TRANSCRIPT

NOAA 2021 Winter Outlook Virtual Media Briefing
October 21, 2021 at 11 a.m. EDT via GoToMeeting
Hosted by NOAA National Weather Service Public Affairs

Media advisory about briefing
NOAA to issue 2021 U.S. Winter Outlook October 21
Winter Outlook news release
U.S. Winter Outlook: Drier, warmer South, wetter North with return of La Nina

0:01

Good morning, everyone.

0:03

And thank you all for joining today's announcement of NOAA's 2021 Winter Outlook.

0:08

This media briefing is being recorded.

0:11

If you do not wish to be recorded, please disconnect at this time.

0:16

My name is Jasmine Blackwell and the Media Contact for today's Winter Outlook.

0:22

At the conclusion of this media briefing, you can reach me by e-mail at jasmine.blackwell@noaa.gov

0:30

or by phone at 202-841-9184. We will begin today's media briefing with remarks from our speakers.

0:40

Then we will take questions from reporters.

0:43

If you would like to ask a question during the question and answer portion of this briefing, please click the hand icon in the go to webinar window next to your name.

0:53

I will then call upon each reporter that has virtually raised their hand and your line will be unmuted.

0:59

You may also use the question at school and your go to webinar window to type your question for our speakers about today's winter outlook.

1:08

Please be sure to state or type your full name and media affiliation when asking your question.

1:15

I would like to welcome John Gottschalck to open our call.

1:25

Thank you, Jasmine, very much.

1:27

The National Weather Service plays a critical role in helping the nation become more ready, resilient and responsive to extreme weather and climate events.

1:39

Providing impact based decision support services enhances the American Public's ability to quickly make informed, life-saving decisions in the face of extreme weather, and ultimately results in a more weather ready nation.

1:54

The winter outlook is produced in order to give American communities the best possible scientific prediction of how we think the winter will develop across the nation.

2:03

The Climate Prediction Center issues the seasonal forecast, so users can account for risks and opportunities when making climate sensitive decisions.

2:12

This outlook supports everyone from local and state governments that must plan for public needs this winter.

2:18

To large and small businesses, they determine how the winter could impact transportation, market demand for their goods and services and crisis.

2:28

The winter outlook is probabilistic in nature meaning that the maps show these areas that are most likely to be warmer or colder than normal or wetter or drier.

2:38

However, the nature of a probabilistic forecast means then other outcomes are always possible, just less likely.

2:45

And in fact, for our probabilities to be reliable, the less likely outcomes must occur from time to time.

2:54

The second winter in a row, La Nina, climate conditions have developed, and are forecast to continue into spring 2022.

3:04

Therefore the temperature and precipitation outlooks are somewhat similar to the forecast issued last year at this time and are characterized by above average precipitation and colder than average temperatures, for some areas of the northern tier of the US.

3:17

And below average precipitation and above average temperatures across the south.

3:22

More specifically, for Temperature, the 2021 winter Outlook favors warmer than average conditions across the southern US.

3:31

And for much of the eastern U.S., with the greatest likelihood, we're above average seasonal mean temperatures, in the south-east, and along the Gulf Coast.

3:41

Below average seasonal temperatures are most likely for the Pacific north-west, Northern Rockies, Northern High Plains and south-east Alaska.

3:50

Portions of the Northern Plains, Upper Mississippi Valley and Northern California, have an equal chance for above near or below normal seasonal mean temperatures, because climate signals are not as strong in these areas.

4:00

So confidence in a shift in the odds is lower.

4:05

The precipitation outlook favors.

4:07

Wetter than average conditions for the Pacific north-west, Northern Rockies, Great Lakes, Ohio Valley, and Areas of Western Alaska, drier than normal conditions for the Southern Half of California, the south-west, the south-east, and the South Central Coast of Alaska.

4:24

Our forecast, as well.

4:26

The rest of the country falls into the equal chances category, meaning that there are equal odds for above, or below normal seasonal total precipitation amounts during the winter months.

4:36

That brings us to the drought condition.

4:40

Since late last year, widespread severe to exceptional drought.

4:44

has persisted across much of the Western half of the continental United States, Northern Plains, and the Missouri River Basin.

4:51

Short-term drought recently developed also across the Southern Plains, and it is also present throughout Hawaii.

4:58

A major region of concern this winter remains in the south-west where drought conditions remain persistent in most areas, conversely nearly all of the Eastern US remains drop rate Currently.

5:10

Drought conditions are forecast to persist and develop in the south-west.

5:15

And Southern Plains.

5:17

while in the Pacific north-west, Northern California, the Upper mid-west, and Hawaii are likely to experience drought improvement.

5:25

With that, I'll turn it back over to Jasmine to moderate the question and answer session.

5:35

Thanks, John.

5:36

Before we move into Q&A, let's introduce Brad Pugh.

5:40

He leads the Climate Prediction Center’s drought outlook team and contributes to the Weekly Drought Monitor.

5:47

He will assist with questions about drought and also joining us on the call is Russell Vose, a climatologist from NOAA National Centers for Environmental Information.

5:57

We will now take specific questions about the outlet from our media partners, joining us in the webinar.

6:03

First from everyone at the instructions that were given at the top of the call.

6:08

If you would like to ask a question, please click the hand icon in the GoToWebinar window next to your name in the attendee list that appears to the right of your screen.

6:17

I will then call upon each reporter that has virtually raised their hand, Once you're called upon, your line will be unmuted.

6:25

You may also use the questions tool in the webinar window to type a question for our speakers about today's outlook.

6:33

Please be sure to state or type your name and media affiliation when asking your question.

6:40

I would like to ask for your patience while we are moderating your questions, as they may take a few moments for questions to come in and organize them.

7:12

Our first question comes from Emma

7:16

from the Associated Press and she's asking, can you please discuss the relationship with the predictions this year?

7:26

Sure. This is John ..., again, from my Prediction Center.

7:30

La Nina, as many of you may know, as part of the world called the El nino southern Oscillation cycle, and it is resulting up cooler than normal sea surface temperatures in the equatorial Tropical Pacific, which changes those tropical rainfall patterns, and therefore changes the pattern of the jet streams across the Pacific In North America. And so these changes in the jetstream pattern result in a number of temperature and precipitation impacts, that on average, over many average, over many events result in a number of factors.

8:03

For example, for temperature, we tend to see, during the winter a warmer above average temperatures, more likely across the southern tier of the US, and across various parts of the eastern, continental United States, as well.

8:18

Conversely, below normal temperatures are typically observed under typical La Nina conditions across parts of the Pacific north-west, the northern Rockies, and expanding into the Northern Plains and Northern High Plains, as well as across south-east Alaska.

8:33

Now for Precipitation, la nina conditions, again, on average, over many events, favor, above normal precipitation for the Pacific north-west. From down to perhaps Northern California and the cross to the Northern Rockies.

8:47

But also across many of the areas of the Great Lakes, Ohio Valley, Upper Mississippi Valley in that region.

8:54

It's generally a drier signal or below normal precipitation that is favored on average for seasonal precipitation amounts along the Southern tier of the US.

9:03

From the Southern Half of California across the south-west and also extending eastward to the south-east and it's somewhat a little bit weaker signal for the South Central Coast of Alaska.

9:18

Thank you, John.

9:20

Our next question comes from James Gilbert.

9:23

James, your line should now be unmuted.

9:28

Hi, James Gilbert, from W R O C. Music, The CBS Affiliate in Rochester, New York. So, we're like a sector country here in the north-east was wondering if you are seeing any trends or patterns within other teleconnections. Most specifically the Arctic Oscillation. I know sometimes when that swings negatives, that can mean Nor'easters and such. So, that's the first question, the second question, Are you seeing any trends versus we're going to see more clippers versus, like, Miller type, but a storms? Are there certain types of winter storms that you can lean towards? And so, kind of a two parter there.

10:09

Sure. So, with the first question, you're absolutely correct, in the sense that, in your region, the Arctic Oscillation or it calculates today the North Atlantic Oscillation, as I'm sure you know tend to result in more storminess and colder temperatures for parts of the eastern US. Pacific and as well as across Europe.

10:29

However, although there is considerable research going now and a number of different hypotheses for how you can make a reliable seasonal prediction for the Ayo Arctic Oscillation or the North

Atlantic Oscillation There's generally considerable Read whether how reliable those techniques are So the bottom line is for our winter outlook at this least mid october.

10:54

It's difficult. It's not really predictable. How, how often will be in a negative or positive phase of the ACO? So we do certainly look for those patterns and some of the forecast tools that we have, but we are limited in being able to use them reliably.

11:07

And in this particular case, we know that in our discussions, that certainly can result in higher variability.

11:14

And that's often the case with Nino events, that with respect to the storm trap, during that many of us, again, on average, average over multiple events, the storm tracks. And as I'm sure you probably remember or know, as compared to say El Nino weather the storm track, it shipped south-east, for example, across the Gulf of Mexico and that along up along the Coast.

11:35

Some of the strongest storms that we've had along the East Coast for example have been during strong El Nino events for La Nina the storm track is typically.

11:44

More often than not, a little bit further to the west as compared to climatology.

11:48

And so some of those storms will have more warm air available to them on the coast, but in the snow staying on the Web signal, the more across the Ohio Valley and Great Lakes, which is why we have that area favored.

12:01

And with respect to clip persistent that’s correct, using, generally see, that, in the flow diagram, here that very often, during La Ninas they are, quite a bit of variability, are changeable. Changeable patterns and the weather, such that, you will get through. Enriches moving quickly. And Clippers will certainly be a part of that. So, I hope that answers your question.

12:21

It does, thank you, We're getting our plows ready.

12:25

OK.

12:29

Next question is written in the chat box and it comes from Henry Fountain from the New York Times. He's asking, How does this compare to last year's.

12:40

Sure. Very good question. With respect to last year, one thing that we noticed in the ocean, the equitorial temperatures in the tropical Pacific, we were actually a little bit cooler than we are now.

12:51

But one thing that's important to note with this current La Nina, it seems like the atmospheric response, the changes in the circulation or jetstream in the North Pacific and into even parts of North America have been a little bit more established earlier than say last year.

13:08

As well, also, there's a reservoir of considerable colder water adapt in the Pacific, which is typically a precursor for decreasing SSTs or ocean surface temperatures in the tropical Pacific. So, that's from the ocean perspective, from the atmosphere or forecast perspective.

13:27

one thing that we've noticed with the Outlook and some of the forecast guidance that we have available to us is perhaps a little bit of a polar signal that we had in our outlooks last year across parts of the West. Meaning favoring below normal temperatures, perhaps a little further to the South and the Pacific north-west.

13:45

And less above normal temperatures in parts of the far West, and South and south-west, and also warmer conditions across parts of the Eastern seaboard. And across the Great Lakes as the the circulation changes with the La Nina this year right now in the model guidance appear to be a little bit more robust than they were some guidance.

14:13

And previous month this year, which would produce a more potentially more wavy pattern and more potential cooler temperatures across Alaska western Canada, in the Pacific north-west, and into the Northern Plains, and potentially perhaps warmer temperatures along the Eastern seaboard and south-east.

14:27

Thanks actually, that was a two part question from Henry. He's also asking, Is there anything unusual about going from one La Nina to another like this?

14:38

Yeah, I looked at that as I was doing the Outlook and considerable work, but that there's a, there's a number of different, what we'd call a double dip la ninas. And, with respect to how they occur, one after the other, there's no real consistent pattern, whether the second one is stronger or weaker. Or the same from the previous La Nina winter. However, I will say the last three La Nina winters.

15:08

The second has been weaker, from the beginning in the late two thousands. But, with respect to it, whether it's anything different.

15:13

As I mentioned, we also utilize dynamical Model guidance to help us, nuance to the general anticipated large-scale La Nina pattern.

15:22

And as I mentioned, this particular event seemed to be more colder in parts of the western North America region and perhaps warmer across some of the South.

15:38

Thanks, John.

15:44

The next question we have here is about drought and it comes from Edward O'brian.

15:49

He's asking how can this potential impact our drought conditions?

15:56

Will it be significant or not?

15:58

Yes, The drought outlook is on the slide now.

16:02

It could be significant. Again, as I've talked about earlier, there tends to be often below normal precipitation along the southern tier of the US. And with that, being, the expectation or what were

favoring in the outlook. We do expect drought to continue to persist in many areas in the south-west and southern Intermountain West.

16:22

Although the monsoon was stronger and more prolific this year, not all the improvements were not enough to remove all the drought in the south-west area.

16:36

And also with drier Conditions forecast, on average, over the three month period, We do expect drought development to occur across much of the Southern Plains and also in small areas along the Eastern Seaboard lower eastern seaboard across parts of the Carolinas Extreme south-east Virginia coastal Georgia.

16:51

Lower two thirds of the Florida peninsula.

16:57

Now the other upon the positiveness, The excellent participation of above average precipitation, both rain and snow.

17:05

We do forecast currently the drought outlook for improvement or removal from areas in northern California to the Pacific north-west and across the northern Rockies during this by the end of January. In the current outlook.

17:25

Yeah, this is a Brad Pugh at the Climate Prediction Center, and just to add on to John's good answer there, on what we're expecting, this coming winter in terms of the drought.

17:31

I would say, just to provide a little more detail on the forecast confidence, regionally, the Pacific Northwest really stands out.

17:42

As far as like, high high forecast confidence for improving drought conditions.

17:49

Due to three factors, La Nina is typically wet there during the winter.

17:57

The next two weeks, it looks quite wet with heavy precipitation. Some areas could receive as much as 5 to 10 inches of precipitation.

18:05

And then finally, we're going into the wettest time of year, November, December, January, February.

18:12

That's certainly held up the drought situation there in the Pacific north-west and also Northern California.

18:26

Thank you so much. Our next question comes from Susan Wood.

18:31

Susan, you are now unmuted.

18:36

It looks like you’re self muted.

18:46

All right. We'll come back to Susan.

18:52

Our next question here comes from the Chat window, and it's from Leo H.

18:54

He's asking, are you leaning toward a weak, moderate, or strong la Nina for the upcoming winter season?

19:03

Right now the best expectation is that this will be a moderate event.

19:07

Have some more upper and moderate events, given some of the forecast model guidance that we have with the actual eventual Central Pacific SST, departures from normal. It doesn't roll out a strong event.

19:25

But currently, the probabilities are probably under 20% for that to occur.

19:27

And a strong event would be SST temperature departures across the central, the equatorial Central Pacific, ranging, on average, greater than 1.5 degrees below normal. And again, that's not out of the question. But, right now, are favoring more of a moderate event, potentially, maybe high-end, more high-end, moderate event.

19:49

Great, thank you. Our next question comes from Nancy Garder.

19:50

Nancy, your line is now unmuted.

20:15

All right, we'll come back to Nancy.

20:17

Oh, it looks like Nancy asked a question in the chat.

20:21

Um, early versus late winter. When does La Nina have its greatest impact and was the polar vortex an outgrowth of La Nina or was it more short-term thing like the Arctic Oscillation?

20:38

Great question, Nancy.

20:39

Typically La Nina impacts, whether it be both the temperature or precipitation is strongest. In the later winter, say, January, February, March actually into early spring, March can sometimes be some of the strongest impacts. And with respect to the polar vortex work, basically changing the strength and phase of the Arctic oscillation to first order.

21:02

As I mentioned, the forecasts are mainly driven by La Nina, but we do know that those impacts, with respect to have the stratosphere. We know there's, a, can often be stratospheric changes that sometimes sometimes do not. But sometimes they do length of the troposphere and can change the phase of the Arctic oscillation. As you as you know, and with polar vortex weakens, it becomes more, let's say wobbly, more more north and south, or wavy, if you will, and that allows more Arctic outbreaks to shift down into the continental areas in the northern hemisphere. For example, at this time, range the forecasts of whether the stratospheric polar vortex will strengthen what will be strong throughout the winter or have some weakening that are also associated with southern stratospheric warming. For example, are unclear at this time. But that's why some of the uncertainty in the forecast map that have a greater forecast lead that we're not talking about today, but we have on our website. You'll notice that the equal chances area across parts of the Great Lakes.

22:06

This is for temperature in the Great Lakes, and into New England and north-east becomes quite larger, because of that uncertainty that you, in fact, are highlighting.

22:17

Our next question comes from McKinsey Bart, mckenzie's ASCII, with above average temperatures in the mid-west projected this winter. Do you think we will start to see a trend in this upcoming winters?

22:32

No, I would, I would say, no.

22:38

Overall, to first order, the favor and go above normal temperatures in our Outlook, for December Garret, February 2021 to 2022 is mainly a combination.

22:50

Typically warmer impacts in those areas, especially early in the winter, across, especially with la nina, and pretty consistent guidance, from a number of different methods for warmer than normal temperatures.

23:01

Longer term trends, certainly play some role, but, they are considerably less than, in that particular area, with the new update in our long term period means in which our forecasts are anchored to.

23:18

All right. Next question comes from Kimberly Miller with the Palm Beach Post.

23:25

She's asking for Florida, does La Nina have a stronger tie to temperature or precipitation? And if there is one or the other, that is stronger. Why so?

23:33

Typically, the precipitation of single is stronger.

23:38

But in this particular forecast, or not being, guidance will forecast tools that are indicating that, in fact, our probabilities are pretty modest.

23:46

Even put below normal precipitation in Florida as compared to some other years that we've, we've had la nina events. And this is mainly because, as I mentioned, there's more disagreement or less continuity in some of the indicators that we look at and making these forecasts for that drier dryer signal for precipitation, we actually have somewhat higher competence for Temperature, I'm sorry, higher competence.

24:12

Where are probabilities are greater than 50% for the 50 to 60%.

24:14

Above average, temperatures, for the seasonal mean, temperatures, from December through February, for much of the south-east. and Gulf Coast, including Florida.

24:24

Thanks, John, Doyle Rice.

24:27

I see you have your hand raised, your line is now unmuted.

24:33

OK, Yeah, good morning, thanks for doing this. Can you hear me?

24:35

Yes.

24:37

Yeah, Just I know you can't predict specific weather events this far out and all that, but I wonder how does how does la Nina often factor into the big north-east blizzards that were that can you know, can paralyze the areas from Boston to Washington? Is it more likely during a la Nina to have these, these big snowstorms, in the north-east, and mid Atlantic, or is it less likely during a La Nina?

25:04

It's it's actually for the most part, less likely during strong El Nino event marked storms, a strong and certainly strong event. We very often have had very strong nor'easter, major snowstorm events during the winter along the eastern seaboard. That often can hit the major US cities, Boston, to Washington, for example. During La Nina on average. The Storm track has shifted over further inland and so often.

25:32

It doesn't rule out. Certainly major blizzards we have had major blizzards in Northeastern Iowa, Nino events, but that's mainly related to more.

25:40

Just very voting in the pattern. At a given time, typically the storm track is more inland.

25:47

Further to the west of the Appalachians And so on, such that warmer air will work its way in. and the more heavier precipitation signal is actually over the Great Lakes.

25:56

If you look at, typically for La Nina, looking at many events on average, snowfall actually, as well is below average in the mid atlantic during a La Nina.

26:07

When you look at Composite, and that would include Washington, DC. Philadelphia, Eastern, Pennsylvania, New Jersey, even up to New York City. However, as we get later in the winter. There is actually an increase in snowball during El Nino events, at the parts of northern New England, and say north of Boston, Atlantic, down across parts of the western areas of New York State and Pennsylvania, and then in the Great Lakes because of that difference in storm tracks. So, it doesn't work out a bit major, north-east blizzard, advantage you're noting, but it is less likely on average.

26:44

Next question comes from Lila Wade with Bloomberg News. Lila is asking, are you expecting to see any polar vortex type of cold snaps?

26:55

At this forecast lead time, it's not really possible reliably to make a prediction like that.

27:03

Those events typically occur, later, in the winter, say, in January and February, as those are mainly a result of stratospheric changes, which the atmosphere above the weather layer or the troposphere, that way in which we live. And the stratosphere changes, as I mentioned before, would have to occur meaning becoming more wavy and potentially having a stronger signal that reaches into the troposphere or into the weather area here that we live.

27:35

And that's just not predictable at the forecast lead time that we, we have or will. We will be able to monitor that as we go through the winter.

27:43

And there are signs and indications decently lead times meaning several weeks, perhaps, in which we may see that potential that may occur when we wanted to view those items.

27:55

And an important point to that is that we issue in addition to the seasonal outlooks, we issue shorter term outlooks for example, outlooks that may look out for one month, weeks, three, and four, for example, or the next couple of weeks. And so, we will be able to kind of have an idea, pretty well, those points. whether we're having a disruption in the polar vortex such that we would have colder air infiltrating the continental areas across the northern hemisphere. At that sort of lead time.

28:24

So, I, I would ask and suggest, as we go through the winter, to take a look at the short-term forecast, where we have a little bit more we can say something more reliably about whether the polar vortex’s stress vortex will be modified?

28:42

Our next question is going to be from Cassie McGrath.

28:45

Cassie, your line should now be unmuted, it looks like your actually self muted.

28:52

Good morning. Can you hear me?

28:54

Yes, we can hear you.

28:55

Hi, my name is Cassie McGrath and with NASS live in Massachusetts, and I have a two part question. First, could you tell us how climate change impacts La Nina's, and on the other hand, is the La Nina this year expected to disrupt climate trends specifically here in the north-east where we've seen the greatest temperature increases compared to the rest of the United States?

29:21

I think that, um, perhaps Jasmine, Russell may be the best person to answer the first question.

28:29

If that's possible.

29:35

Hi, this is Russ Vose from the National Centers for Environmental Information.

29:39

Your question was on, basically will La Ninas and El Ninos change in the future?

29:45

And I think the best way to characterize it is we're not expecting big changes in either El Nino or La Nina. Going forward there's still going to be the dominant mode, if you will, of, like, variability in the atmosphere. And, so, no, we don't expect, at this point, major changes in either.

30:14

So, just to be clear, I was trying to kind of get out here, if La Nina's can impact, you know, climate trends overall, What will we continue to see warming despite colder temperatures this year?

30:30

Yes, I think, if you're looking over the course of decades, into the future, the things that drive changes are increases in carbon dioxide and methane, and other greenhouse gasses, which just simply slowly warm the atmosphere going forward.

30:47

But the way the atmosphere works, in terms of seasons, we still have winters. We still have summers, we still have things like La Nina and El Ninos that happen.

30:55

And greenhouse gas changes or increases don't affect the way those things tend to play out in the future, at least, that's our best understanding of the science at this point. So if Jon is still doing this job 30 years from now, you'll still probably be having to contend with the same La Nina sort of challenges that he has right now.

31:13

The background temperature could easily be warmer, the global scale by so-called tenths of a degree or more.

31:26

Thank you so much.

31:32

Our next question is going to come from Edward O'brian.

31:38

Good morning, again, want to echo others. Thank you for this opportunity. Last year here in Montana, and I'm from Montana Public Radio, it was winter in name only, really, it was just an extended dust spring, really pushed us deeper into drought. You talked about La Nina's impact on the Pacific north-west, What about us in Montana in the northern Rockies? Can you drill down a little deeper And part two very briefly: how accurate are these early outlooks and in general?

32:10

Sure, So the first part of your question is, on average, when you look at many, all La Nina events, which is what we have to do in the climate business. Is, that, typically for your area in, Montana, you would favor to be below normal temperatures, and above normal precipitation now, I understand that that did not happen last year.

32:34

And one of the, the characteristics of all of these outlooks is that there will always be variability.

32:41

And events that are unforeseen or not predictable, as I mentioned earlier, a few times, at this forecast, lead time, such that you can have your forecast, if you will.

32:53

verify, or the observations match very well for a significant part of your forecast. But then an event type of a short timescale that's not really predictable can make a large change. And an example of that was actually the winter weather forecasts last year for temperature.

33:10

Not particularly in your area, but in general, across the US. Where we had a pretty warm December, December, January for much of the country.

33:18

And then we had an extremely cold February with that, the extreme cold, highly impactful, cold event, that reached down to the Gulf Coast in Texas, and so on. And so on.

33:29

Right now, again, as I mentioned, we're still favoring for you in Montana below normal temperatures and above average precipitation.

33:36

So hopefully your winter will not be non-existent this year with respect to the accuracy or what we would call forecast scale of these outlooks.

33:45

Generally, one way to look at that is, um, you use the outlooks over the long term. As you, as you mentioned, any one Outlook may not be as accurate as we would like in any given year, but on average the forecast or what would be called skillful and try to put a number on that generally the outlook at this time. Or about a 50% improvement over what you would have by just using climatology or random forecast alone.

34:16

So they do provide important information um and skill.

34:22

Thank you very much.

34:29

Our next question comes from Michael Easterbrook.

34:31

His question is, what is the winter precipitation outlooks specifically for California's central Valley, both for the northern and southern parts of the Valley?

34:40

Great question.

34:42

And unfortunately, California's typically a dividing line from a La Nina Impact perspective, how the state of California is.

34:52

Central California especially is often a dividing line between some of the more reliable impacts to the north of a wetter and cooler and warmer and drier across southern California.

35:05

And so there's, there's always quite a bit of uncertainty. In fact, if you look back at other La Nina events over an historical period, you'll see joint La Nina events in Northern California, North Central California, that, that you can receive any one of the three categories.

35:18

Often, and with respect to temperatures and precipitation, especially with precipitation. So right now, we are favoring for the southern areas.

35:30

Of Southern areas of California, more of a slight tilt towards below normal precipitation. But in the northern part of the valleys as you mention, a less reliable signal, and not a strong climate signal,

really, at all. But as we've seen in the next couple of weeks, it doesn't preclude having wet periods and also followed up by dry periods. In fact, the last couple of weeks, as you mentioned, it will be a very wet set of days, on average, for much of northern California, North, Central California.

36:04

So to answer your question, which warmer and drier in the southern part of the valley, less confidence in that in the northern part of the Valley.

36:18

Alright, our next question comes from Max Crawford with KBTX in Texas. Max is asking last year's winter we saw a cold outbreak that those of us in Texas had not seen for 30 years or more. Are there any signals that we may find a similar cold break this year, even with La Nina?

36:37

Yeah, great question. The answer is, we were not able to be able to have an accurate prediction for that, that's not to say that that can't happen again, this year, it's just, the science is not, at a stage where we have that event occurred in later part of February, mid february, which is actually at the end of the three month outlook period that we're discussing today.

37:00

And that sort of forecast lead time, or with respect to the Outlook, predictions of that type. That extreme event. Those extreme events are not really, the state of the science is not there and not possible. And again, though, however, as we saw last year, does not mean that they cannot occur. It's just we cannot say one way or another that that work would not happen or is likely to happen again.

37:26

Our next question comes from Kimberly Miller with Palm Beach Post. And she's asking: can you explain why it is common to have a double dip La Nina yet but not a double dip El Nino?

37:38

Well, I think very often, I mean that was one thing that that's still an open research question about whether, why la Nina, typically, or more often, are more common to have a second following winter. for linear, then say El Ninos, that's what we observe.

37:55

And so we can’t comment on that.

37:58

But as far as the overall dynamic and physical reasons for why that occurs, I still believe that that's an ongoing research issue. It might be better.

38:07

answered it as a follow up for you with a lot of other partners with NOAA.

38:14

Feel free to send me an e-mail, and I'd be happy to connect you with our experts.

38:22

Our next question here comes from Lowell Melzer.

38:25

Lowell, your line should now be unmuted.

38:29

Can you hear me OK?

38:32

Yes. OK, great. Lowell Melzer from WPA, in Baltimore. I'm following up to the north-east question that was asked. Earlier, I'm just looking at the maps. I've had a chance to see everything. Temperatures in our area 50 to 60% chance, above normal. Precipitation looks like it could go either way. You mentioned that the nor'easters and the snowfall I was just concerned in our area. It is so hard to predict what the precipitation is going to be because of that darn 540 line, with what you're seeing right now in the forecast.

39:11

Do you think we can expect more ice events here, or full on rain events, given the warmer temperatures.

39:20

I'm just curious what your analysis is of that as we move forward because these ice storms can be really crippling here. And, again, hard to forecast.

39:30

We had one, I'll stop speaking, but we had one this year where we thought it was going to be all snow and turned out to be a tremendous amount of ice on the front end, a little bit of snow and ice on the backend. I'm just curious what you're thinking about here, as we move forward in the north-east region, particularly DC, Baltimore, Pennsylvania.

39:49

Yeah, that's a great question, and I'm in my home, the south of Baltimore, so I can remember exactly what, what you're referring to last year.

39:58

On average, how about, you know, how, I mentioned, the storm track, typically, will be shifted West on average, over the winter.

40:06

That would be what the La Nina response would be, and as you mentioned, would typically bring in warmer water off off of the Atlantic Ocean.

40:14

Ocean surface temperatures right now along the eastern seaboard are way above normal considerably above normal. Or the, or you know, I'd have to look closely, but on the order of 1 to 3 degrees above. Normal allow much of the Eastern seaboard, and also across off the eastern part of New England.

40:31

From one event to another, it's so dependent on the, obviously the track of the system, but also the timing of any other features in the upper atmosphere, for example, dropping and cold air, Whether we have high pressure and to the north, as you know, across New England or Eastern Canada, with the timing. So you that you can have a brief warm up and get lots of precipitation, that liquid. And then have cold temperatures behind it for several days. On average, temperature over the period, that might actually be below normal and say that, at that time, that is very difficult with actually predicting. The one thing I can say on average is, I mean, like I mentioned before, to the mid Atlantic and the Baltimore region snowfall, typically is less than normal.

41:12

During La Nina events, whether there's more ice or more total, rain is a difficult thing to say, It would be event to event. And I wouldn't want to speculate that.

41:23

However, again, as I mentioned, our outlooks, as we get closer to various events, whether it'd be monthly down to the second, week, one, week out, let's say, we do try to make some assessment of whether there would be potential ice or

41:37

hazards that look in the extended range, as well as our regular temperature, precipitation forecast. So, you may have a general idea, But, again, that shorter range, really, the take home point, I would say, is typically a storm track.

41:50

That's more west, generally more warmer air in general, and, on average, less snowfall compared to normal years.

41:57

Hopefully, that answers your question.

41:59

Thank you very much.

42:04

Our next question comes from Mario V. who has his hand raised

42:09

Mario, your line is now unmuted.

42:11

The same question that was asked for Texas.

42:15

We suffered quite a bit earlier in the year with snow and ice, and as I understand that that's an atmospheric aberration, but is there a confidence that we will not have the same setup as we did last year or early in the year for ice and snow?

42:36

Um, again during La Nina events, we do favor warmer than normal conditions. So I would say it's less likely than normal.

42:43

But it doesn't preclude another event, such as what we had last year from happening. It should we just not able to necessarily make that prediction to say, no, you're in the clear this year. That's not something that we're able to do.

42:55

But again, on a law, over the longer term, or an average, it's less likely because of the La Nina pattern, meaning the colder temperatures are more likely to be across parts of the northern tier of the US. Again, doesn't preclude colder air moving south like it did last year.

43:13

That screen treatment, that obviously was very extreme, and was the result of a number of different factors. In fact, that were originating, from changes in the stratosphere.

43:21

And, as I mentioned, some of that, activity, just not predictable at this forecast lead times, we just really can't say that it won't happen again, but it typically is less likely, OK.

43:33

So, you could, you could say, in summary that this was a weather aberration, or was it to use the well worn phrase a perfect storm?

43:45

Um, I think that in this particular case there was part of the natural variability, weather timescale variability within any winter. It turns out to be an extreme event and yes, true events typically have a number of factors that come together to produce that event.

44:03

And if you want to characterize this a perfect storm, that wouldn't necessarily be untrue, but there's always within any winter. whether there's an extreme event or not highly variable, which we variability either within our larger scale climate pattern that we forecast.

44:19

Thank you very much for your answer.

44:21

I appreciate you. You're welcome.

44:26

Our next question comes from Susan Wood, who has her hand raised.

44:31

Susan, your line should now be unmuted.

44:33

Good morning. Thanks for taking my question again.

44:37

Oh, you gotta love technology, right?

44:39

OK, so I'm with the North Bay Business Journal in the northern San Francisco Bay area and of course, we are mainly concerned with fires and so we're constantly plus, it's very heavy ag land. So definitely concerned with the drought outlook.

45:08

So I have a two part question with the wild in respect to the wildfires.

45:09

Ah, I was wondering if there's any type of system NOAA is working on, or the climate prediction center, in being able to gage when because wind is such a detrimental part.

45:26

What is driving these fires

45:29

And then the second part is relative to the drought outlook because of course, I, I look at what we have for the winter outlook.

45:40

And, I think, well, how is it that mainly, ah, you have equal chances in the Bay area of above normal temperatures.

45:54

Ah, but yet you have a drought outlook that could be improved.

46:00

How does that work, John?

46:03

Yeah, it's definitely a very good question. One is that as Brad mentioned earlier, there's a number of factors with the drought outlook from Northern California up into the Pacific north-west and northern

Rockies. one, it's important to remember that the drought outlook shown here is for November through January, so it's able to use the information over the next several weeks and also November.

46:26

And what we're seeing in the short term, quite short term or the next few weeks, quite quite a wet pattern.

46:34

In fact, 5 to 10 inches of precipitation in many areas, higher elevation snow.

46:40

But still, improvement there plus entering the cosmological wet season, there should be, that would typically, on average, also improve drought conditions.

46:50

And again, with La Nina although we have highlighted above average precipitation, for the season precipitation total amounts, further north in your region, there is some tendency for storms and troughs of low pressure to also move fast and stay low for Northern California. And that's why we're able to do improvement for drought conditions and in that region, even though you're kind of in the border line with the precipitation forecast. There's some other factors short-term and also longer term climatology.

47:23

And the wind, wind question. All right, thank you for reminding me. CPC, we're not working on that per se, but I know my colleagues in the research community, the Office of Atmospheric Research are hard working on those areas. And also with a longer term and let's say week two and also longer term than that experimental work for fire forecast or fire outlooks, let's say. So that research is going on, not being done, really at CPC, although we're partnering with them. We would have to get back to you with some of those colleagues here who could talk more about that. But, those areas of wind and fire are being looked at or more short-term climate outlooks as well. So, to answer your question. We are looking into it, but it will be some time before we're able to make official outlooks of that type.

48:23

Thank you.

48:28

Our next question comes from Edward O'brian, who has his hand raised, Edward. Your line is now unmuted.

48:38

It looks like you're self muted.

48:41

I apologize, I just forgot to take my hand down. Sorry.

48:45

No worries at all.

4851

Next question comes from Nancy Gardner.

58:54

Nancy, your line should now be unmuted.

49:08

OK, we'll come back to Nancy.

49:11

Our next question comes from Jason Samenow. He is asking: Let's see here.

49:27

You mentioned earlier that long-term climate trends are reflected in the Outlook map, because it's relative to the new normals.

49:35

Now, he's interested in finding out, he says, he can't remember the last time, NOAA issued an Outlook map with a lot of blue for cooler than normal conditions.

49:41

And, given that, is long-term climate warming trend, which increases the odds of a mild winter, are they incorporating it into these outlooks, or at least pushing you to lean that way?

49:55

Yeah. Good question. Yes, longer term trends are one of our outlook.

49:59

Are forecast tools that we make use of, and how we make use of that is compare.

50:04

The last last most recent 15 year temperature temperature average with the WMO World Meteorological Organization man, mandated 30 year climate normal.

50:16

So, that difference, a simple difference, indicates that what we would see as a temperature trend, and we're talking about more short-term trends and climate projections, or decadle trends, per se, and we do utilize that information.

50:29

The trends have changed, as you noted, with the updates to the new, what we call it a base pairs, from switch from 1981 to 2010 in 1991 to 2020.

50:43

And so, some areas became some areas that had struggled, positive temperature trends, were, have been reduced, and actually, in some areas, there are below normal body temperature trends that are negative. For example, during the February March periods in Northern Plains, there's a tendency for the long term trend now is actually negative. It's been some time since we have larger areas of negative trends in some areas, but overall the temperature trend in most areas and most seasons is positive and remain so. And so those do factor into the forecast, especially some of the longer leads where we don't have as much confidence and inter-annual variables such as El Nino or la Nina, or things of that nature.

51:25

So, they do definitely play a role and tend to tilt things for the majority of the ..., um, warmer that more, a little bit more warm.

51:34

Hope that answers your question.

51:41

Our next question comes from Jerry Auster, Jerry's asking, Does this Outlook indicate any potential areas of extreme weather, heavy rain, or anything similar, so essentially, heavy precipitation in any areas?

51:55

Right, Um, it's a good question.

51:57

As I mentioned, the specific prediction information that we would feel competent and reliable, saying it is not really possible, let's say, at these longer leads.

52:06

However, we do know during La Nina events, we can get a combination of factors that can relate to heavy precipitation events and, let's say in the Pacific north-west, Northern California. In fact, we're going to have one of those in the coming week, where we have a circulation pattern across the Pacific.

52:25

And North America, that is consistent with La Nina, even at this early part of the, with the fall Winter Season. Where the upper level atmospheric dynamics are very favorable for a strong system linked linking with atmospheric moisture from all the way across the Pacific in the Western Pacific, and some of the tropics. Very often, these sort of linkages are referred to as atmospheric rivers. And these atmospheric river events can very often produce extreme precipitation events, rain rain at lower elevations, and if later later in winter is cold enough and not have very heavy snowfall at higher elevations. So that risk is always there for the case of heavy precipitation or snow.

53:05

The greatest likelihood of that that this year would be across parts of the West of the Rockies and the west west coast, likely as opposed to the southern tier where typically storm trackers are generally shifted to the north.

53:18

And so, that is why those regions, as I mentioned, in the west, and also areas and parts of the Great Lakes would be a better chance for something like that extreme event with respect to either rainfall or snowfall.

53:35

Our next question comes from Robert ..., Robert is asking for the Kansas City area, Would you discuss the outlook for Missouri, Kansas, and more specifically the Kansas City area. And can we expect more of a shift in the polar vortex, again this year with extreme cold?

53:53

OK, question, with respect to temperature for, for your area. If I heard you correctly, Kansas City, area parts of southern Kansas.

54:01

We do feel like there will be favoring above normal temperatures in that in that region. There's a little bit more uncertainty with the precipitation outlook in that area, because you're in the kind of the border between them where we see typical on average impacts with precipitation.

54:16

As you can see here, the above average precipitation is typically to the east or near nearer to the east of Kansas City in a more towards the Ohio Valley Great Lakes, whereas the dryer signals a little further to yourself and so you kind of in more of a mixture where the uncertainty is high, the climate signal are less reliable. We're confident over the long term.

54:41

As we do get into later in the winter, our dryer signal starts to move up into, this would be for January, February, or March, February, March, and April in our outlook, in which the dry similarly you see here are actually expands north and east to include parts of Texas.

54:55

I'm sorry.

54:56

Parts of Kansas, the north-east Colorado, And parts of Nebraska, and then we see. And those are associated with La Nina impacts in the late winter and spring.

55:05

Now, as far as the extremes, as I mentioned before at this lead time, we really don't have evidence or feel strongly whether there would be another, an extreme event or indications of that either. Of

the cold snap that impacted the Central and Southern Plains in February of last year, We're just not able to make that prediction.

55:26

You just say that you you will have that are not have that actually the general conditions for La Nina would make that typically less possible. But again, as we saw last year, can still occur.

55:43

Thanks, John. And then the last hand that I see raised here is Nancy Garter.

55:49

Nancy, your line is now unmuted.

56:00

OK, it looks like we're having audio issues, Nancy. Feel free to follow up with me after this, and I'd be happy to connect you with an expert.

56:18

That appears to be our last reporter question. And with that I would like to again, thank today's experts. John Gottschalck and Brad Pugh from NOAA’s Climate Prediction Center, and Russell Vose from the National Center for Environmental Information for their assistance with today's call.

56:34

A recording of today's briefing will be made available online at the bottom of our press release. Later this afternoon. If you have any follow-up questions, please do not hesitate to reach out to me: Jasmine Blackwell, jasmine dot Blackwell iowa dot gov, or (202) 841-9184.

56:55

That concludes today's webinar. Thank you all so much for joining us today, and have a great afternoon.