of the river to make its way down.

It takes several weeks for that water that falls into the Missouri Basin, or the Upper Mississippi Basin, or for the Ohio Basin to work its way southward towards our area. Unfortunately this year, we had another low-water event for 2023, which was similar to what we had back last year of 2022.

I'm going to transition to the next slide, which is slide number nine. And the reason why we got the low-water conditions again this year was because of the dry conditions that we had back in June.

From mid-May through June period of time, we had very low precipitation that occurred over the Midwest area, specifically in Missouri and Illinois and Iowa and Wisconsin and Minnesota. So that started our precipitous drop in some of the river levels that we saw on the lower part of the Mississippi River.

We were somewhat fortunate as we went into July and August that we had just enough rainfall to keep us from getting down to record-low levels on the lower part of the Mississippi River. But our luck ran out as we got into September.

The slide on the very bottom, on the right-hand bottom is showing that pretty much our whole entire drainage area was very dry and very little precipitation. That really allowed us to get down to the very low water levels that we experienced in the early part of October, across the lower part of the Mississippi River.

I will transition to the next slide, which is slide number 10. This is just showing you some of the years that we've had low-water conditions on the Mississippi River, the traces for the Cairo Illinois area; that's where the Ohio and the Mississippi River come together, in the southern part of Illinois.

And the colors that you're seeing there: blue is representing the year of 1988. That is the year that we had most of our low-water modern records for the lower part of the Mississippi River. That red color is actually showing you what's been occurring this year, and the black color is showing you what we had in 2022.

Looking at the graph for about May to June, we had a really good drop in river conditions. And as we got into June, we were really concerned that we would get down to some of those record levels. Again, that July and August time period got enough rainfall to really keep us from getting down to the record levels.

And then again, as the previous slide indicated with those dry conditions in September, we were able to start to break some of the low-water records as we got into the September-October time periods for the lower part of the Mississippi River.

I'll transition to slide number 11. And slide number 11 is really giving you an idea of where those low-water records occurred on the lower part of the Mississippi River.

From where the Ohio and the Mississippi River come together at Cairo Illinois, all the way through Memphis, and just before we get to the junction of where the Arkansas River comes into the Mississippi River, all those locations exceeded their modern-day low-water records. Those records were from the 1988 period, and even from last year in 2022.

I will transition to the following slide, which is slide number 12. This is looking at what we're looking at for long-range forecasts for the lower part of the Mississippi River. We were fortunate enough to get a little bit of rain about three weeks ago in the middle portions of the Mississippi River, to allow a rise to work its way down the lower part of the Mississippi River.

And we got stages here over the last few days that have been the highest levels that we've seen since about the ending portions of August through the early portions of September. That's working its way through the system now. And unfortunately, our middle portions of the Mississippi and our upper portions of the Ohio are starting to indicate falls again. And we're starting to see that in our upstream location.

This graph here that we're showing here is a long-range forecast. The black line is showing you what our forecasts are looking at with no additional rainfall. But some of our models here are showing, with the colors here that you're seeing

in blue and green, we're using 10 days of future rainfall to give us an idea what we may expect over the proceeding weeks across the lower part of the Mississippi River.

This graph is specifically for Cairo Illinois, again where the Mississippi and Ohio River come together. And we're starting to have some hints of maybe enough rainfall that may occur in the coming weeks that may allow us to be able to continue to get rainfall to show maybe some rises, especially as we get to the ending stages of November into early December.

So again, we're still going to continue to have low-water conditions on the lower part of the Mississippi River, even with what this map is showing you with this graph for long-range forecast. This still will not get us out of that low-water condition.

There's not really any one magic number to tell us exactly when that rainfall would end. So we can't say, "Five inches of rainfall or 10 inches of rainfall will actually end it." But what we do need is to have a series of rain events that occur over the coming weeks and months. That really would allow us to be able to get out of low-water conditions.

With that, I will turn it over to Johnna.

Johnna Infanti:

Thank you, Jeff, and good morning everyone. This is Johnna Infanti, meteorologist from the National Weather Service Climate Prediction Center.

I'd like to bring your attention to slide 13 of the presentation, which shows the current sea surface temperature observations and the forecast for the El Niño Southern Oscillation, or ENSO.

The figure on the left shows the average sea surface temperature anomalies over the last month. Blue shading in this figure represents areas where sea surface temperatures are below normal. And the orange-to-red areas correspond to areas where the sea surface temperatures are above normal. The horizontal black line in the center of the plot represents the equator, and the vertical black line represents the International Date Line.

The red shading near the center of the map indicates that the sea surface temperatures were above average across much of the Pacific Ocean in the last four weeks. And sea surface temperatures, in what is called the Niño 3.4 region of the Tropical Pacific, are roughly 1.8 degrees Celsius above normal: which puts us firmly in El Niño territory, which starts when sea surface temperatures rise to 0.5 degrees Celsius above normal.

Looking to the future, a continuation of El Niño is most likely as we head into the winter. The chart on the right shows the ENSO forecast issued November 2023 through June-July-August 2024.

This chart indicates the probability of La Niña, which would be shown with blue bars; neutral conditions, which is shown with gray bars; or El Niño, which is showed with the red bars for sea surface temperatures in the Niño 3.4 region for each season.

El Niño is favored through the Northern Hemisphere spring 2024, with chances gradually decreasing from winter into the spring. A transition to ENSO neutral is favored for May through July 2024. In addition, there is a greater than 55% chance of at least a strong El Niño persisting through January through March 2024.

Shifting now to slide 14, which represents our monthly outlooks for the month of December: these outlooks represent the probability of what the mean temperature or total precipitation for the month will be below, near, or above normal.

The red-and-orange shading on the map to the left indicates areas where above-normal temperatures are the most likely outcome. While any blue shading, if there was any on this map, would indicate areas where below-normal temperatures are most likely.

For precipitation, green shading indicates areas where above-normal precipitation is most likely. And brown shading indicates areas where below-normal precipitation is most likely.

Looking at the map on the left, the red and orange areas over the eastern US, indicates that these regions are favored to have warmer-than-normal temperatures in December, supported by model guidance as well as impacts of trend and El Niño.

Uncertainty in tools and conflicting signals led to a forecast of equal chances of above-, near-, and below-normal temperatures to the west.

Across Alaska, recent above-normal sea surface temperature observations and lower sea ice coverage support above-normal temperatures for western and northern Alaska.

Now turning to the Precipitation Map on the right, the strongest signal for above-normal precipitation is across the Southeast, which is consistent with anticipated El Niño impacts of a stronger storm track in the Southeast.

A wet start to the month is favored from Texas to South Dakota, and a small region of below-normal precipitation is expected over the Northern Great Plains.

Above-normal precipitation for western and northern mainland Alaska is the most likely outcome. And a progressive pattern expected over much of the western US supports mainly equal chances of above-, near-, and below-normal precipitation towards the West.

And now looking ahead to the three-month period from December 2023 through January 2024, I'd like to bring your attention to slide 15.

These outlooks represent the probabilities of the mean temperature. Total precipitation for the season will be below, near or above normal. In addition to the red-and-blue shading representing above- and below-normal temperatures, gray shading on the map on the left indicates likely near-normal temperatures.

During this period, the potential impacts from El Niño are apparent in one of the main considerations for the outlook. The December-January-February 2023 to 2024 temperature outlook favors above-normal temperatures, shown with the red-and-orange shading on the map on the left. And the [inaudible 00:20:26] Alaska and the West Coast of the contiguous United States, the Northern Plains, the Ohio and Tennessee Valley regions, and the Mid-Atlantic.

The greatest likelihood for above-normal temperatures is forecast over parts of western Alaska and parts of the West Coast, which is partially supported by the above-normal SST anomalies and over New England, which is partially supported by above-normal decadal trends.

However, in addition to the SST anomalies and trends, the primary driver for the above-normal temperature probabilities for December-January-February is the persisting El Niño event, which is expected to lead to above-normal temperatures along northern parts of CONUS, as well as dynamical model guidance that favors higher probabilities for above-normal temperatures dipping southward along the West Coast and into the Ohio and Tennessee Valley regions.

Though the season may tilt above normal in the mean, some periods of cold may occur during winter and early spring, especially in northern parts of the US.

Near-normal temperatures, shown with the gray shading, are favored for the central and southern Rockies and parts of the Central and Southern Plains. These areas of near-normal temperatures represent regions where there's interplay in the tools between expected impacts from El Niño, decadal trends and dynamical model guidance, which lead to a forecast of near normal.

The December-January-February 2023 to 2024 Precipitation Outlook in the figure on the right depicts below-normal precipitation, shown with brown shading over southwestern Alaska, and above-normal precipitation shown with green shading over northern Alaska.

The southwestern Alaska below-normal area is consistent with expected El Niño teleconnections. And the northern Alaska above-normal precipitation is supported by El Niño as well as decadal trends and above-normal SSTs and low CS coverage.

Below-normal precipitation is favored from the Northern Rockies to the Great Lakes and into the Ohio Valley. And above-normal precipitation is favored over parts of the West Coast, with a slight tilt for above normal over parts of the central CONUS.

Given a strong connection to El Niño over the southeast CONUS, the highest confidence for above-normal precipitation is over the Gulf States, and along the East Coast to South Carolina at about 60 to 70%. The probability is decreasing toward New England.

Finally, turning to the Drought Outlook on slide 16, the brown areas on the map indicate where drought is currently ongoing and expected to continue. Yellow shading on the map indicates areas in which drought development is likely. The tan shading on the map indicates areas where drought is predicted to remain but improve. And finally, green shading indicates areas where drought removal is likely.

The Seasonal Drought Outlook for December 2023 through February 2024 is influenced heavily by the anticipated mid-latitude response to the ongoing El Niño, which favors an active southern stream and increased moisture across the southern CONUS.

Drought reductions are most likely across the Southeast. Continued drought relief is favored for the eastern half of Texas. And so climate anomalies favor persistence across western Texas and the Great Lakes region.

Seasonal precipitation across the Pacific Northwest favors at least some relief for coastal Washington and Oregon and the Cascades, while climatological dryness and freezing of soils and streams make the persistence the most likely outcome across the Northern Tier of the North Central Plains, the Midwest, and the Great Lakes region.

No drought development is anticipated for Alaska during the winter months. Across Hawaii, a drier-than-normal start to the wet season is anticipated due to disruption from the ongoing El Niño. Therefore, drought is favored to persist and expand.

The ENSO signal also favors a slightly suppressed signal across the Caribbean, making drought persistence the most likely outcome for Puerto Rico and the US Virgin Islands.

And that is it from the Climate Prediction Center. And back to you, John.

John Bateman:

Thank you, Johnna. We will now take specific questions from the call participants. Please be sure to identify who you would like to answer the question, if possible. Vanessa, could you please remind the call participants how they can ask a question, and then please queue up the first question?

Vanessa (Operator):

Thank you. We will now begin the question-and-answer session. If you would like to ask a question, please press star one, unmute your phone, and record your name. Your name is required to ask a question. If you need to withdraw your question, press star two. Again, to ask a question, please press star one.

We're showing no questions or comments in queue.

John Bateman:

Okay. Well thank you, Vanessa. If there are no questions, then we can wrap up the call.

First, I'd like to thank all of our speakers for their time, and everyone else for participating in this conference call. I will end by reminding you to mark your calendar for a few upcoming events.

The release of the November 2023 US Climate Report is scheduled for December 8th. The release of the November 2023 Global Climate Report is scheduled for December 14th. And the November 2023 Climate Media Teleconference will be held at 11:00 AM Eastern Time on Thursday, December 21st. A media advisory will be sent out and posted to noaa.gov ahead of the teleconference.

Lastly, an audio file of this call will be posted on the noaa.gov media advisory site later today. And if you have any further informational needs, please feel free to email me, John Bateman. My contact information is available at the top of the media advisory. Thank you.

Vanessa (Operator):

That concludes today's conference. You may disconnect at this time. Host, please stand back for your post. One moment.

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