

Delaware Water Supply Coordinating Council Meeting

DRAFT Meeting Minutes

Meeting Date: January 24, 2019

Meeting Location: Kent County Administration Building, Conference Room 220

ADMINISTRATIVE - Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer called the meeting to order at 10:06 a.m. and welcomed everyone. The meeting attendance list is included at the end of the meeting minutes.

REVIEW AND APPROVAL OF OCTOBER 18, 2018 DRAFT MEETING MINUTES

Mrs. Laura Mensch asked what the updates were in the draft meeting minutes that were included and distributed prior to the meeting. Mrs. Kimberly Burris replied the edits were submitted by Mr. Joe DiNunzio and they were on pages 7, 8, and 11 (the edits that were made are included in the list below):

- Page 7 – five lines from bottom of page, I believe “plant heartedness” should be “plant hardiness”
- Page 8 – Artesian’s report, second line: “9.3 mgd” should be “17.0 mgd for the month to date”
- Page 11 – first full paragraph, ninth line, “then” should be “than”

Mr. Smailer asked for a motion to approve. Mr. Vic Singer replied, “So moved with the added corrections.” Mrs. Mensch seconded. Mr. Smailer asked if there was any discussion. There was none. Mr. Smailer asked if all were in favor of approval. All were in favor to approve the minutes with the suggested edits. Motion approved.

Final meeting minutes are posted online at <https://publicmeetings.delaware.gov/Meeting/60066> .

OLD BUSINESS – Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer stated there was no old business to address.

WATER CONDITIONS REPORT –Stefanie Baxter, P.G., Delaware Geological Survey

Ms. Baxter presented a handout summary as of January 22, 2019, of hydrologic conditions that is considered a snapshot of water conditions and are tracked on a monthly basis (see attachment titled *Northern Delaware Drought Advisory Guidelines*). She began by saying, “It’s very wet.”

As stated in Ms. Baxter's handout:

- Precipitation for a 12-month period at the Wilmington Airport was +18.04" and +14.74" for a 6-month period

Ms. Baxter said, "If you look at the first line at the 12-month precipitation, we're up over 18". More than what we normally have in a 12-month period. Dan (Dr. Daniel Leathers) will talk a lot more about precipitation."

- Brandywine Creek (30-day moving avg) was at 794 mgd
- White Clay Creek-Stanton (30-day moving avg) was at 367 mgd and White Clay Creek-Newark (30-day moving avg) was at 139 mgd

Ms. Baxter stated, "Everything else is above average."

- Well Db24-18 was at 8.02 (fbls) (above normal) 3rd highest of record

Ms. Baxter stated, "If you skip down to Well Db24-18, which is about mid-page of the handout, that well is 8.02 (fbls) (above normal) and is the 3rd highest of record and we are still recharging. We're supposed to be recharging this time of the year and we've been recharging this well since January 2018. So for over a year now, the well has been steadily increasing or staying steady. It has not declined at all. That solid year has brought the water level up from over 15 (fbls) to now it's at just under 8 (fbls)."

- Water Conditions Index was 23.80 – 2nd highest of record (so far)

Ms. Baxter began to discuss the Water Conditions Index. She said, "It's at 23.80 which is absolutely ridiculous. Anything above 10 is considered wet and I think I said at the last meeting we had I think we should have a new category that just says 'Enough' because we are well past having enough at more than 18". And at this point in time, when I calculated this yesterday, that 23.80 is the 2nd highest of record and the month's not over yet and we're getting all this rain today so we could be on our way to having a January record. We already have had a November and December record for the Water Conditions Index. The last time it was this high was in 1996." Ms. Baxter continued to say that there was a drought in 1995 and said there obviously was a wet spell and Council continued to discuss.

- Chlorides were at -14.48ppm through 1/5/19

Ms. Baxter stated that chlorides are very low.

- Hoopes Reservoir (City of Wilmington) was at -7.2ft on 10/18/18

Ms. Baxter asked for an update from the City of Wilmington but they were not present at that time (they were present later during the meeting)

- Newark Reservoir was at -1.0 ft on 10/16/18

Ms. Baxter asked for an update from the City of Newark. Mr. Mark Neimeister stated they are currently 3 ft. below. Ms. Baxter said she will update the numbers at the end of the month.

- Aquifer Storage and Recovery (ASR): SUEZ was at 4.5 mg as of 6/26/18; and AWC was at 0 mg as of 10/18/18.

Ms. Baxter asked SUEZ for their current ASR and Mr. Rob Penman said there was no status change. She then asked for Artesian's current ASR and Mr. DiNunzio said 17.5 mg as of 1/22/19.

- Chlorides on the Delaware River as of 1/22/19 are currently at River Mile (RM) 69 and the normal is River Mile (RM) 69.

Ms. Baxter stated the Chlorides on the Delaware River as of Monday were at RM 69, which is exactly where they should be.

- NYC DRB Reservoirs (DRBC as of 1/22/19) storage 250.5 bg or 113 bg above drought watch.

Ms. Baxter stated the NYC Delaware River Basin Reservoirs are 113 bg above drought watch.

- The Kent County Hydrologic Conditions: precipitation Dover 12-month +19.30”, 6-month +11.43”, 5-month +10.17”. Streamflow for the St. Jones at Dover 30-day moving average for December 24 through January 22 at 71.7 MGD and is above normal. Groundwater for Mc51-01a for January 2019 at 9.36 ft below land surface and is above normal.
- The Sussex County Hydrologic Conditions: precipitation Georgetown 12-month +15.15”, 6-month +3.82”, 5-month +7.76”. Streamflow for the Nanticoke River at Bridgeville 30-day moving average for December 24 through January 22 at 114.7 MGD and is above normal. Groundwater for Qe44-01 for January 2019 at 6.27 ft below land surface and is above normal.

Ms. Baxter discussed the Kent County and Sussex County Hydrologic Conditions as of January 22, 2019. She said, “Everyone is just above normal. Kent (County) has for the 12-month up over 19” of rain, Sussex (County) up over 15”, and everything is above normal. It’s wet and I think we’re heading into spring in excellent shape. I think we should continue to keep recharging as well so we may actually hit record high levels with groundwater levels in Db24-18.”

The DGS’ full analysis is found on <http://www.dgs.udel.edu>.

FORECAST SYNOPSIS – Dr. Daniel Leathers, State Climatologist

Dr. Leathers presented a Power Point presentation (see attachment titled *Weather Summary and Forecast*).

Dr. Leathers said, “I’m just going to give a summary of what 2018 was like because it was really dramatic and then I’ll give a little bit of what we can say about the upcoming months.”

As stated in the presentation on the slide titled *2018 was 1.6°F above the 1981-2010 “normal”, and the 9th warmest since 1895 (Preliminarily)*:

Dr. Leathers stated, “I’m just going to start with temperatures because temperatures were not really spectacular but we had the 9th warmest, in 2018, since 1895. Before I go too far, I do want to say that these numbers are all preliminary because we try to do things very consistently with the Feds (Federal) and right now with the Federal government shutdown all the places where you get data and can go back and forth with them are closed down so everything’s preliminary but we can come pretty close to what we’re going to see. So last year, we averaged about 57°F which was again the 9th warmest since 1895.”

As stated in the presentation on the slide titled *2018 Statewide Monthly Temperature Anomalies*: Dr. Leathers stated, “We had some pretty spectacular months. We had the 2nd warmest February on record, the 4th warmest May, but then if you thought the end of the summer into fall was warm, I think a lot of people were shocked when we actually got to November where we were cold again. We had the warmest August on record, the warmest September on record, and we

had quite a warm October as well. Then we went into November where it got a little bit colder and in December we were actually a little bit above normal. January right now we'll just have to wait and see how that turns out."

As stated in the presentation on the slide titled *Delaware 2018 annual precipitation was 17.56 inches above the 1981-2010 "normal". This "MAY BE" an annual record:*

Dr. Leathers stated, "But for precipitation, I can't say this yet but it's likely that we hit a record year for precipitation. Almost 62" of rain fell statewide and there are a lot of places that have a lot more precipitation than that. That's over 17" above normal for us and once again it would be the wettest year that we've had since back in the 1940's if this all works out and I'm pretty sure that this is going to end up being a record year."

As stated in the presentation on the slide titled *This year's Delaware precipitation was approximately equal to the average precipitation for the states of Louisiana and Hawaii, the two wettest states in the country:*

Dr. Leathers stated, "Just to put that in perspective, this is a map that shows you the annual state precipitation averages. Our climate precipitation wise this past year was more like Louisiana and Hawaii than anywhere else in the country. Usually the states that have the highest precipitation totals on average each year we have been right in between Louisiana and Hawaii for the amount of precipitation we had."

As stated in the presentation on the slide titled *2018 Annual Precipitation at DEOS Stations:*

Dr. Leathers said, "So that kind of puts it in a little bit of perspective that we had 17" above normal for the State but in the center of the northern part of Kent County we had several of our DEOS stations that had more than 70" of rain and 75" in a couple of places. That's 30" above normal. Also up in Chester County, many stations over 70" of precipitation so once again we're running over the last year about 30" above normal up there at the Christina Basin." Mr. Richard Wilkins stated 82" at his weather station. Dr. Leathers said, "Incredible. Just absolutely amazing when you figure that our average for the State is about 44" a year." Dr. Leathers continued, "And the other thing that's amazing about this is none of that precipitation was from any major tropical system. That's what's really amazing. Most of the years you go back and look where we've had real high precipitation and we've had one or two or several tropical systems. A small portion of it was from tropical systems this year."

As stated in the presentation on the slide titled *2017 Statewide Monthly Precipitation Anomalies:*

Dr. Leathers said, "This just shows the statewide precipitation for each month of the year and you can see we've had a few months this year where we actually had below normal precipitation but that amount was very small. If you look at the rest of these, the green color, all very much above normal and if you add all those up you get the 17/18" above normal. Once again a pretty spectacular year."

As stated in the presentation on the slides titled *Late Winter / Early Spring Forecast and Current Tropical Conditions El Niño Watch:*

Dr. Leathers said, "Now as far as the spring forecast goes, what we have right now happening in the world that can give us any clue as to an extended forecast is some warming that's taking place again in the tropical Pacific Ocean. Right now, there's an El Niño watch out. The

National Weather Service actually puts out El Niño watches and warnings but it looks like the Central Pacific is going to get a little bit warmer again. That can have some big effects on different parts of the U.S.”

As stated in the presentation on the slide titled *El Niño / La Niña Forecast Winter 2018 – Summer 2018*:

Dr. Leathers said, “Not so much for us but basically this just shows that the models are all projecting an El Niño event, which are the red bars, going into the spring. Then we can look back in time and say so when we’ve had these El Niño events in the past, how have they affected our region here in the mid-Atlantic. Not a whole lot.”

As stated in the presentation on the slides titled *El Nino Event Mean FMA Temperature Distribution (°F)* and *El Nino Event Mean FMA Precipitation Distribution (inches)*:

Dr. Leathers said, “In general, February, March, and April this is a 3-month forecast. When we have El Niño conditions, we tend to be a little bit colder than normal. We’ll see if that works out.” He continued, “We tend to have a little bit below normal temperatures where we have El Niño events. The big thing is precipitation and maybe we don’t want to see this now. We tend to have a little bit more precipitation than normal when we have El Niño events during the spring months.”

As stated in the presentation on the slide titled *NOAA Extended Outlook February – April 2019*:

Dr. Leathers said, “So right now the National Weather Service extended forecast for us is no reason to assume anything really about temperatures, no reason to assume any big deviations in precipitation. We have about a 33% chance of above, below, or near normal conditions. I should say that that’s been the same extended forecast for us for a while. We’ve had much heavier than normal precipitation. These extended forecasts really don’t mean a lot.”

Dr. Leathers asked if there were any questions. There were none.

DELAWARE RIVER BASIN STATUS – Ken Najjar, DRBC

Mr. Najjar said, “Record rainfalls and run-off and gage heights in 2018 in Montague and Trenton. They’re running at about 80 percentile now. Salt lines are where they should be. Well below the past 6-months or more. Had 1-2” of rain over this week and generally speaking the storage in the reservoirs are up there. 26 bg above the median so about 93% in the NYC Reservoir and a lower basin storage of about 100%. Lots of storage. The good news is there’s no reporting of major floods.”

WATER UTILITY REPORTS – Water Purveyors

Artesian – Joe DiNunzio presented: “Saturated is the word of the day. Through the first 19 days of January our system deliberated Northern New Castle County with 17.35 mgd and it’s been hovering in that 17 mgd range since October. Normal seasonal situation. Ginny (Ms. Virginia Eisenbrey) spoke last time that we finished the well redevelopment at our ASR well and

started to store water on December 18th and as of the beginning of the week we had 17.5 mg stored. Injecting about 0.5 mgd so by Memorial Day we would have about 80 mg this season and we'll continue to store past that if the weather conditions remain as they are." Mr. Smailer asked Mr. DiNunzio, "Where does that put you relative to your average stored?" Mr. DiNunzio replied, "We target 130 mg storage in a normal cycle but with the well redevelopment with a late start but again what we'll do is we'll take advantage of the weather is still wet we won't need to withdraw and we'll continue to store and withdraw just a little later. And we don't have anything significant out of service at this time."

Newark – Mark Neimeister presented: "Averaging roughly 3 mgd, 2/3 coming from the Curtis Water Treatment Plant and mixing use from the reservoir in White Clay Creek mainly because of salt in the White Clay Creek. As of October we successfully transitioned from chlorine gas to hypochlorite as our main disinfection at our treatment plant. It's a huge project for us. It's about 20 years in the making and we finally got that done. We do have our South Well Field down for the last week, week and a half. Demand is low right now so we're okay. Our remediation air strip remoter has burnt out. Make sure we're meeting Office of Drinking Water and Federal standards just shut that down and wait until we get the new blower in. Not an issue as far as production demands at this point. Have some water main breaks with the fluctuating temperatures. Normal winter for Newark."

New Castle – Jay Guyer presented: "Everything pretty much normal. System's good. It's been serviced and had maintenance for the year. Ready for the spring. Right now we're averaging just about 0.5 mgd. We finished our fall hydrant flushing in November. Did an upgrade to one of our pumps at the treatment facility for the controller. And looking at projects for 2019 to include some cleaning and lining and possibly another pump to replace." Mr. Smailer then addressed the Council to extend a thank you to Mr. Guyer for reaching out to him and Mr. Matt Grabowski who are both new in their positions and invited them to meet with the staff and to take a tour of the facility on November 13th. Mr. Smailer said, "Discussion and dialogue were very good."

SUEZ – Rob Penman presented: "To recap 2018, average day for the year was about 15.76 mgd and maximum day was about 20 mgd. January 2019 to date average is 14.77 mgd and maximum day at 17 mgd. Year to date is a little less than last year. We had a lot less breaks than last year. Frequency is starting to pick up as we had a couple breaks last night. ASR on paper about 4-4.5 mg stored. We did have some problems last year when we got this going in May/June when we first started up and didn't get time to revisit. We're back on it. Similar to what Artesian's doing, we'll take advantage of the weather. Hoping to start in February with recharge. Goal is to get to 75 million by September and then start recovering. December we broke ground on our reservoir project at the Stanton plant. We're building two 2 mg above grade tanks, 4 mg total additional storage, as well as high service pumps. Hope to have it start up by the end of this year."

Wilmington – Not present.

Tidewater – Sheila Shannon presented. “Production for this time of year is running in the normal range. Pumping a total of 5.13 mgd (0.51 mgd in New Castle County, 1.62 mgd in Kent County, and 3.00 mgd in Sussex County). Nothing major out of service. No major projects.”

Sussex Shores – Not present.

DROUGHT ADVISORY GUIDELINES WORKING GROUP UPDATE – Dr. Gerald Kauffman, Water Resources Center

Dr. Kauffman reported, “The Drought Advisory Guidelines Working Group met at the University of Delaware a couple of times over the last several months at my office. Representatives included Dan (Dr. Leathers), Stefanie (Ms. Baxter), Steve (Mr. Smailer), Joe (Mr. DiNunzio), Charles (Mr. Jenner), the City of Wilmington, and the City of Newark. We went through updating our Drought Advisory Guidelines that Stefanie (Ms. Baxter) reports on and we decided with the evolution of technology and the data that Dan (Dr. Leathers) and the DGS (Delaware Geological Survey) have, it’s time to revamp our Drought Advisory Guidelines reporting it out on a statewide basis so we’re in the process of doing that.”

Dr. Leathers added, “Some of you may have heard that the University just received a Water National Science Foundation grant to look at water quality and quantity. They kind of go together and our group is involved with that. One of the first projects actually under that grant, we received seed money from that grant to do a project looking at very accurately the amount of water in the soil, the amount of water surplus or deficit across the state, and all the basins across the state. We had some money and a graduate student to get that whole project started.” Dr. Leathers continued to discuss to Council. Mr. Smailer asked Mr. Grabowski if he could briefly discuss the contract DNREC has pertaining to this project. Mr. Grabowski said, “We recently were successful in securing some surplus grant money and piggy backing a little bit of this years grant funds to contract with Dan’s (Dr. Leathers) group to do an irrigation model project where we’ll be able to model with a high level of accuracy to predict what the water use on to their farms are based on the crop that they grew. Growing and how much rain we had and those type of things. It should increase our water use reporting for Allocations. For the first time, it’s going to give us a more complete picture of the overall water use. Looking forward to it.”

Dr. Kauffman said, “Just to follow up, we now have the time to do this (revamp guidelines). If for some reason a dry event does come up, these Advisory Guidelines have been reliable for the last decade or so and we’ll utilize that if we have to. It’s time. We have the information and technology and it’s now time to update.”

Mr. DiNunzio added, “One additional comment from the Working Group perspective is we had discussed this distinction between Climatological Conditions and Water Supply Conditions and how we might be able to better address that going forward. Mr. Smailer added, “And communicate.” Mr. DiNunzio continued, “That’s part of the mission.”

Mr. Singer stated, “I had a conversation about a week ago with a member of the General Assembly and the impression I had was that the grant to the University and water activity is not

separable as to drinking water quality and stream water quality. It seems to me that we may have stream water quality issues but not have drinking water quality issues. We ought to be clear what quality issues we're focusing on when we talk with legislators." Mr. Smailer replied, "That's kind of a loaded topic in a number of ways because from a surface water standpoint and water quality component, for years some of the criteria have been the designated uses of those surface water bodies. Fishable, swimmable, drinkable. And there's criteria associated with each of those categories but the drinkable really only applies to the ones that we deal with up state. In the other context from a source water perspective, the water quality of the drinking water that's the groundwater system is very specific. Location specific, very aquifer specific, very other pieces specific. So you have certain places that you have concerns from naturally occurring arsenic in the groundwater systems, other places you have concerns with predominance of nitrates in the shallow groundwater. So it's not a 'one size fits all'. It's not that we only have surface water that's good or groundwater that's good or bad or whatever. And you're absolutely right, Vic (Mr. Singer). The conversation with anyone, particularly a legislator, can be delicate. What we can do as individuals, as organizations, or whatever to further the body of knowledge in that area is in all our best interests." Mr. Singer said, "It's a difficult situation when you talk to legislators. Typically, they have a few hundred bills to deal with every year and the amount of time they have to spend on one issue is not critical, it's minimal." Mr. Smailer added, "The legislators respond to the problems that are being presented to them but don't respond to all positives that aren't being responded to them. So the perception often is that there is wide spread problems when there's localized problems. That's the reality of the communication." Mr. Singer said, "I guess the bottom line is when you have a discussion with a legislator and water quality is mentioned, you ought to make clear that you're talking about stream water quality and if possible what particular stream." Mr. Smailer added, "I would say source water quality and whatever source." Mr. Singer said, "If it's a water supply, when you get your drinking water supply you have to make a distinction between water that's after treatment and before treatment."

Dr. Kauffman said, "So that's why the Water Supply Coordinating Council in its early years concentrated on developing a billion gallons of water supply storage and actually the water purveyors doubled that, two billion gallons. So I looked at the surplus in Northern New Castle County being 37 mg in supply. (Dr. Kauffman referenced the Thirteenth Report to the Governor and General Assembly.) Because of not just quantity issues coming down from another state by the way like Pennsylvania, but quality. You heard Mark (Mr. Neimeister) talk about they operate the reservoir because of the quality conditions. Salt coming down. That's why the Water Supply Coordinating Council is very conservative in building reserve storage." Mr. Singer added, "Certainly." Dr. Kauffman said, "That's what I would say to the members of the General Assembly. All of this is documented in the Thirteenth Report that we submitted to the Governor and General Assembly."

Mr. Wilkins said, "Just for clarification, the National Science Foundation grant, what's the amount of that grant?" Dr. Leathers replied, "The amount from the National Science Foundation I think is \$19 million and from the State of Delaware either \$4 or \$5 million." Mr. Wilkins and Dr. Leathers continued to discuss and Mr. Wilkins asked, "So the recipient of the grant is the University of Delaware Water Resources Agency?" Dr. Leathers replied, "No. It's every university and college in the State of Delaware and the whole point of this grant is to build

products that will help with decision making across the State. Not only is it the University of Delaware, and it goes to many different pieces of the University of Delaware, but it's also Wesley College, Delaware State University, and Delaware Tech are also involved in the grant." Mr. Wilkins said, "So it's only institutes of higher education that are receiving the grant funds?" Dr. Leathers continued to discuss with Mr. Wilkins and added the point of the grant is to develop products working with State government to help inform. Mr. Wilkins said, "Products being analytical tools." Dr. Leathers said, "Websites, more or less analytical tools but also there's a lot of interest in the social dimensions actually also looking at how people make decisions, etc." Mr. Wilkins said, "So when you said that you're going to be studying water quality and quantity, is there a particular area of the State that you're going to be focusing on?" Dr. Leathers replied, "For water quantities it would be the entire State. For water quality, we have several surface streams that have water quality issues certainly and those are the ones that will be looked at and goes all the way from northern Delaware all the way to southern Delaware and also very much so the Coastal sections. A big part of the grant is looking at Salinization or potential problems like that." Mr. Smailer added, "I think the scope of what's being done depends on the actual grant work, the individual projects. Where they're targeting, there's a number of researchers involved and is pretty broad." Mr. Singer and Mr. Smailer commented and discussed what Mr. Smailer previously said about swimmable, fishable, and drinkable. Ms. Ellen Kohler commented about a prior point that Mr. Singer made. She said, "If I'm a legislator and I'm sitting here listening to, at least I know from Delaware Nature Society's perspective, discussions around the fact that 90% of our streams are impaired under the Clean Water Act for fishable, swimmable uses but then if you were to ask any of the water purveyors do you have a problem with drinking water in terms of quality, (Ms. Kohler addressed the water purveyors 'you guys know how to treat your water, right?), so if I'm sitting there as a legislator I feel I'm getting two very different messages." Ms. Kohler asked Mr. Singer if that is what he was referring to and Mr. Singer said, "Yes." Ms. Kohler continued to discuss.

Mr. Smailer added, "If you look at past meeting minutes, this Council and their focus was on available quantity in many instances. We have the luxury, if you will, sitting there when we have almost 70" of rain that's coming in, reservoirs full, overfull, other aspects to start thinking about the quality aspects to but it's an interesting piece that the focus of the Water Supply Coordinating Council does, in my mind, have a role in helping to educate the decision makers as to what affects our water supply be it quantity or quality."

Ms. Kohler stated, "I know there are specific users both in Newark and Wilmington who, high quality water coming out of your treatment plants is really important to the products they are producing, too, so water quality, while you all know how to treat water and deliver it in a way that meets drinking water standards, there are still issues about treating that water in a way even for economic uses, commercial uses, that we need to be thinking about and communicating to legislators that just because we know how to treat things for drinking water does not mean we don't have water quality problems." Mr. Singer agreed and Ms. Kohler continued to discuss.

Mr. Neimeister added, "I think that anybody who has an impacted well they could get it treated for quality issues and we do not have to remediate or put some sort of chemical addition into it." Mr. DiNunzio said, "Prevention is better than detection. Detection means it's already there."

Mr. Charles Jenner stated, “A lot of this conversation has revolved around what I believe is called WiCCED (Water in a Changing Coastal Environment).” Mr. Jenner continued, “I thought it was unfortunate that the initial public outreach I thought there was an awful lot of emphasis on the negative.” Mr. Jenner then mentioned and discussed the e-mail that Dr. Kauffman sent out last week having to do with the series of reports that WHY (television) is doing on water quality. Mr. Jenner continued to discuss on how there should be balance between the two and include achievements in addressing the public in the future. Mr. Jenner and Dr. Kauffman continued to discuss.

Dr. Kauffman added, “For Delaware to get this grant of this magnitude from the National Science Foundation (NSF), such a small state, is a big deal. We don’t get our fair share out of Washington. This is going to students that went to Delaware high schools that are now attending the University of Delaware, Delaware State, Wesley College, and others and it’s a big deal. Our College of Ag is going to be working with some big time stuff that’s going to benefit our economy, too. So, I’m all in on this.” Dr. Leathers said, “This is not a grant. This is a Cooperative Agreement which means if the work is not showing benefits to the State of Delaware and the people in Delaware during the five years, NSF can pull that whenever they want to.” Dr. Leathers continued to state that results need to be shown or he said, “You won’t get anymore.”

Mr. Smailer commented on the social public outreach and the communication and how is it understood. Mr. Najjar, Dr. Leathers and Mr. Jenner continued to discuss.

EASTERN KENT COUNTY WORKING GROUP UPDATE – Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer said, “I have a very brief update. The Eastern Kent County Working Group, where we stand with that, we met and the DGS is in the process of finalizing their Open File report for the work that they’ve done that includes the stuff for Eastern Kent County. Once that product is reviewed and published, I think that would be a basis for some additional outreach. We’ve already added some additional people of parties of interest in that area. So that report is forthcoming.” Mr. Smailer continued, “It’s a water quantity issue in an area that right now don’t have many pivots going in Eastern Kent County.” Mr. Smailer asked Mr. Wilkins if he agrees with that. Mr. Wilkins replied, “No, there’s not very many running but from a farmers perspective when you just experienced a record setting period of climate with excessive rainfall it’s the time to make investments in irrigation infrastructure because you know that the weather pattern will change.” Mr. Smailer commented to Mr. Wilkins how telling it was at the last meeting, or previous meeting, when he talked about the timing of the precipitation actually forced greater agriculture use because the roots were shallow.

Dr. Leathers said, “From an agricultural standpoint, Stefanie (Ms. Baxter) and I were just talking, we can have 80” of precipitation this year but if we get to June and we hit 100° days for three weeks with no precipitation, it doesn’t matter how much we get this year.” Mr. Smailer said, “But economically the pressure’s put on by this year on why you need to make sure you have the ability to deal with it in forthcoming years.” Mr. Wilkins discussed June was a month

that there was a period of below average rainfall and July was above average and the shallow rooted crops didn't have roots deep enough to draw and irrigation systems had to be run hard to keep up.

Mr. Jenner asked Mr. Smailer and Dr. Kauffman regarding both Working Groups and tentative schedules they could reconvene. Mr. Smailer said he's waiting on the finalization of the DGS report (for the Eastern Kent County Working Group) and Dr. Kauffman said a meeting will be scheduled shortly (for the Drought Advisory Guidelines Working Group).

WSCC GOVERNANCE UPDATE – Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer said, "Late November or early December I had a two and a half hour phone conversation with the Governor's office that I thought was productive. They still have questions about quorum and other aspects but it was a good back and forth and there's no definitive outcome from it and nothing specific to report back."

Mr. Smailer then asked Council for open discussion on having the Water Supply Coordinating Council meet three times a year rather than four times since we have not shown any sign of a drought. Mr. Smailer added, "If we do show signs of a drought, we can certainly meet more frequently." He continued, "We can meet one time going into the summer drought season. Are we prepared and where do the supplies stand and other components. The other meeting would be in the fall coming out of that and how did we manage and handle and the third meeting to be late fall / early winter that would be a working meeting of other things we would like to see on the agenda." Mr. Smailer added, "If conditions change, we can call meetings more frequently than that but to me and the sensitivity of everyone's time, those are the key pieces." Mr. Smailer then opened up for discussion and feedback from Council.

Mr. Keith Mensch asked if there was anything written in the statute and regulations and Mr. Smailer replied, "There's nothing."

Mr. Jenner said, "I don't want to see us meet monthly or bi-monthly but quarterly seems to be pretty effective. The idea about before and towards the end of the drier season I think that's really good thinking." He continued, "You could even take two of the wet season periods and push them closer together."

Mr. Singer said, "I think your suggestion makes a lot of sense. Meeting when you have something to talk about." Mr. Smailer added, "Don't get me wrong. I think particularly in times of quantity uncertainty the report outs by the systems and everything else is absolutely imperative." Mr. Smailer continued to discuss of having an agenda with specific action items and not just a fixed agenda. Ms. Shannon said, "I agree with your proposal." Ms. Kohler agreed as well. She added, "I can also see scheduling the three meetings and putting a fourth meeting out there and having it on the calendars but then we will not have it unless there is something to talk about. That there's a need for that meeting because then if something comes up you have the time blocked. Mr. Najjar discussed back when there was a drought there were conference calls, etc. going on."

Mr. Neimeister said, "I like the idea. I think maybe in the summer months, the dry months, to send out the water conditions report so we see where things are going." Mr. Smailer agreed that if there's something for the Council and the public to look at instantaneous and update periodically, he's not against that. Council continued to discuss.

Mr. Jenner mentioned he noticed that there is a lot of support for the motion for the Council to meet three times a year. Mr. Smailer added the next meeting will still occur and the meeting after that will occur. There will be a few months to figure it out. Mr. Smailer continued, "There's no statutory obligation and the conversation we had today there's pros and cons and that's why I wanted to have the conversation." Mr. Singer stated, "We're all pretty much saying the same thing. Historically the strength of this group is the absence of statutory authority to compel." Mr. Singer and Mr. Jenner continued to discuss.

Mr. Smailer discussed the following: how do we get the information out as far as direct communication; procedures for solicitation of agenda items, topic elevations, and what criteria would be there for when do we want to meet and how do we get that established if a certain group of people deem something elevated; and, as Vic (Mr. Singer) stated previously, making sure that we have the ability for the distribution list and open lines of communication. Mr. Smailer said, "Those are action items for me to work out over the next couple of meetings."

SELF-SUFFICIENCY REPORT CERTIFICATION UPDATE – Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer told the Council that Wilmington has not submitted their report yet. He also mentioned how the other four reports were e-mailed again to the board members as a refresher. They were previously e-mailed out prior to the October 18th meeting (e-mail to the Board originally went out on October 16th.)

Mr. Smailer asked Dr. Kauffman to comment on the difference between the annual reports and the Self-Sufficiency Certification Reports. Dr. Kauffman said, "Last year I sent out a memo to the Water Supply Coordinating Council that tabulated water demands for that year which was 2018 and projected out to 2021. You have this information. It's on the website and it's also summarized in the Thirteenth Report. The numbers all jive. The water suppliers use that information to compile their water supply Self-Sufficiency Certification Reports. The numbers conclude that there's a healthy surplus for each of the five water purveyors, although we don't have Wilmington's." Dr. Kauffman said if you look at the numbers in the Thirteenth Report there's 36 mgd surplus in Northern New Castle County. He continued, "If I wanted to, I could move to approve the four of the five reports." Mr. Jenner stated we shouldn't do that and Dr. Kauffman restated again, "I said I could." Dr. Kauffman continued, "In my opinion, there's very little to discuss. All four of the water purveyors have more water in supply that exceeds the peak demands that this group has reviewed many times before and agreed upon the Thirteenth Report and they all have water conservation oriented water rates with the more water people use the more they pay. That meets the criteria for the Water Supply Self-Sufficiency Act that this group is responsible under the law to report that to the Public Service Commission (PSC)."

Mr. Najjar, Dr. Kauffman, and Ms. Baxter discussed the condition of what the Act stated about the drought of 2002 (75-day drought period).

Dr. Kauffman said, "I think this is the fourth three-year cycle since the Water Supply Self-Sufficiency Act was passed in 2003. So we did this three years ago and now it's time to do it again. Peak demands are declined for various reasons and supplies have increased since the Act was first passed." He continued, "I've been working with Wilmington to complete their report. I sent them all the information for this report, the memo that I wrote, and also they have the report that was passed by this group three years ago that they just need to update. The thing that's going on with Wilmington is they've gone from a quarterly water rate reporting to monthly. And that's a good thing." Dr. Kauffman continued to discuss.

Mr. Jenner told Dr. Kauffman he happened to have about a dozen copies of *Title 26 Public Utilities Chapter 14. Self-Sufficient Water Supply* with him. Mr. Jenner said, "I think if we're going to have a serious discussion about Jerry's (Dr. Kauffman) proposal, I think some copies of this needs to go out because, unfortunately, the requirements of this statute are not just limited to being assured that we have adequate supply in our filing requirements. The law is quite specific and the law has a number of stipulations about the requirements of the utilities in their reporting." Mr. Jenner told Dr. Kauffman he would be very happy to take three to four minutes to discuss.

Dr. Kauffman said, "I was referred to as co-coordinator of this Council. The Secretary of DNREC is Chair. I, by the state law, am the temporary water coordinator that goes back to 2000."

Mr. Smailer said, "I asked Jerry (Dr. Kauffman) to give an update to me because I thought it was helpful for the group about how the annual reports to the Self-Sufficiency Reports are not solely independent. I think there's an overlap between those components." Mr. Smailer continued to address Mr. Jenner and said, "Yes, if it can be sufficiently succinct, going through what you feel are the specific key points of the statute. You don't need to distribute it we can pull it up (on the screen)." Mr. Jenner said, "I think it would be helpful for people to have access to the actual primary document before somebody makes claims in regard to that document that are not verifiable through the document itself. (At this time, Mr. Smailer pulled up *Title 26 Public Utilities Chapter 14. Self-Sufficient Water Supply* from the internet.)

Mr. Jenner deferred to Mr. DiNunzio to walk the Council through the specifics. Mr. DiNunzio read aloud *Title 26 Public Utilities Chapter 14. Self-Sufficient Water Supply §1401. State Policy (1) (3)*.

Mr. Wilkins asked Mr. Jenner for a copy that he had and also if this could be an action item. Mr. Smailer replied, "Yes." Mr. Wilkins stated if this was going to be an action item then it should have been distributed to the Council ahead of time for review.

Mr. Smailer replied, "This is the actual state law that exists. The contention that Mr. Jenner is making is that something is not meeting this. That was not the agenda item. I did not send a copy of the link to the State of Delaware Code on this particular topic because the agenda item

was the Self-Sufficiency Reports. Mr. Jenner wants to take the opportunity to make sure, and I'm giving him the time, that we are clear on the obligation."

Mr. Jenner said, "We received a proposal from Dr. Kauffman that we can bypass this and my contention is that no we can't because we have a specific statutory requirement which is basically what stimulated the initiation of this." Dr. Kauffman replied, "I didn't say bypass." Mr. Jenner said, "I'm not trying to put words in your mouth but I think that you were suggesting that we didn't necessarily have to go through this process exactly as it's spelled out."

Mr. Smailer said, "Dr. Kauffman said he could have made a proposal that we accept the Self-Sufficiency Reports that we have seen from the four entities that are here and quite frankly I guess what I'd like to do at this point, I would entertain a motion right before that so we can have this very discussion under that specific topic." Mr. Smailer asked, "Do I have a motion?"

Mr. Najjar asked, "When are the certifications due?" Mr. Smailer replied, "The certifications are due July 1 of the reporting year. Wilmington has not met that obligation." Council continued to discuss that 2018 was the reporting year. Mr. Najjar said, "It was not indicated on the agenda. I'd like to review." He continued to discuss.

Dr. Kauffman said it was tabled at the last meeting and Mr. Najjar added that it's been tabled for almost six months or more. Mr. Najjar said, "Maybe there needs to be dedicated time on the next agenda to make sure we have the information to take action at the next meeting."

Mr. Singer said, "I want to make a motion similar to what you asked for. I move that we recognize that the five organized water utilities doing business north of the canal, whether jurisdictional or non-jurisdictional, have more than adequate supply to cover the next three years. The only potential deficiencies have to do with the paper requirement of the report."

It was asked about what the paper requirement means? Mr. Singer replied, "I don't perceive any problem with adequacy to meet the demand over the next three years even with a recurrence of the worst drought of record. But I have some problems with some of the reports." He continued, "So I'm moving that we recognize that in combination the five water utilities that service New Castle County north of the canal have adequate supply to meet the demands even should there be a recurrence of the worst drought of record." Mr. Smailer said, "Which to me was our charge of making sure that was the case. That's the ultimate obligation." Mr. Singer said, "I'm separating the logic between what the fact is and what the reports say."

Mr. Smailer said, "So procedurally Vic (Mr. Singer) has a motion with regards to stating that we believe we have adequate supply for the drought of record for the five required entities. Do I have a second?" There was no second.

Mr. DiNunzio suggested, "For the benefit of the Council, I think it may be good just to review what Charles (Mr. Jenner) has highlighted here (in *Title 26 Public Utilities Chapter 14. Self-Sufficient Water Supply*) for the fact that to what our charge is under the law as it relates to these certifications. I don't know if we're going to be prepared today to go beyond that in terms of we do not have Wilmington's in hand and I recognize it was not an agenda item today in terms of

discussion and approval of even what's been submitted. So I would suggest that this be a specific agenda item for next time. I'm a little concerned that the statute does not provide for any consequence for failing to file a certification."

Mr. Smailer said, "The reality of the statute is that if we deem something inefficient we notify the PSC, thereof." Mr. DiNunzio said, "But in the case of an un-jurisdictional utility, that has no context. That applies to SUEZ and Artesian ..." Mr. Singer then interrupted and said, "That's not quite so. The underlying issue is who is under oath." Mr. DiNunzio said Wilmington has not even submitted a certification. Mr. DiNunzio continued, "The only thing under the statute that I think would apply is the PSC should not be granting an additional certificate of public convenience of necessity, should one be asked." He continued to discuss and then read to the Council *Title 26 Public Utilities Chapter 14. Self-Sufficient Water Supply §1404 (a)(2) and (c) and (e).*

Mr. Smailer said, "To Vic's (Mr. Singer) point, the concern about is there available quantity is not necessarily concerns detailed of what has been submitted." Mr. DiNunzio said, "And we address that in the Thirteenth Report as Jerry (Dr. Kauffman) points out. The Thirteenth Report stands as it was presented. We don't have a good reason to believe that the submissions are going to change. But the question I think Charles (Mr. Jenner) has on the table as I understand it is we don't have Wilmington's at all and what has been provided, are there perhaps deficiencies." Mr. Smailer said, "The last meeting in October we sent out the pieces prior to that last meeting but it was only a few days prior to that last meeting and we didn't have Wilmington's at that point either. I said that was not sufficient so we had a discussion and we tabled it for this meeting. I was not clear in the language that I placed on the agenda that that was to move forward with these specific certifications even though I thought the discussion there was in that regard."

Mrs. Mensch said, "What's that status of Wilmington's submission?" Dr. Kauffman replied, "Any hour now. I had a discussion with Wilmington earlier this week and they asked how should they treat the change in their water rates schedule and I proposed you are quarterly up to 2018 and now you're monthly which is even better. They haven't submitted it because of change in personnel." Dr. Kauffman continued to discuss how Mr. Matt Miller is no longer with the City of Wilmington and he is the one who submitted it.

At this time, Ms. Mary Neutz with the City of Wilmington introduced herself to the Council. She said, "Ms. Chris Oh gave me an update this morning and she said her and Sean (Mr. Duffy) are just working on finalizing it." She continued to say how they are trying to catch up on the backlog and have been understaffed. She thanked Dr. Kauffman for all of his help. Dr. Kauffman said, "I say let's give a long time member of the Water Supply Coordinating Council a break." He continued to discuss the City of Wilmington's situation.

Mrs. Mensch continued, "Correct me if I'm wrong but I believe we voted in between meetings on topics and I'm wondering if there's a request for time for people to review things especially if within a short period of time we might be able to receive Wilmington's. Is that an option people would be willing to consider?" Mr. Singer said, "It seems to me from prior discussions at the last meeting the statute is specific as to when the utilities are to submit the reports to this group.

But it's not specific as to when we are to report to the PSC. So we aren't violating the law if we say we don't need to act until the next meeting."

Dr. Kauffman said, "I don't see any reason to delay action on the four out of the five that we have received." Mr. Singer said to Dr. Kauffman, "Well you might have seconded my motion." Dr. Kauffman said, "Were you going that way about voting on the four? You didn't say the reports you just said supply exceeds demand. If you were to add the words 'and the four Self-Sufficiency Reports that were submitted by the four water purveyors' I would have seconded your motion." Mr. Singer said, "My perception of the adequacy of the supply is based on the reading of the cumulative data that we have already including the annual report." Dr. Kauffman said, "I'm asking clearly what's inadequate about the four that have been submitted?" Mr. Singer said, "If you want to get specific let me get specific." Dr. Kauffman said, "And what's different from three years ago when this body voted to approve the section of the same documents? The law hasn't changed." Mr. Singer said, "Well let me point something out. In the reading of the law, Joe (Mr. DiNunzio) went through §1404 (c) and the operative sentence is '*With the certification, the water utility shall provide supporting materials and documents that identify each source of supply and the volume of water available from each source*.'" He continued, "That means data beyond a table. There is a three page submission from SUEZ that refers to the prior reports for data that this sentence says ought to be in the report. If it's the same data as before, repeat the same paragraphs as before, don't rewrite it, just include it."

Mr. Smailer said, "One of the things that I know going through this is everyone around this table, I believe, has a different opinion as to what adequate documentation and adequate detail is on these as was evident to me by the poor submissions we received." He continued, "My understanding of the history of this is this has gone back and forth, too, when these were originally submitted to the PSC then they came to the Water Supply Coordinating Council but there is no guidance as to what these things are. We know what we call them but there is no guidance as to what these things are." He continued, "One of the things for a future topic if you want to think about is this Council as it stands right now as that statute stands right now sunsets in 2022 or whatever it is. So I would imagine that those reports would go where, to the PSC?" Dr. Kauffman said, "DNREC." Mr. Smailer continued, "My point being, we still have no standardization of what those people are going to be looking at." He said, "It sure would have been nice to have a template for what was in a Self-Sufficiency Report so there would be no arguments of what is included." Mr. Smailer continued to discuss.

Mr. Smailer said, "I think to Vic's (Mr. Singer) original motion we feel comfortable that we met the need, that the volume is there. We individually would like to see different components for different reasons and I'm not saying they're not valid but they're different by the very nature he ambiguity of what (c) says."

Mr. Wilkins said, "For clarification in §1404 (c) *Certification of adequate supply*, '*The certification must be executed by the governmental officer responsible for the operation of the water utility*.' So for interpretation, when I see governmental officer I'm thinking of the governmental entity." Mr. Smailer said, "That would be like a CEO who is on the line for saying 'this is adequate.'" Mr. Wilkins said, "These four (large) reports that were just distributed to me last night..." At this point Mr. Smailer interrupted by stating, "I want to be very, very clear. The

Council had these reports since before October 18th. I just want to make it clear that it wasn't just last night that Council received these reports." Mr. Wilkins continued, "Has the Water Supply Section adequately reviewed these reports and believe that the reports are accurate?" Mr. Smailer said, "DNREC has a Water Supply Section but I'm not part of it but I'm the Secretary's representation and I have my opinion as I'm sure everybody else does that reviewed the documents that were provided. My personal conclusion is that they do demonstrate as does the report that we have adequate supply. Could there be additional details provided to fill in some questions and is there syntax that could be tweaked, yes. My opinion on the information provided it does demonstrate that we have adequate quantity to meet the requirement of that. I don't know if we have filled out what everybody wants to see." Mr. Wilkins said, "Is there any recommendation to the Council to either accept these four reports or to send the reports back for revision?" Dr. Kauffman said, "I recommend accepting all four." Mr. Jenner, Mr. Smailer, and Dr. Kauffman discussed.

Mr. Jenner said, "The one report I reviewed intensively point after point did not meet the requirements of the statute as I interpreted it." Dr. Kauffman said, "But you were comfortable two years ago." Mr. Jenner stated that three years ago he was looking at another report with a microscope. He said, "As a result of that, that provider resubmitted his filing." Mr. Jenner and Council continued to discuss.

Dr. Kauffman asked, "How many people are here from the Water Supply Coordinating Council? What I understand is that an action of the Water Supply Coordinating Council does not need to be unanimous. There may be opinions from others we haven't heard from yet this morning that are different from yours. It is 2019 and I'd hate to be here in April and still discussing something which I think is a no brainer because I know the numbers, you know the numbers. The supply far exceeds the demands and I hate to quiver over little minor details. If you wish to have the documentation, it's there."

Mrs. Mensch said, "Why don't we just go through each report and vote on each report separately. Would that be beneficial?" Mr. DiNunzio said, "That would only be beneficial if Charles (Mr. Jenner) is willing to have the discussion directly about which ever one of us he is concerned about. Or otherwise what I would suggest is, if there are concerns about giving reports and there's concerns about, at this moment, having a general discussion, perhaps there needs to be a discussion among the certain parties to conclude that. My concern would be the statute. The statute puts a burden upon us. The reports must meet at least some standard." Mr. DiNunzio continued to discuss and stated that if someone has a problem he'd sooner get it resolved. Dr. Kauffman said, "I would like to know, because now's the time, what specifically is deficient?"

Mr. Keith Mensch said, "I went through these quickly and the one question I have is source involved. SUEZ has treatment plant but I don't see source. So my question for SUEZ is does this meet the criteria in terms of source and volume?" Mr. Mensch continued to say that every other report has source and volume.

Mr. Singer said, "I have to say the three page report (SUEZ) says quite emphatically that a substantial amount of water is expected to be brought from the City of Wilmington to meet its

requirement. Under the statutory requirement that says, ‘*With this certification the water utility shall provide supporting materials*’, I would expect to see a copy of the contract with the price tag redacted that shows that the contract will last for years. Without a copy of the contract, I don’t know if the arrangements with the City of Wilmington goes out to the three years that are required to be certified.”

Mr. Smailer said, “The other component, and I wasn’t here, but I am aware that the same concern was raised last year. The information was filed with the Secretary who deemed that the information that we have adequate and confidential. That was deemed by the Secretary by previous action, not by me.” He added he doesn’t know how it was communicated but it was in the 2015 submittals. Mr. Singer said, “Well, what you’re saying is that the report is in the Secretary’s office. What the SUEZ report says is if you want to see the supporting documentation go to the PSC.” Dr. Kauffman said, “Their contract is actually summarized in the Water Supply Coordinating Council reports to the Governor and General Assembly.” Mr. Singer said, “That’s fine. All of the certification report requires is what it says.”

Mr. Smailer said, “Here’s the components that I see right now. We have three potential paths forward for this right now. We have Laura’s (Mrs. Mensch) proposition to go through individually and vote up or down each of the reports, we have the potential for doing a vote via e-mail in the interim once we have received Wilmington’s piece, or putting this off until the next meeting. I would entertain a motion on any of those three topics.”

Ms. Kohler said, “I would like to vote by e-mail once we received Wilmington’s report.” Mr. Smailer asked, “Do I have a second?” Ms. Baxter said, “Why do we have to wait until we get Wilmington’s? Why can’t we vote by e-mail on the four that we have and then wait until we get Wilmington’s and then vote on that?” Ms. Kohler stated the reason she approached it the way she did was because she would rather do it once and get it done. Ms. Baxter seconded.

Dr. Kauffman said, “I was proposing to vote individually on the four that we have today.” Mr. Smailer said, “But we have a motion and a second.” Ms. Baxter asked, “In what time period?” Ms. Kohler said, “I think it’s appropriate to give people a week once they get the report. Again, we’re late already. I agree with Jerry (Dr. Kauffman). There’s no question about sufficiency. That’s not the issue. The issue is I think there was some confusion about what was happening today in terms of whether we were voting or not voting. The best way to deal with it is to give people an opportunity like a week once we get Wilmington’s report.” Ms. Kohler also agreed with designing a template that Mr. Smailer suggested earlier.

Dr. Kauffman wanted to do another poll but Mr. Smailer said, “There’s a motion and a second on the table right now.” Mr. Singer asked, “Does the motion include voting on the individual reports?” Ms. Kohler replied, “We can amend it so that when the e-mail goes out it will include the five individual plans and voting on each individual plan.” Ms. Baxter agreed to the amendment.

Mr. Smailer said, “So we have a motion and a second.” Council continued to discuss. Mr. Jenner said that if the Water Supply Coordinating Council is not to have an actual real time face

to face discussion on these reports, he suggested an e-mail distribution list to express opinions. Ms. Kohler said, "I don't see a need to amend my motion." Council discussed.

Mr. Wilkins said, "Is it reasonable to expect that the Certification Report from the City of Wilmington will come in within the next 10-14 days?" Mr. Smailer replied, "I think that is reasonable." Mr. Wilkins said, "I'd hate to see the other four utilities approval of their reports being help up."

Mr. Smailer said, "So we have a motion and an amendment to vote by e-mail with the procedure being a motion to approve the individual reports needs to be seconded by someone and then a period of discussion yet to be determined as the basis for that period of discussion."

Mr. DiNunzio said, "From a provider's perspective, I don't want to speak for the other providers, but if somebody has a concern about Artesian's submission of certification, I would much prefer that we're approached and have the chance to discuss it. And I'm not sure if I'm comfortable with e-mail discussions flying around (e-mail distribution list)." Mr. DiNunzio continued to discuss. He said, "Artesian would abstain on voting on the other providers." He continued, "I'm just not sure that this process is going to be fair that way." Council discussed.

Mr. Smailer again stated, "We have a motion and a second. All in favor of voting by e-mail on the specific individual reports upon receipt of Wilmington's within one week." (Final vote was 10 nay's and 8 yeah's.) The motion failed and will be an agenda item at the April meeting as a vote.

NEW BUSINESS - Steven M. Smailer, P.G., DNREC, Chair

Mr. Smailer had no new business to discuss.

PUBLIC COMMENT

Mr. Smailer introduced "STRIDE" (Science, Technology, and Research Institute of Delaware) and they discussed PFAS and asked people to come and talk to them after the meeting. DAFB was specified and Ms. Shannon said that everything is in the shallow groundwater wells and is not in the deeper drinking water wells. Documentation was left for Council.

NEXT MEETING - Steven M. Smailer, P.G., DNREC, Chair

The next meeting has been scheduled for April 18, 2019, at 10:00 a.m. in the Kent County Building, Conference Room 220.

ADJOURN - Steven M. Smailer, P.G., DNREC, Chair

Meeting adjourned at 12:04 p.m.

These minutes are not intended to be a detailed record. They are for the use of the Water Supply Coordinating Council members in supplementing their personal notes and recall of Council discussions and presentations and to provide information to Council members unable to attend. Minutes recorded and submitted by Kimberly Burris.

Meeting Attendees are listed below alphabetically, last name first:

Barndt, John – retired DNREC, Division of Water, Water Supply
Baxter, Stefanie – University of Delaware, DGS
Byun, SeungAh - DRBC
Cocke, William – DNREC, Division of Water, Water Supply
Coleman, Brian - STRIDE
Coleman-Kammul, Seetha - STRIDE
DiNunzio, Joe – Artesian Water Company
Driggins, Lisa – Public Service Commission
Edge, Renay – Public Service Commission
Grabowski, Matthew – DNREC, Division of Water, Water Supply
Guyer, Jay – City of New Castle, Municipal Services Commission
Hemphill, Samantha – Public Service Commission
Hokuf, Doug – New Castle County Government
Homsey, Andrew – University of Delaware, Water Resources Agency
Houseman, Adam – Delaware State Golf Association
Jenner, Charles – Delaware Grounds Management Association
Kauffman, Dr. Gerald – Water Resources Center
Keyser, Todd – DNREC, Delaware Waste & Hazardous Substances
Kohler, Ellen – Delaware Nature Society
Leathers, Dr. Daniel – State Climatologist
MacDonald, Glen – Delaware State Golf Association
Mensch, Keith – Division of Public Health, Office of Drinking Water
Mensch, Laura – Department of Agriculture
Najjar, Ken - DRBC
Neilson, Kevin – Public Service Commission
Neimeister, Mark – City of Newark
Neutz, Mary – City of Wilmington
Penman, Robert - SUEZ
Rudd, John – Office of the State Fire Marshal
Shannon, Sheila – Tidewater Utilities
Singer, Victor – Civic League for New Castle County
Smailer, Steven – DNREC, Division of Water
Smith, Samantha – DNREC, Division of Water, Water Supply
Steppich, Tony – Delaware State Golf Association
Sumption, Grace – DNREC, Division of Water, Water Supply
Warren, Heather – Division of Public Health
Wilkins, Richard – Delaware Farm Bureau

Northern Delaware Drought Advisory Guidelines

Reported by the Drought Advisory Guidelines Subcommittee (DAGS), which is composed of the Delaware Department of Natural Resources and Environmental Control, Delaware Geological Survey, and University of Delaware Water Resources Agency with input from the water purveyors and representatives from the landscaping industry. These drought operating guidelines are designed to provide guidance to the Delaware Water Supply Coordinating Council (WSCC) and the Governor's Drought Advisory Committee (GDAC). Responsibility for providing technical guidance for a move up to or down from Drought Watch is with the WSCC. Responsibility for providing technical guidance for a move up to or down from Drought Warning or Emergency is with the GDAC. Final declaration of drought advisories rests with the Governor.

Indicators	Drought Watch Voluntary Conservation	Drought Warning Voluntary Conservation	Drought Emergency Mandatory Restrictions	Status January 22, 2019
Precipitation Wilmington Arprt/Porter Rsvr 12-month	-6.00" to -8.99"	-9.00" to -11.99"	>-12.00"	+18.04"
Precipitation Wilmington Arprt/Porter Rsvr 6-month	-3.00" to -4.50"	-4.50" to -6.00"	>-6.00"	+14.74"
Brandywine Creek (30-day moving avg)	85 mgd	70 mgd	48 mgd	794 mgd
White Clay Creek - Stanton (30-day moving avg)	42 mgd	37 mgd	31 mgd	367 mgd
White Clay Creek - Newark (30-day moving avg)	19 mgd	16 mgd	13 mgd	139 mgd
Well Db24-18	14 - 14.99 (fbls)	15 - 15.99 (fbls)	16 (fbls)	8.02 (fbls) <small>(above normal) 3rd highest of record</small>
Water Conditions Index	5.0-4.0	3.99-3.00	<3.00	23.80 <small>2nd highest of record (so far)</small>
Chlorides	WCC ≤ 37 mgd for 5 consecutive days at SUEZ Stanton Intake	Cl > 250 ppm for 3 days at Christina River at Newport	Cl > 250 ppm for 3 days at UWD Stanton Intake	-14.48ppm <small>through 1/5/2019</small>
Hoopes Reservoir (City of Wilmington)	-10 ft (68% capacity)	-12 ft (64% capacity)	-15 ft (57% capacity)	-7.2ft (10/18/2018)
Newark Reservoir	- 10 ft (70% capacity)	-17 ft (52% capacity)	-27 ft (28% capacity)	-1.0 ft (10/16/2018)
Monitored				
Aquifer Storage and Recovery	Monitor Status	Monitor Status	Monitor Status	SUEZ: 4.5 mg (6/26/2018) AWC: 0 mg (10/18/2018)
Octoraro Reservoir (Chester Water Authority)	Monitor Status	Monitor Status	Monitor Status	

Marsh Creek Reservoir	Monitor Status	Monitor Status	Monitor Status	
Chlorides on the Delaware River 1/22/2019	Monitor Status	Monitor Status	Monitor Status	Normal RM: 69 Current RM: 69
DRBC Lower Basin Drought Criteria	Monitor Status	Monitor Status	Monitor Status	
NYC DRB Reservoirs (DRBC 1/22/2019)	Monitor Status	Monitor Status	Monitor Status	Storage 250.5 bg or 113 bg above drought watch

fbfs = feet below land surface
 mg = million gallons
 mgd = million gallons per day
 RM = River Mile
 bg = billion gallons

Delaware Geological Survey:
<http://www.dgs.udel.edu>

U.S. Geological Survey Streamflows:
<http://waterdata.usgs.gov/de/nwis/current/?type=flow>

Delaware River Basin Commission:
<http://www.state.nj.us/drbc>

Delaware Environmental Observing System
<http://www.deos.udel.edu>

Delaware Geological Survey

State of Delaware
University of Delaware • Delaware Geological Survey Building
Newark, Delaware 19716-7501



Kent County Hydrologic Conditions – January 22, 2019

PRECIPITATION

Dover – Running surplus/deficit

12-month: +19.30" 6-month: +11.43" 5-month: +10.17"

STREAMFLOW

St. Jones at Dover – 30-day moving average for December 24 - January 22

71.7 MGD Status: Above Normal

GROUNDWATER

Mc51-01a – January 2019

9.36 ft below land surface Status: Above Normal

Sussex County Hydrologic Conditions – January 22, 2019

PRECIPITATION

Georgetown - Running surplus/deficit

12- month: +15.15" 6-month: +3.82" 5-month: +7.76"

STREAMFLOW

Nanticoke River at Bridgeville - 30-day moving average for December 24 - January 22

114.7 MGD Status: Above Normal

GROUNDWATER

Qe44-01 – January 2019

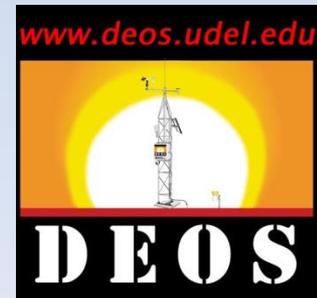
6.27 ft below land surface Status: Above Normal

Weather Summary and Forecast

Water Supply Coordinating Council Meeting

January 24, 2019

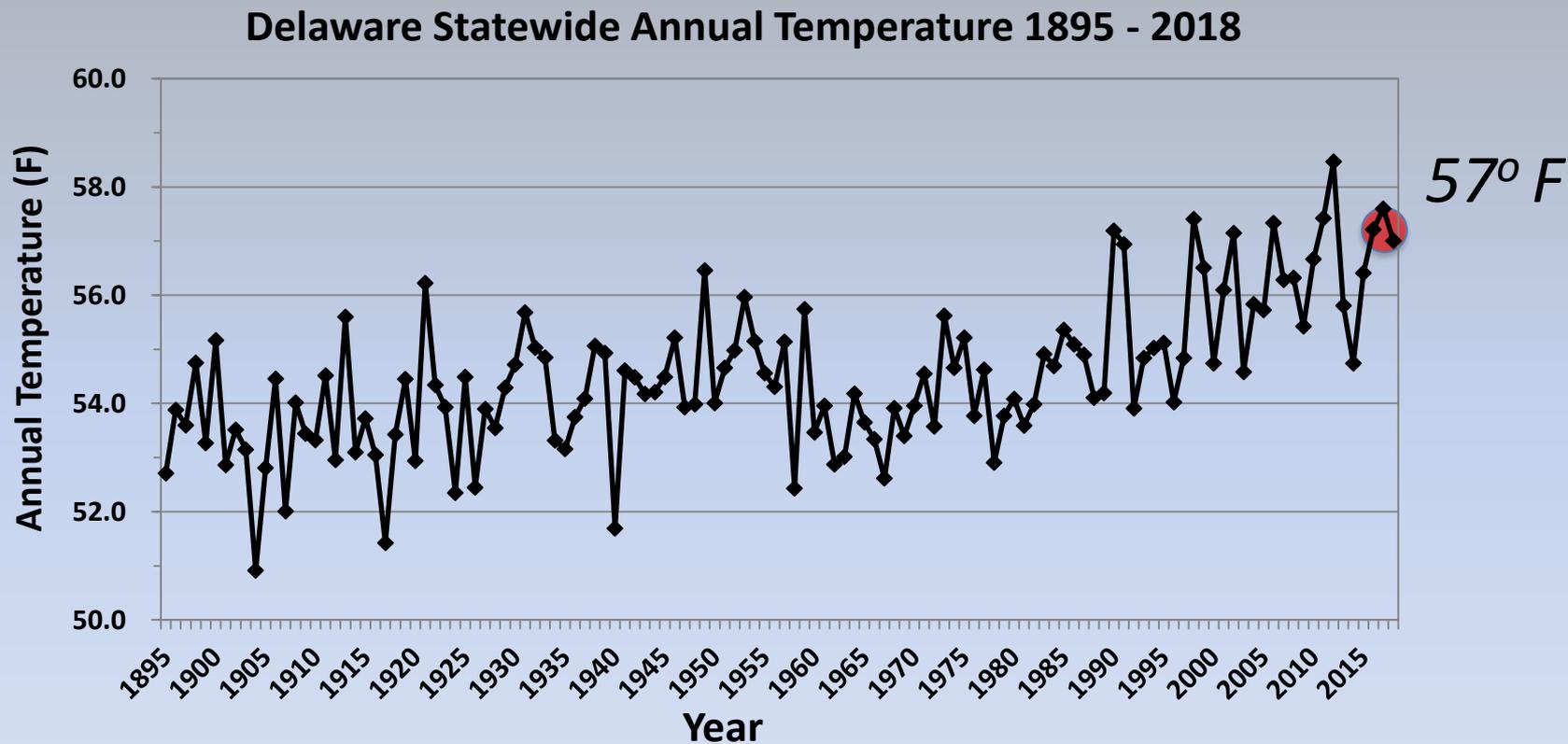
*Center for Environmental Monitoring and Analysis (CEMA)
Office of the Delaware State Climatologist*



2018 Weather Summary

(preliminary due to shutdown)

2018 was 1.6° F above the 1981-2010 “normal”, and the 9th warmest since 1895 (Preliminarily)



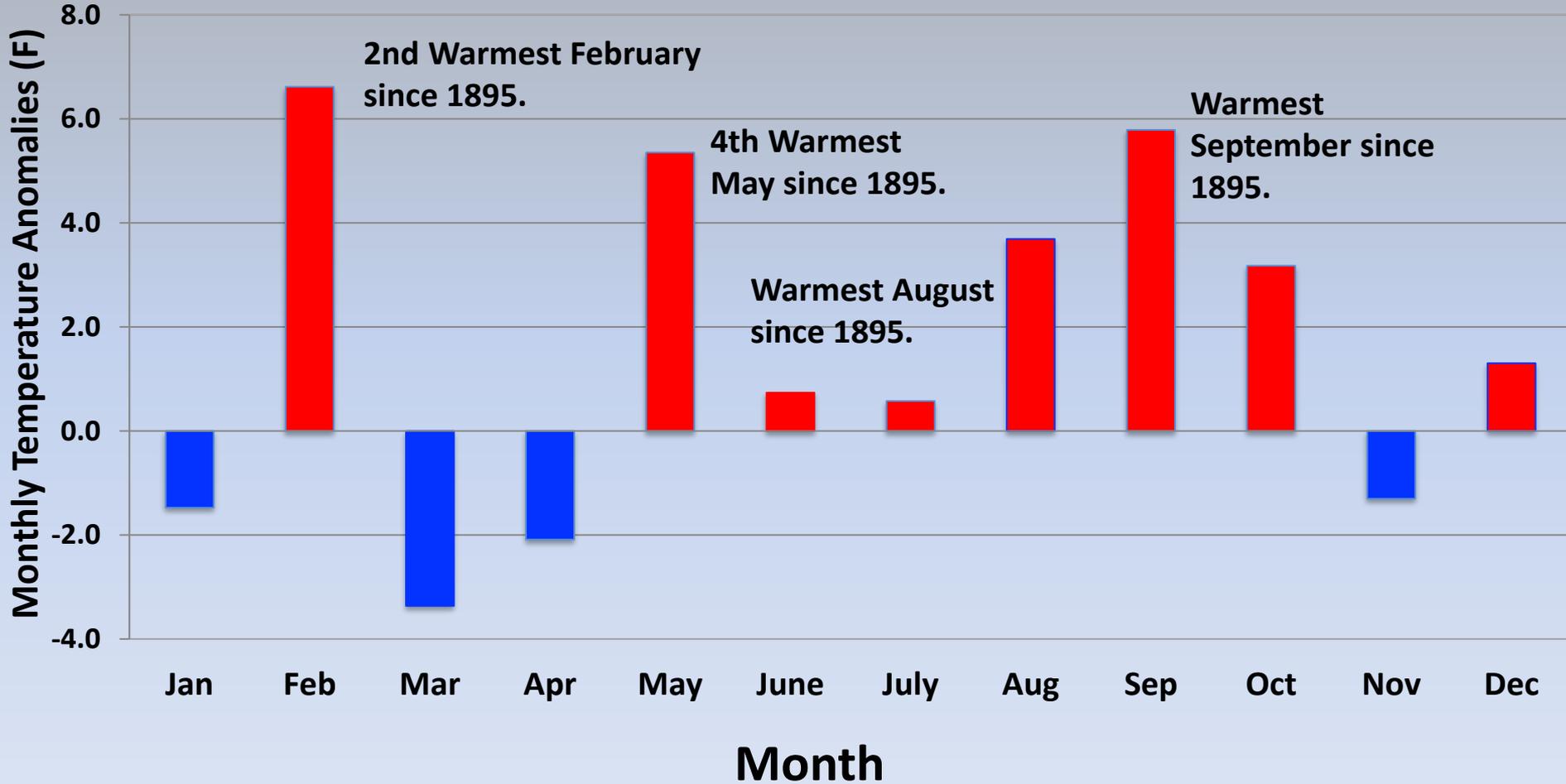
Preliminary data supplied by NCDC



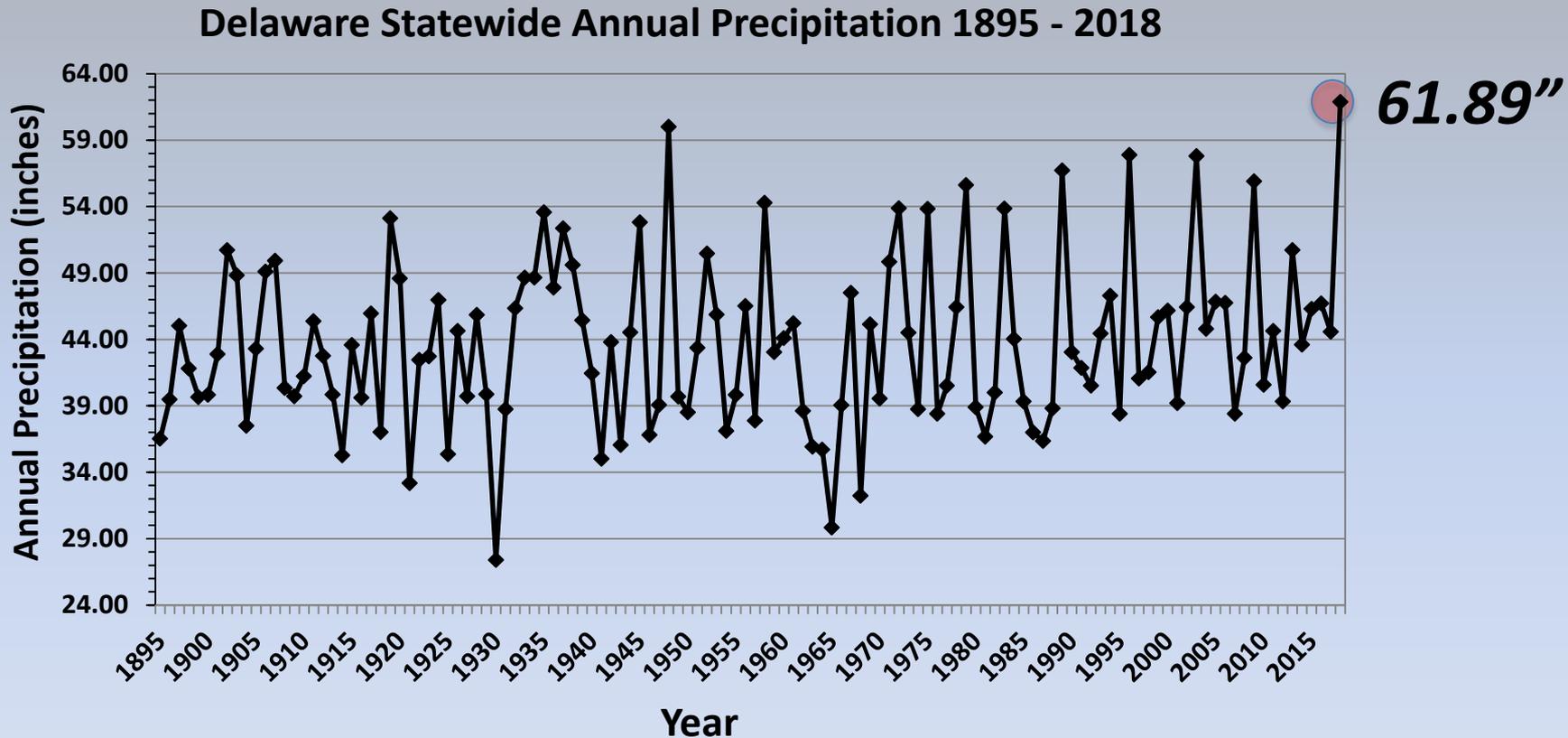
NOAA Satellite and Information Service
National Environmental Satellite, Data, and Information Service (NESDIS)

2018 Statewide Monthly Temperature Anomalies

2018 Monthly Temperature Anomalies



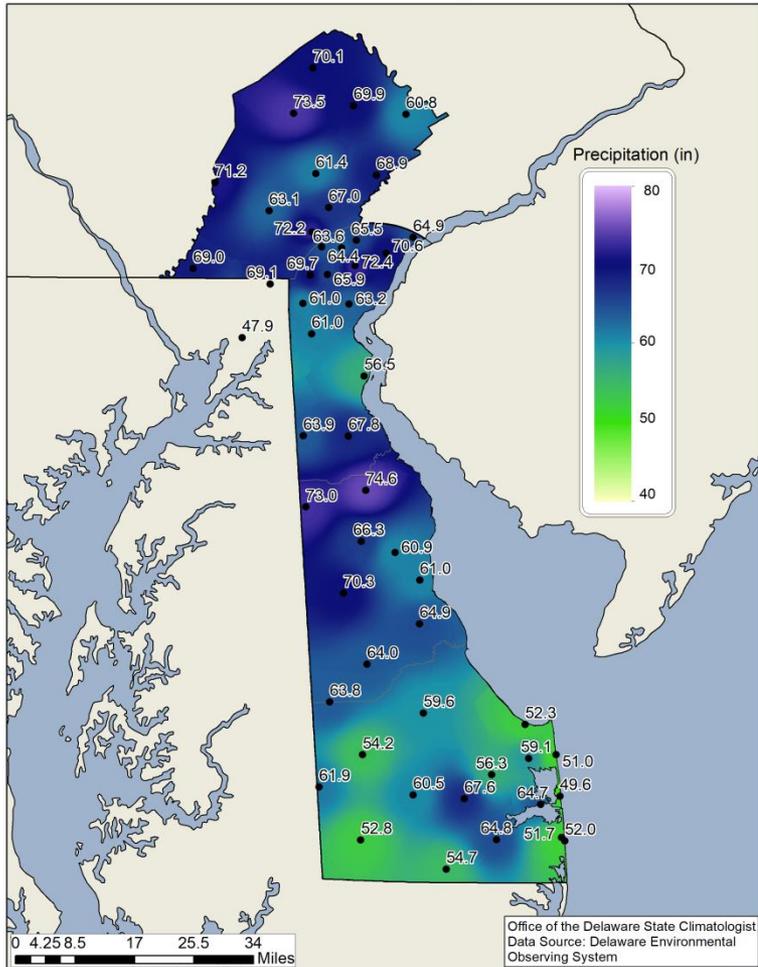
Delaware 2018 annual precipitation was 17.56 inches above the 1981-2010 “normal”. This “MAY BE” an annual record.



Preliminary data supplied by NCDC

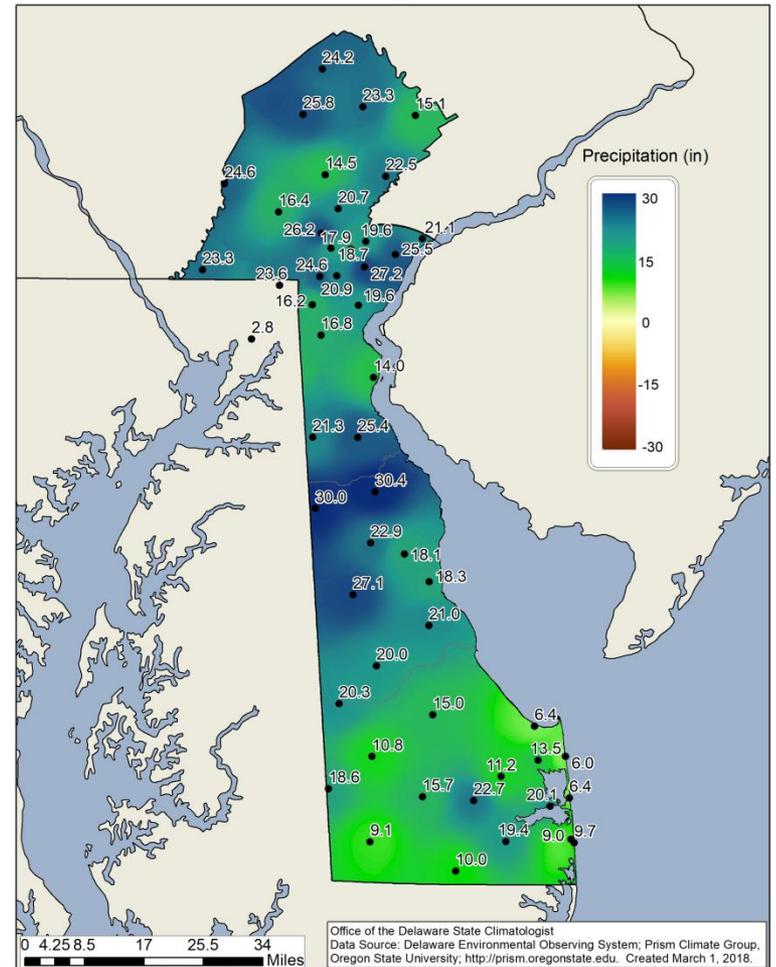
2018 Annual Precipitation at DEOS Stations

2018 Annual Precipitation



2019.01.23 ctc

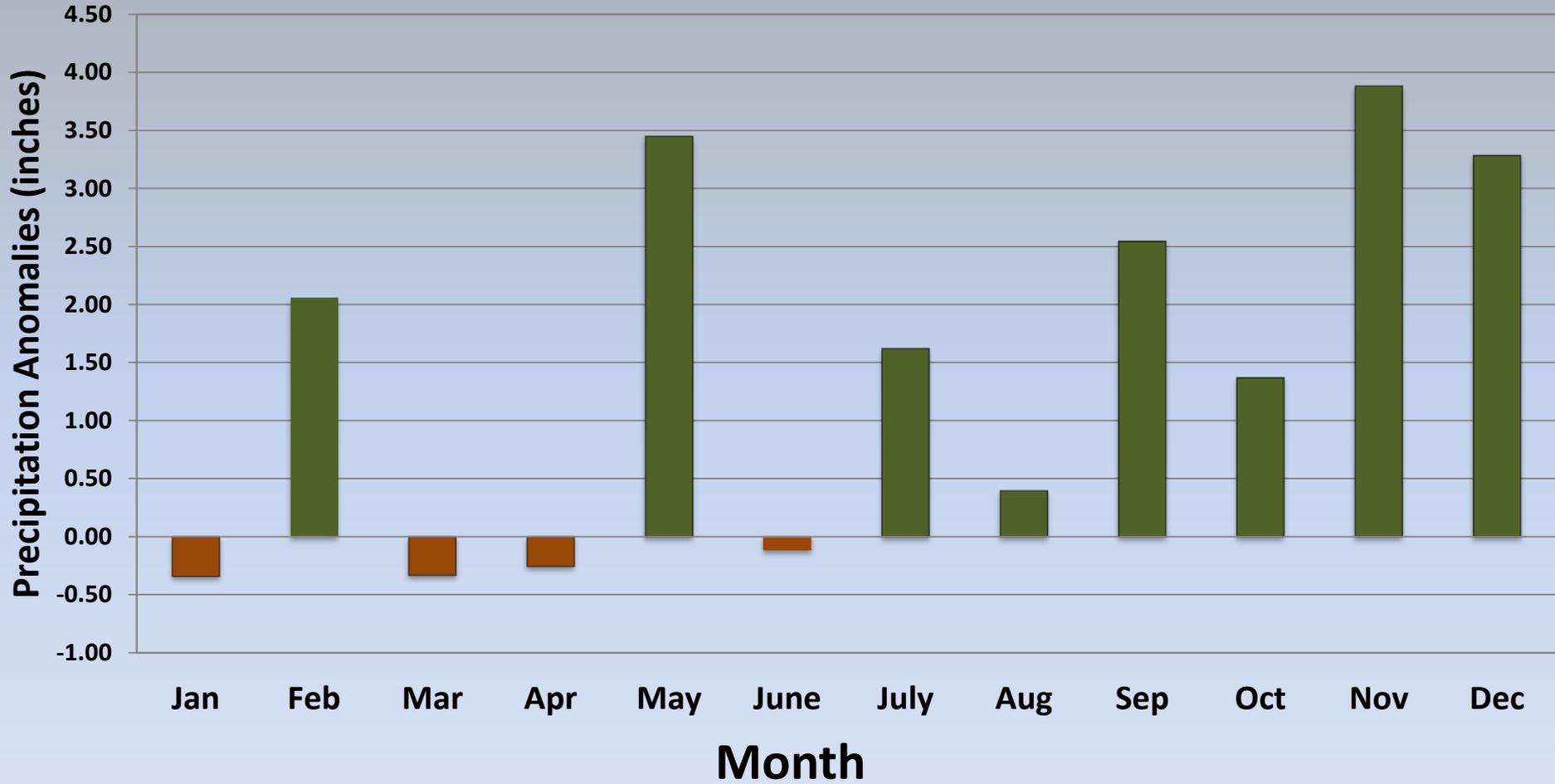
2018 Annual Precipitation Anomalies



2019.01.23 ctc

2017 Statewide Monthly Precipitation Anomalies

2018 Monthly Precipitation Anomalies

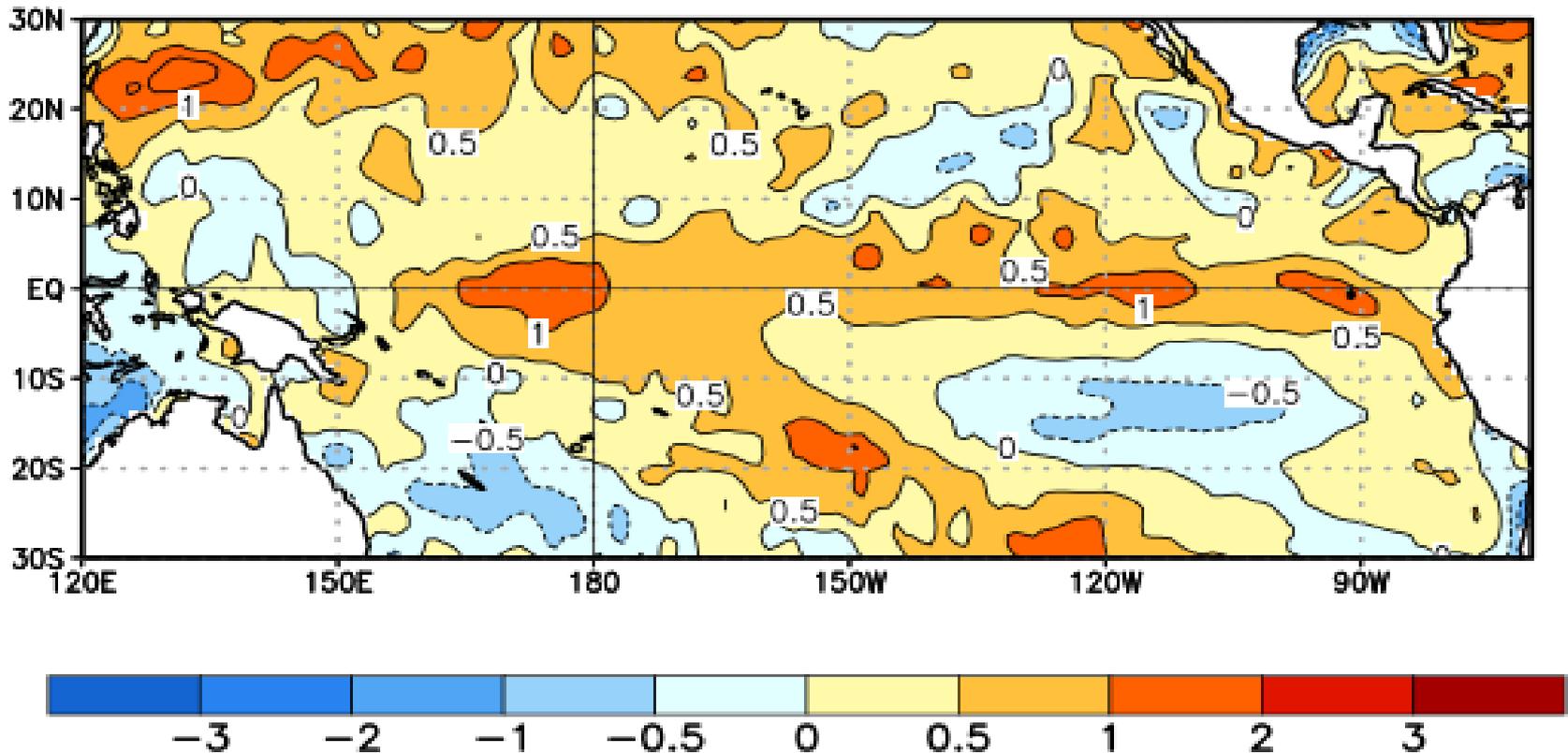


Late Winter / Early Spring Forecast

Current Tropical Conditions

El Nino Watch

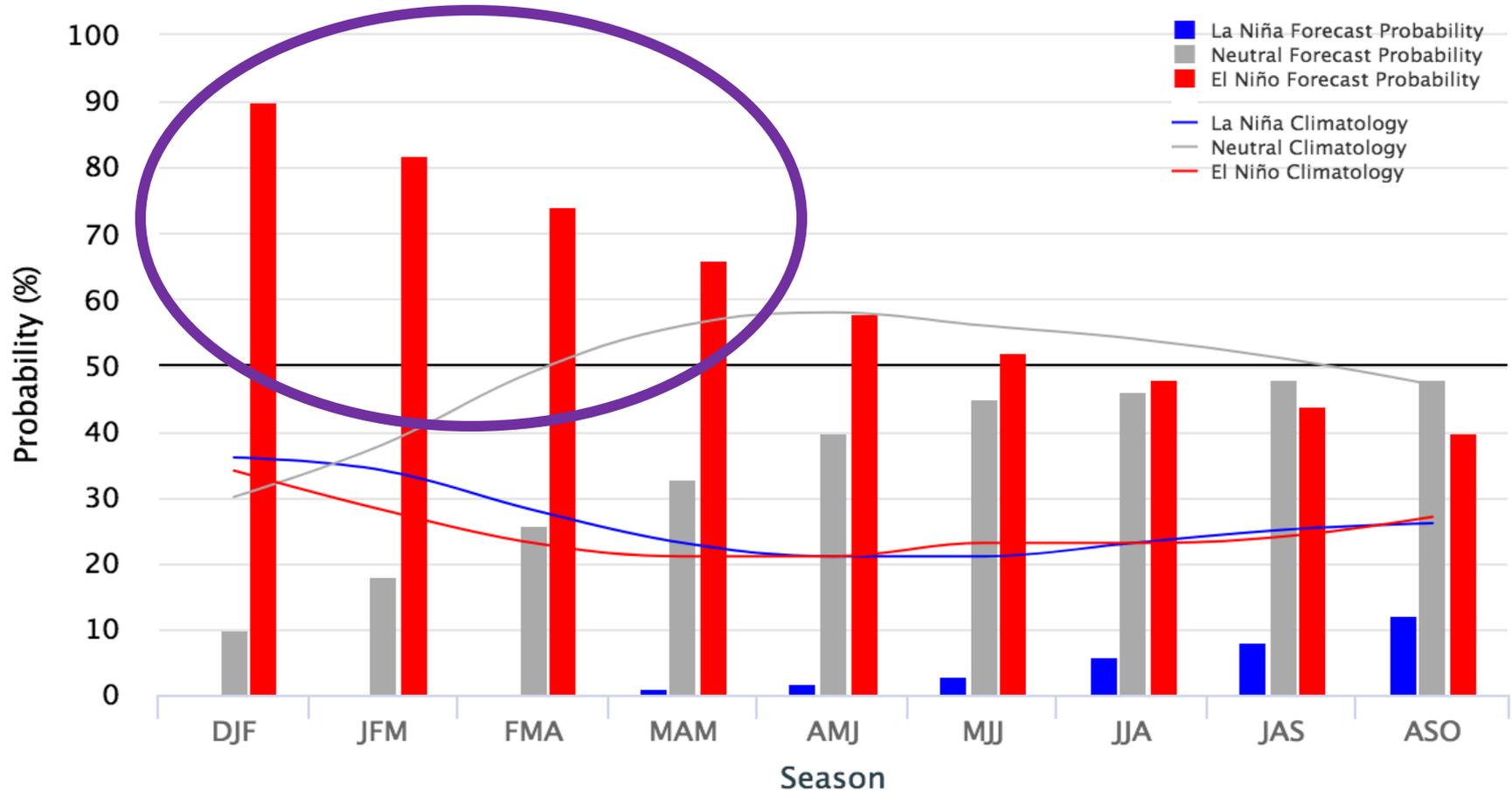
Average SST Anomalies
16 DEC 2018 – 12 JAN 2019



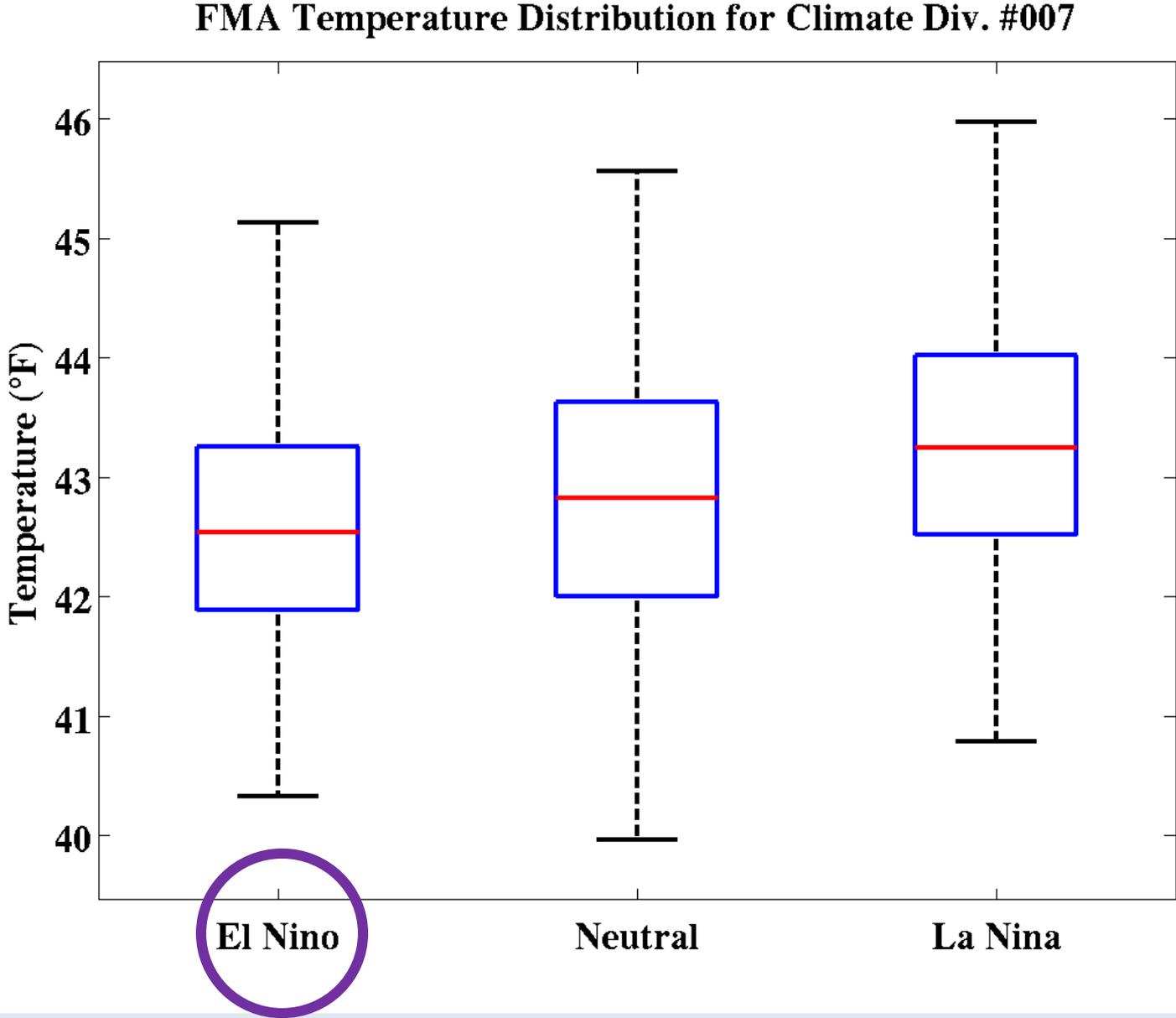
El Nino / La Nina Forecast Winter 2018 – Summer 2018

Early-January 2019 CPC/IRI Official Probabilistic ENSO Forecasts

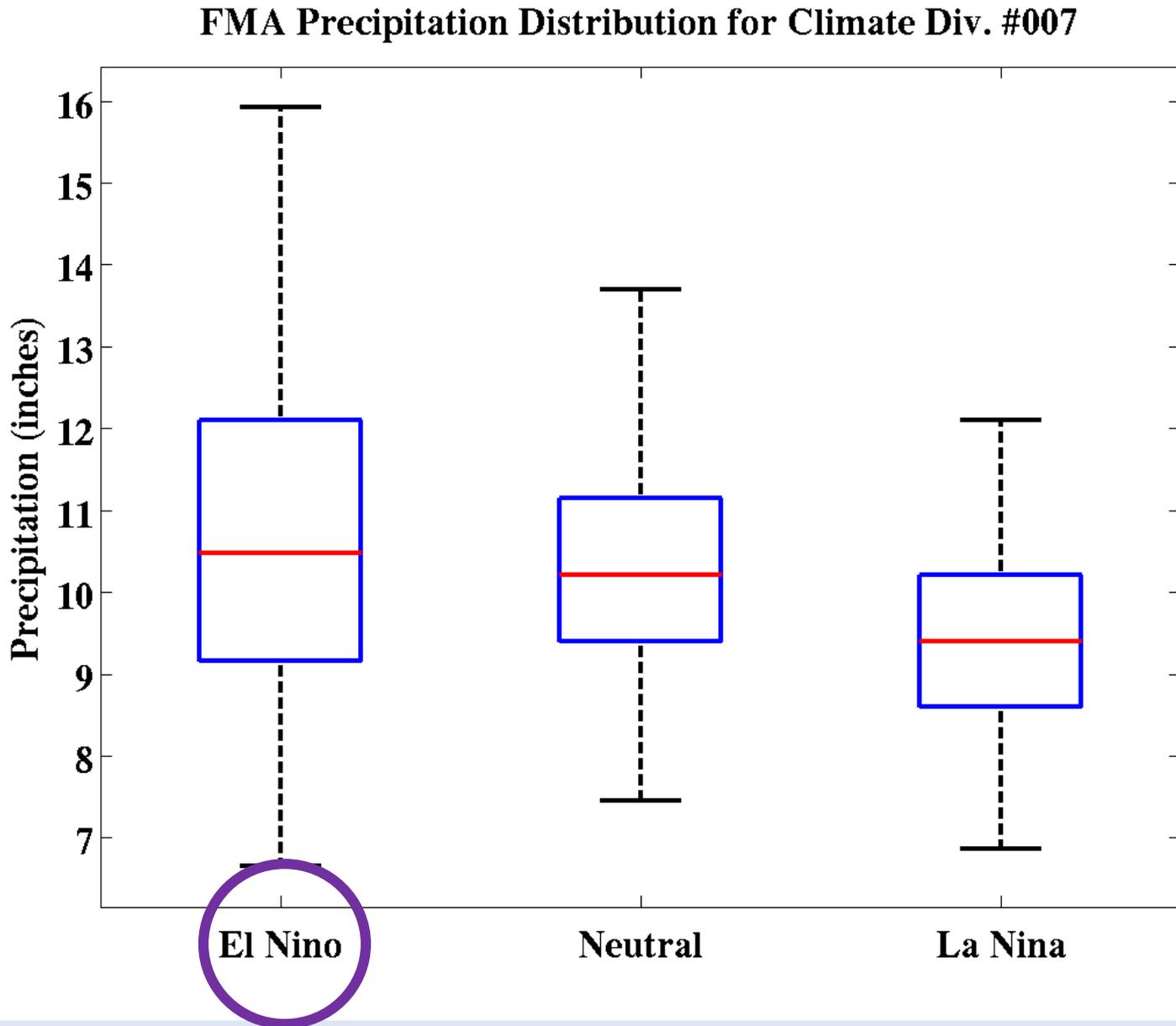
ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: $-0.5\text{ }^{\circ}\text{C}$ to $0.5\text{ }^{\circ}\text{C}$



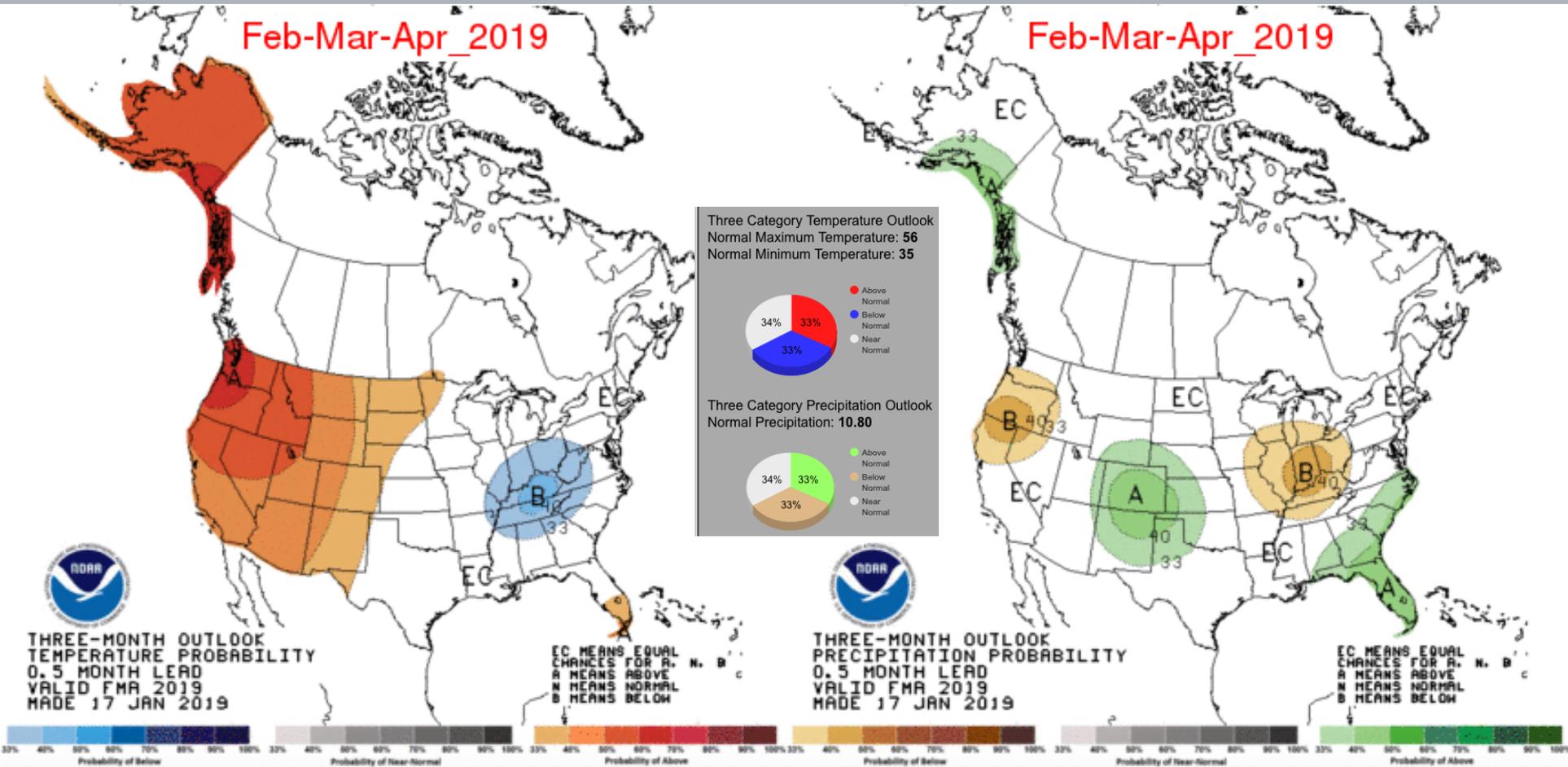
El Nino Event Mean FMA Temperature Distribution (°F)



El Nino Event Mean FMA Precipitation Distribution (inches)



NOAA Extended Outlook February – April 2019



Temperature

Precipitation



Questions?