Delaware Water Supply Coordinating Council Meeting
July 13, 2017
Final Meeting Minutes

ADMINISTRATIVE- Presented by Steven Smailer, Chair

Mr. Smailer called the meeting to order at 10:15 a.m. and welcomed everyone. He introduced himself to the Council as the new Chair after John Barndt's official retirement on July 1, 2017. The meeting attendance list is included at the end of the meeting minutes.

REVIEW OF MARCH 30, 2017 DRAFT MEETING MINUTES

Mr. Smailer asked if anyone had any questions or comments about the March 30 draft meeting minutes. Minor edits were submitted by Mr. Joe DiNunzio and made prior to today's meeting. Mr. Vic Singer motioned to approve and Mr. DiNunzio proceeded to second the motion at the same time Mr. Charles Jenner made a comment about attachments not being included with the meeting minutes as stated in the minutes. Mr. Jenner asked Mrs. Kimberly Burris if attachments could be included with all meeting minutes if in fact they are mentioned. Mrs. Burris commented to Mr. Jenner that attachments are in fact included in the first draft of the meeting minutes that are sent out in an e-mail to Council members who attended the meeting for comment and are also included in a link to the Public Calendar in the final minutes. Attachments are not sent out a second time when the next meeting date is announced in an e-mail due to redundancy and also the attachments can overload some e-mail boxes due to size constraints. It was discussed that attachments are sent with the original minutes and are thereafter available on the Public Calendar website. There is also a link to the Public Calendar on the Delaware Water Supply Coordinating Council webpage. However, Mr. Jenner commented that he would still like to see attachments with all meeting minutes no matter when they are sent out. He then proceeded to agree with Mr. DiNunzio on seconding the motion for approval. All were in favor. None opposed.

Final meeting minutes are posted online at https://publicmeetings.delaware.gov/Meeting/51191 .

WATER CONDITIONS REPORT – Presented by Steven Smailer, Chair, on behalf of Stefanie Baxter, DGS

Mr. Smailer presented a handout summary as of June 30, 2017 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). Mr. Smailer also read a statement to the Council on behalf of Ms. Baxter: "As of the end of June, the 30-day moving averages on the 3 northern streams have declined, but continue to remain above drought watch. The water level in Db24-18 has risen slightly; however, it continues to be in the very low end of normal for this time of year. DGS staff will most likely take a new water-level reading this week. The Water Conditions Index was 6.23 for the end of June. Anything above 5.0 is normal. Hoopes and Newark reservoirs are close to full and ASR storage continues to increase. Precipitation in Kent

and Sussex counties was down about 1.5" for the 6-month average. For the 12-month period, Kent County had a slight deficit of about 2.0", and Sussex County is up about 3.5". Streamflows on the St Jones and Nanticoke rivers are in the normal range. Groundwater levels in Kent County (well Mc51-01) and Sussex County (Qe44-01) are in the normal range for this time of year."

Steve also stated that overall "we have slightly low stream flows but are still in a normal condition."

As stated in Ms. Baxter's handout:

- Precipitation for a 12-month period at the Wilmington Airport was -5.52" and -2.20" for a 6-month period.
- Brandywine Creek (30-day moving avg) was at 190 mgd.
- White Clay Creek-Stanton (30-day moving avg) was at 68 mgd.
- White Clay Creek-Newark (30-day moving avg) was at 29 mgd.
- Well Db24-18 was at 12.9 (fbls) which is very low end of normal.
- Water Conditions Index was 6.23.
- Chlorides at 2.8 ppm which is average as of 6/30/17.
- Hoopes Reservoir (City of Wilmington) was at -1.6 ft as of 6/21/17.
- Newark Reservoir was at -1.0 ft as of 5/6/17.
- Aquifer Storage and Recovery: SUEZ was at 65.5 mg as of 6/12/17; and AWC was at 98 mg as of 6/27/17.
- Chlorides on the Delaware River as of 6/30/17 are currently at River Mile 67 and the normal is River Mile 69.
- NYC DRB Reservoirs (DRBC as of 7/5/17) storage 270.8 bg or 194 bg above drought watch.
- The Kent County Hydrologic Conditions: precipitation Dover 12-month -2.15", 6-month -1.95", 5-month -1.64". Streamflow for the St. Jones at Dover 30-day moving average for June 1 to June 30 at 16.8 mgd and is normal. Groundwater for Mc51-01a for June 2017 at 12.6 ft below land surface and is normal.
- The Sussex County Hydrologic Conditions: precipitation Georgetown 12-month +3.64", 6-month -1.60", 5-month -1.95". Streamflow for the Nanticoke River at Bridgeville 30-day moving average for June 1 to June 30 at 38.5 mgd and is normal. Groundwater for Qe44-01 for June 2017 at 7.8 ft below land surface and is normal.

The DGS' full analysis is found on http://www.dgs.udel.edu .

FORECAST SYNOPSIS – Presented by Kevin Brinson, Assistant State Climatologist on behalf of Dan Leathers, State Climatologist

Mr. Brinson presented a Power Point presentation (see attachment titled Precipitation Update).

Mr. Brinson discussed and stated the following in his spring Precipitation and Evapotranspiration presentation:

- April-June 2017 Precipitation: Mr. Brinson stated that Delaware had a pretty good spring. "April and May were good months but June was not and was one of the Top 20 driest and warmest months", he said. April-June 2017 Precipitation Anomalies: Mr. Brinson stated there were some small deficits (below normal precipitation) but nothing too large.
- April-June 2017 Evapotranspiration: Mr. Brinson stated that it should range from about 13" to 15" of Evapotranspiration (how much water is coming out through the environment). "We like to always try to even that out but this time of year that's a challenge. We have a lot more Evapotranspiration going on than Precipitation coming in and that's just normal weather", he said. April-June 2017 Precipitation Deficit: Mr. Brinson stated that May and June typically have a lot more Evapotranspiration than Precipitation.

Mr. Brinson discussed and stated the following in his Drought Monitoring presentation:

- About 18% of Delaware (northern Sussex Co. mainly) abnormally dry as of 7/4/17 (next update on 7/11/17)
- "Droughty" area consistent with deficit areas highlighted (refer to presentation) with DEOS rainfall and ET data.

Mr. Brinson discussed and stated the following in his "Average" Water Budget presentation:

- Spring 2017 was 3rd Warmest since 1895
- Statewide Precipitation Average was 10.83 inches (very normal)
- Deficit is mostly plant-demand driven
- A little ahead of "typical" springs deficit-wise
- July-September should continue to add to deficit barring a very wet summer (which is NORMAL)
- Conclusion: A little dry, particularly in parts of Sussex County

Mr. Brinson discussed and stated the following in his Seasonal Outlook presentation:

- "Tropical Outlook"
    - July & August tropical systems tend to originate in western Atlantic or Gulf of Mexico
    - Last significant storm: Irene in August 2011
    - 2017 Hurricane Outlook:
        - 11-17 storms (total)
        - 5-9 hurricanes
        - 2-4 major hurricanes
        - Warmer than normal ocean temperatures main driver for above normal prediction
        - El Niño/La Niña conditions will be neutral (no effect)
    - "The next two weeks will be warm and a little wet", Mr. Brinson said.
    - "The next few months (July through September) possibly one of the Top 10 warmest months ahead of us. No indications showing above or below normal precipitation ("Equal Chances" Precipitation).
    - Typical summer.

Mr. Brinson summarized and stated the following:

- It's been quite warm and will continue to be warm throughout the summer.
- Precipitation has been normal and there's no indication we're headed to a prolonged wet or dry spell.
- Combination should lead to drier than normal conditions throughout the remainder of the summer.

DELAWARE RIVER BASIN DROUGHT STATUS – Presented by J. Kent Barr on behalf of Ken Najjar, DRBC

Mr. Barr said the DRBC is in good shape. Mr. Barr continued, "the NYC Reservoir is about 95% full (normal) and the lower basin reservoirs are completely full. Generally throughout the basin we are seeing good stream flows and normal to above normal rates. Salt front is at RM 69 which is one mile downstream of where it would normally be this time of the year. Positive news."

WATER UTILITY REPORTS

Artesian – Joe DiNunzio presented: "June's system delivery was 18.6 mgd. July started off a little lower but currently around 20 mgd. Had 102 mg stored in ASR as of July 10. As of July 12, began recovery of the ASR. Handling routine repair maintenance matters to systems. Newport Heights booster out of service since February because of Route 141 project and have been buying water at times from the City of Wilmington. Peoples Plaza tank out of service for painting. Project taking longer than expected due to weather conditions."

Newark – Mark Neimeister presented: "Everything alright. Demand slightly up. Averaging 3-3 ½ mgd. Plants running as expected. Underway with 2017 water main contract – a mile of new water main. Also adding a second stream crossing from Windy Hills into the Red Mill Manor area for redundancy for that pressure zone. Reservoir is about ½ ft from full. The creek at the gauge station at the White Clay Creek in Newark is indicating 28 CFS and shut down in allocations is 22. Hopefully get some more rain. If not, in about two weeks switching to reservoir."

New Castle – Jay Guyer presented: "Everything good. All systems up and running. Averaging about ½ mgd. About 14 mg a month. Demands are good. Carbon Filtration System – getting ready to do a change out – first testing in June, vessel consumed and reviewing options of changing out carbon. Completed relining project – 2400 ft of pipe using scotch coat and project went well. Did in three locations and will evaluate to justify moving forward with it. Completed replacement project – 320 ft of 1880's cast iron and started another project last week and doing about another 300 ft."

SUEZ – Larry Finnicum presented: "Everything good. Average for the first six months for 2017 is 14.4 mgd. Peak day was 18.1 mgd. Had 72 mg stored in the ASR of 75 mg capacity. Started ASR recover on July 7. Running at 675 gallons per minute. Stream conditions good. TCS been down since March 13. Working hard to keeping non-revenue water at 15%. Currently working on main renewal projects."

Wilmington – Sean Duffy presented: "Increase in water demands over the past few days because of warmer weather. Averaging 19-20 mgd. Late June early July, average 17-18 mgd. Hoopes Reservoir at 88.5 ft which is 1 ½ ft below top of spillway. Like to keep it in that range of about 1 ½ - 2 ft below top of spillway so we can benefit from any natural recharge. In good shape."

Tidewater – Alexis Virdin-Gede presented: "Everything good. No major facilities off-line for maintenance. June pumpage down slightly compared to this time last year. Statewide average is about 7.9 mgd (0.7 mgd in New Castle, 2 mgd in Kent County and 5 mgd in Sussex County)."

Sussex Shores – Kelly Zahorchak presented: "Total of 8.3 mg for June (up from this time last year). No major projects."

REVIEW OF DRAFT WSCC 13TH REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY – Jerry Kauffman, WRA

Mr. Kauffman presented to Council on behalf of the sub-committee and included all comments given up to that point, including comments from Ms. Lorraine Fleming.

- Draft report went out to the entire Council by John Barndt.
- Mr. Smailer stated that any and all comments on the 13th report should be given in writing to Mr. Kauffman by the end of the month (two weeks).
- Mr. Smailer stated that Legislature not in session right now but this report needs to get wrapped up soon.
- Report needs to have DNREC Secretary Garvin's cover letter and Mr. Smailer will be working on this with Secretary Garvin.
- Jerry gave his presentation of the draft report to Council and discussions began.
- Report must be approved by Council before Chair submits it.
- It was stated again by Mr. Smailer and by Mr. Kauffman that any and all comments on the 13th report should be given in writing to Mr. Kauffman by the end of the month (two weeks).
- Per Mr. Kauffman, "the latest draft of the 13th report has been posted on our website here http://www.wrc.udel.edu/public-service/water-supply-coordinating-council/wscc-meetings-and-reporting/ "
- Mr. Smailer opened the floor to Council for comments and discussion. Mr. Jenner, Mr. DiNunzio, Mr. Singer, Mr. Kevin Nielson, Mr. Brinson, Ms. Ellen Kohler, Mr. William Cocke and Mr. Barr commented to Mr. Smailer and Mr. Kauffman. Their comments will be taken under advisement but should also be submitted in writing to Mr. Kauffman by the end of the month.

NEW BUSINESS – Steven Smailer, Chair

- Mr. Smailer asked Council, "What would Council like to see in the 14th Report to the Governor and General Assembly"? Discussion began. Mr. Jenner suggested that Mr. Smailer send an e-mail out to Council for comments on the next meeting agenda – possible sub-committee. Mr. Kauffman suggested that Council look back at previous reports and reread them to see if any updates are needed. It was decided that Mr. Smailer will send out an e-mail to Council for ideas and suggestions for the next report and it will be included as an October meeting agenda item.
- Mr. Smailer gave an update to Council regarding the status of the Governor's office representative, Ms. Lydia Massey, as discussed at the March 30 meeting. Mr. Smailer stated, "There is no movement, no desire, and no communication that changes the composition of the Council. Our issue is the language in the statute regarding designees and appointees." Mr. Smailer informed Council that the appointment list was given to Ms. Massey and that this list included organizations and entities to be included on the Council per statute and who we have identified as the primary agency contact, primary active participant, and the secondary active participant. The Governor's office said they would be sending out letters to the entities for appointment. The last communication Mr. Smailer had with Ms. Massey was that the Governor's office was very busy due to the end of the legislative session and now post-session the list may be looked at. Mr. Smailer said that if anyone would like to see the list, it is available by contacting him. There are no proposed changes to the structure of the Council.
- Mr. Kauffman asked Mr. Smailer about voting on the 13th Report to the Governor and General Assembly. Does voting need to be in person at the October meeting or can it be beforehand? Mr. Smailer would like to vote before the October meeting. Mr. Singer asked if we need to make a motion to vote by e-mail. Mr. Kauffman stated if Council waits until October to vote, the 13th Report can't be submitted until after that meeting. Mr. Smailer stated there are no by-laws saying how exactly Council can vote. Mr. Smailer answered Mr. Singer by saying, "Technically, we do not need a motion. However, should we have a motion? Procedurally, yes." Mr. Signer motioned and Mr. Jenner seconded. All were in favor.
- Mrs. Laura Mensch wanted to follow-up with the March 30 meeting in which Ms. Massey mentioned about meeting a certain percentage to make up a quorum and what percentage would that be? Mr. Singer commented and Mr. Smailer said it is still being questioned because Council has acted on its own in many instances but did not develop their own documented processes and procedures in that regard. Discussion continued with Council. Mr. Smailer stated he believes that the most important meetings for which we do in fact need a quorum are the drought meetings and report submittals. Mr. Kauffman motioned to set a quorum number and Ms. Kohler said, "Council needs to decide exactly what subjects matter for a quorum vote." Mr. Kauffman made a motion that a quorum vote of the Council is 2/3 representation. Mrs. Mensch asked if this item could be a topic of discussion on the next meeting agenda. Mr. Smailer informed Council that the establishment of a quorum was a primary component of his discussions with the Governor's office. For example, why are certain members listed if discussions are about New Castle County drought? Mr. Singer began to second the motion and at the

same time Mr. Jenner objected to Mr. Kauffman's motion. Mr. Jenner agreed with Mrs. Mensch that this topic needs to be reviewed carefully and discussed at the next meeting and if Council didn't reach a final conclusion, continue to revisit. Mr. Smailer stated that he is hoping by the October meeting that Council will have a definitive answer regarding appointees and quorum. Mrs. Virdin-Gede asked about the Governor's appointment list and if it is directed at a specific person or a representative. Mr. Smailer replied, "That is what we are trying to find out." Mr. Smailer began to explain to Mrs. Virdin-Gede what the Governor's office is looking for exactly as appointees. Mr. Smailer concluded that "what defines a quorum" will be an agenda item at the October meeting. Mr. Smailer commented that aside from a quorum, does Council have the ability to submit the 13th Report by consensus? Mr. DiNunzio said, "Council has done it in the past." Mr. Smailer replied that we have not been instructed in any certain way yet. Mr. Kauffman then withdrew his motion.

NEXT MEETING

The next Council meeting will be held on Thursday, October 26, 2017 at 10:00 a.m. at the Kent County Administration Building, Room 220.

ADJOURN

Mr. Jenner motioned to adjourn the meeting and Mr. Singer seconded. All were in favor. Meeting adjourned at 11:58 a.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.

Attendees are listed below alphabetically, last name first:
Bard, Michael – Artesian Water (not an official entity appointee)
Barr, J. Kent – DRBC
Beckel, Anita – DNREC, Division of Water, GPB Branch (not an official entity appointee)
Brinson, Kevin – Asst. State Climatologist
Budischak, Valann – Delaware Nursery and Landscape Assoc.
Cocke, William – DNREC, Division of Water, Allocation Branch (not an official entity appointee)
Diggins, Allison – DNREC, Division of Water, Allocation Branch (not an official entity appointee)
DiNunzio, Joseph – Artesian Water
Duffy, Sean – City of Wilmington
Finnicum, Larry – SUEZ
Guyer, Jay – City of New Castle, Municipal Services Commission
Homsey, Andrew – University of Delaware, Water Resources Agency
Jenner, Charles – Delaware Grounds Management Association
Kauffman, Jerry – University of Delaware, Water Resources Agency, Director

Kohler, Ellen – Delaware Nature Society
Mensch, Keith – Division of Public Health, Office of Drinking Water
Mensch, Laura – Department of Agriculture
Neilson, Kevin – Public Service Commission
Neimeister, Mark – City of Newark
Rudd, John – Office of the State Fire Marshal
Singer, Victor – Civic League for New Castle County
Smailer, Steven – DNREC, Division of Water
Urbanski, Jon – State Golf Association
Virdin-Gede, Alexis – Tidewater Utilities
Woodward, Amy – Public Service Commission
Zahorchak, Kelly – Sussex Shores

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 June 30, 2017
Precipitation Wilmington Airport 12-month	-6.00" to -8.99"	-9.00" to -11.99"	>-12.00"	-5.52"
Precipitation Wilmington Airport 6-month	-3.00" to -4.50"	-4.50" to- 6.00"	>-6.00"	-2.20"
Brandywine Creek (30-day moving avg)	85 mgd	70 mgd	48 mgd	190 mgd
White Clay Creek - Stanton (30-day moving avg)	42 mgd	37 mgd	31 mgd	68 mgd
White Clay Creek - Newark (30-day moving avg)	19 mgd	16 mgd	13 mgd	29 mgd
Well Db24-18	14 - 14.99 (fbls)	15 - 15.99 (fbls)	16 (fbls)	12.9 (fbls) (very low end of normal)
Water Conditions Index	4.0-5.0	3.0-3.99	<3.00	6.23
Chlorides	WCC ≤ 37 mgd for 5 consecutive days at UWD Stanton Intake	Cl > 250 ppm for 3 days at Christina River at Newport	Cl > 250 ppm for 3 days at UWD Stanton Intake	average 2.8 ppm (6/30/2017)
Hoopes Reservoir (City of Wilmington)	-10 ft (68% capacity)	-12 ft (64% capacity)	-15 ft (57% capacity)	-1.6 ft (6/21/2017)
Newark Reservoir	- 10 ft (70% capacity)	-17 ft (52% capacity)	-27 ft (28% capacity)	-1.0 ft (5/6/2017)
Monitored				
Aquifer Storage and Recovery	Monitor Status	Monitor Status	Monitor Status	SUEZ: 65.5 mg (6/12/2017) AWC: 98 mg (6/27/2017)

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 06/30/2017	Monitor Status	Monitor Status	Monitor Status	Normal RM: 69 Current RM: 67
DRBC Lower Basin Drought Criteria	Monitor Status	Monitor Status	Monitor Status	
NYC DRB Reservoirs (DRBC 7/5/2017)	Monitor Status	Monitor Status	Monitor Status	Storage 270.8 bg or 194 bg above drought watch

fbls = 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 – June 30, 2017

PRECIPITATION
Dover – Running surplus/deficit
12-month: -2.15" 6-month: -1.95" 5-month: -1.64"

STREAMFLOW
St. Jones at Dover – 30-day moving average for June 1 to June 30
16.8 MGD Status: Normal

GROUNDWATER
Mc51-01a – June 2017
12.6 ft below land surface Status: Normal

Sussex County Hydrologic Conditions – June 30, 2017

PRECIPITATION
Georgetown - Running surplus/deficit
12- month: +3.64" 6-month: -1.60" 5-month: -1.95"

STREAMFLOW
Nanticoke River at Bridgeville - 30-day moving average for June 1 to June 30
38.5 MGD Status: Normal

GROUNDWATER
Qe44-01 – June 2017
7.8 ft below land surface Status: Normal

Phone: 302-831-2833 • Fax: 302 831-3579 • Email: delgeosurvey@udel.edu • Web Address: www.udel.edu/dgs

Delaware Weather Update and Seasonal Outlook

Water Supply Coordinating Council Meeting

July 13, 2017

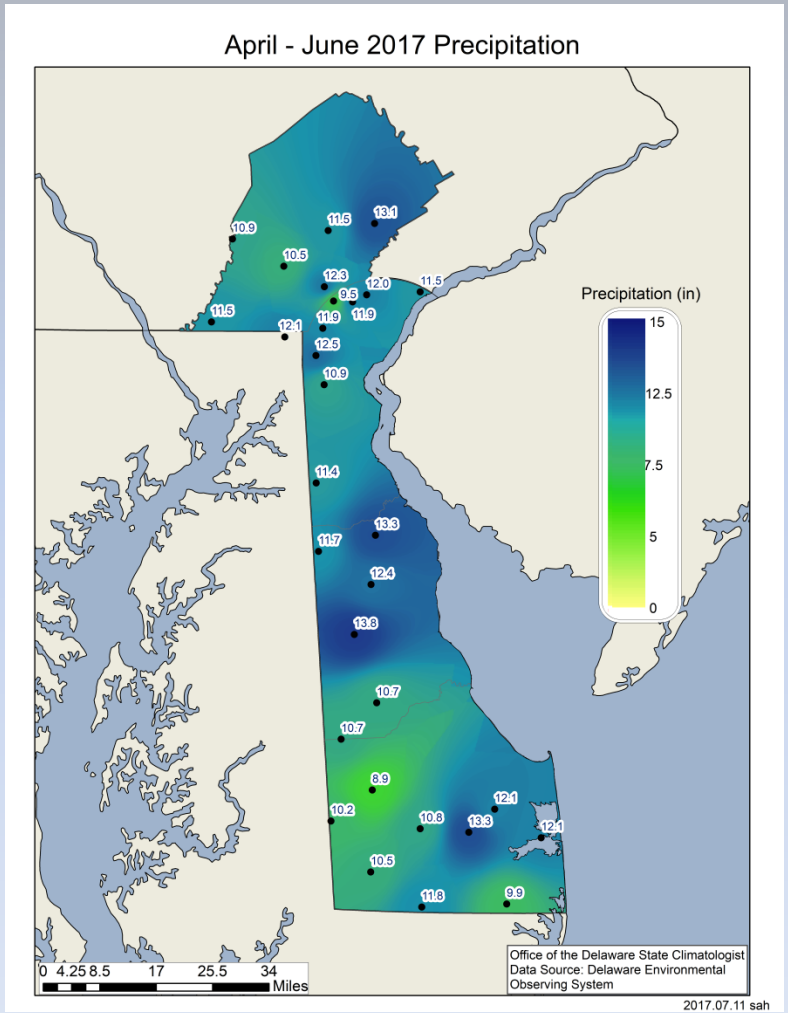
Office of the Delaware State Climatologist

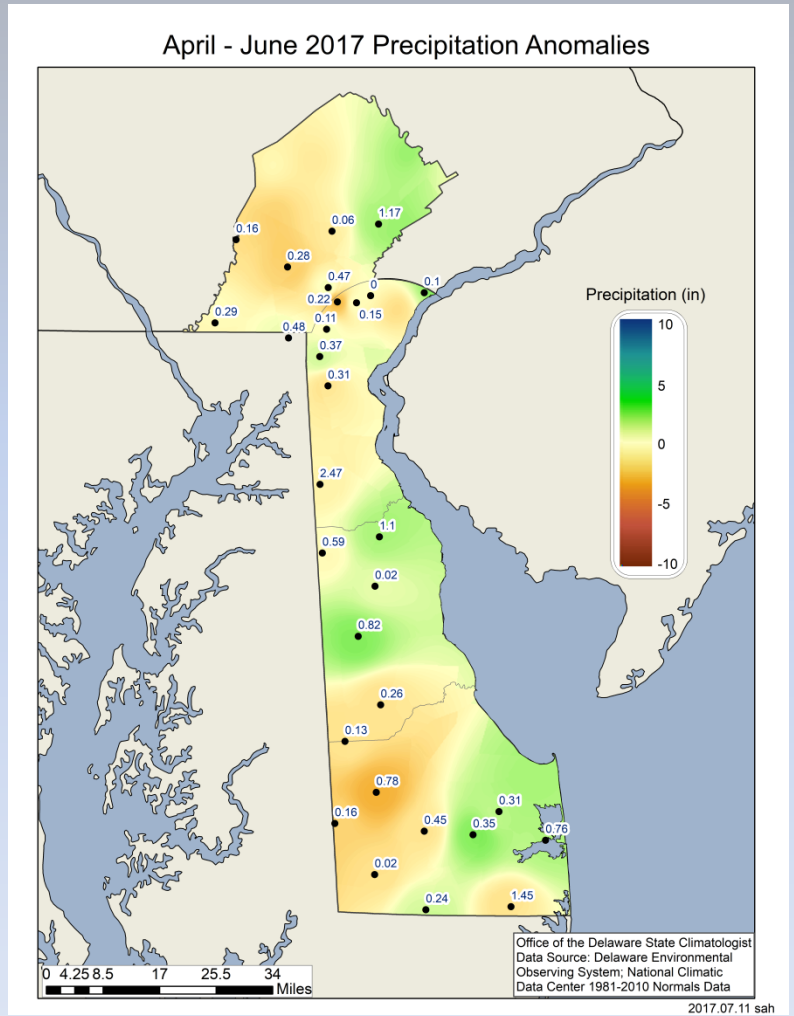
Office of the Delaware State Climatologist

College of Earth, Ocean, and Environment

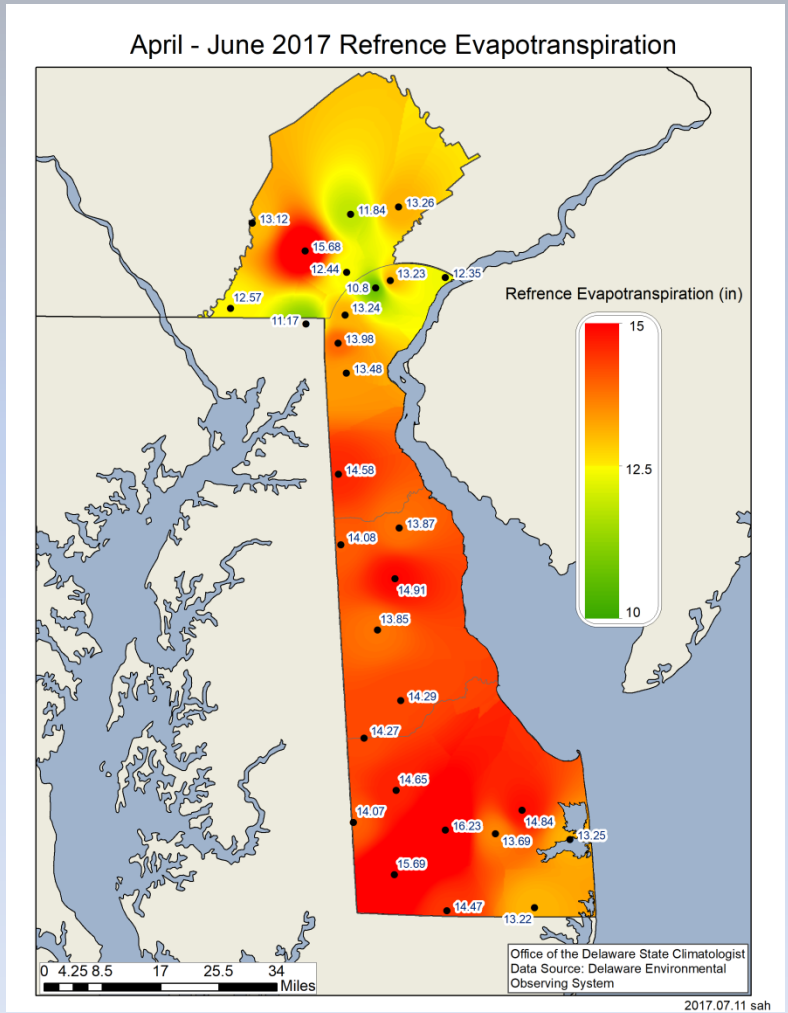
DEOS

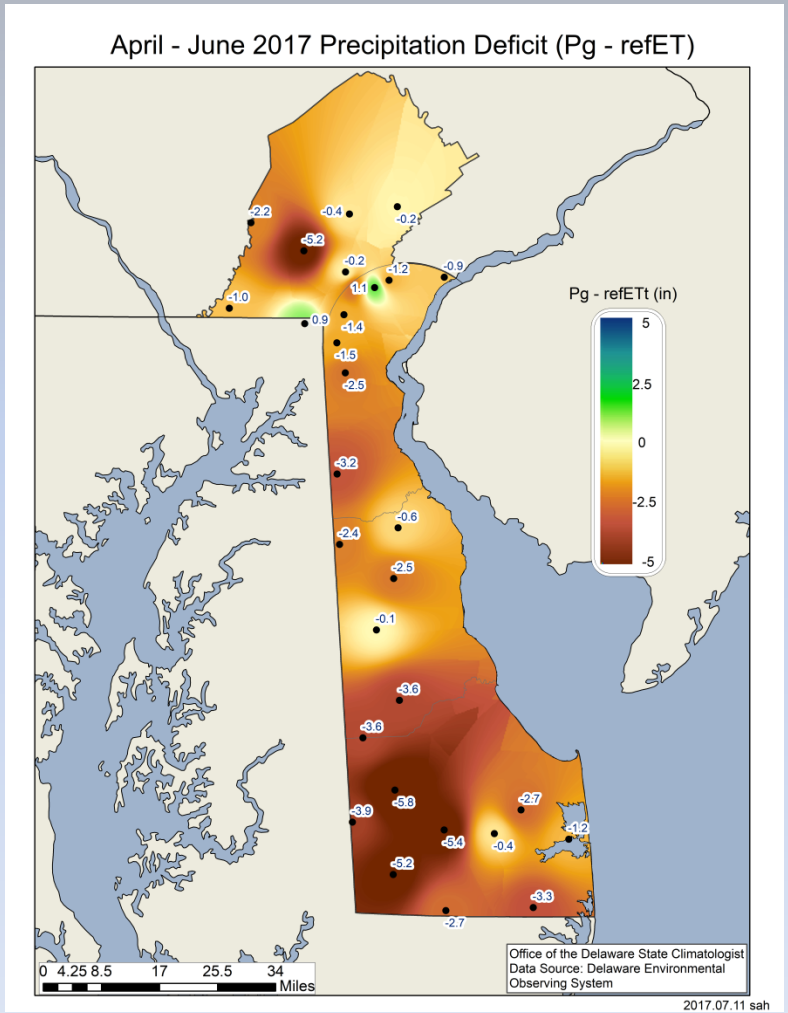
Spring 2017 Precipitation



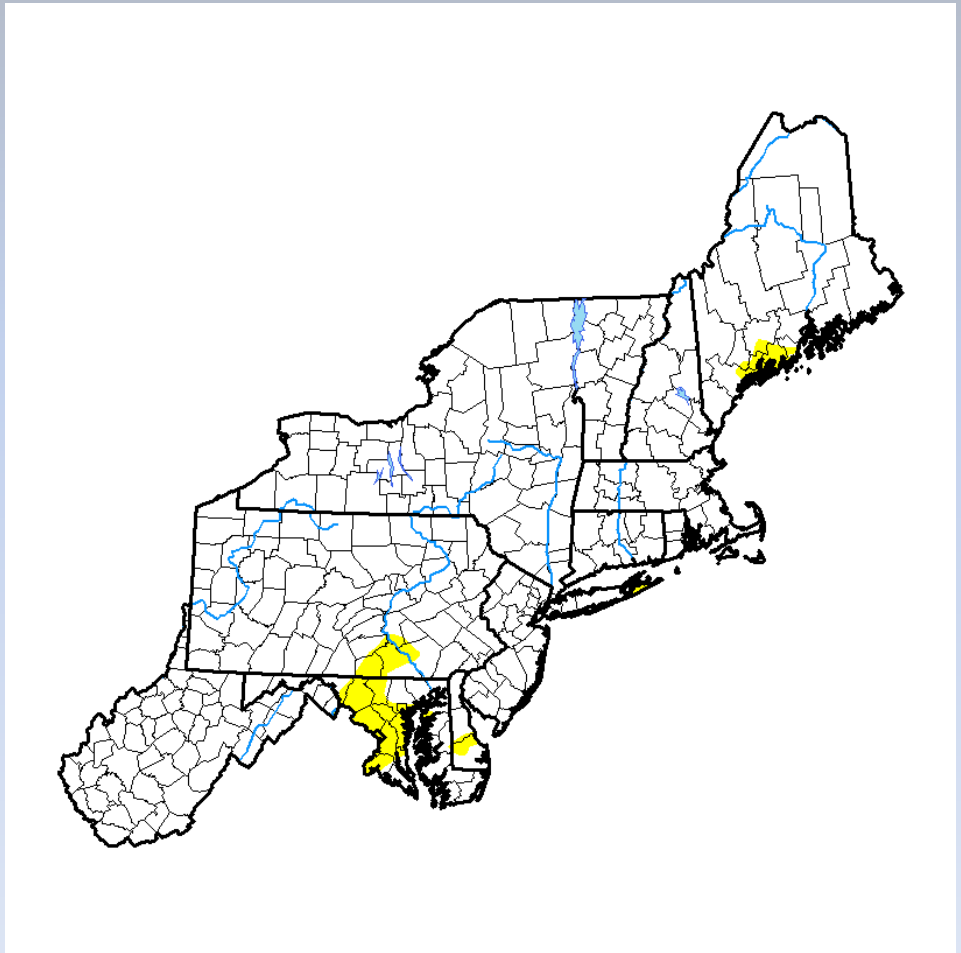


Spring 2017 Evapotranspiration



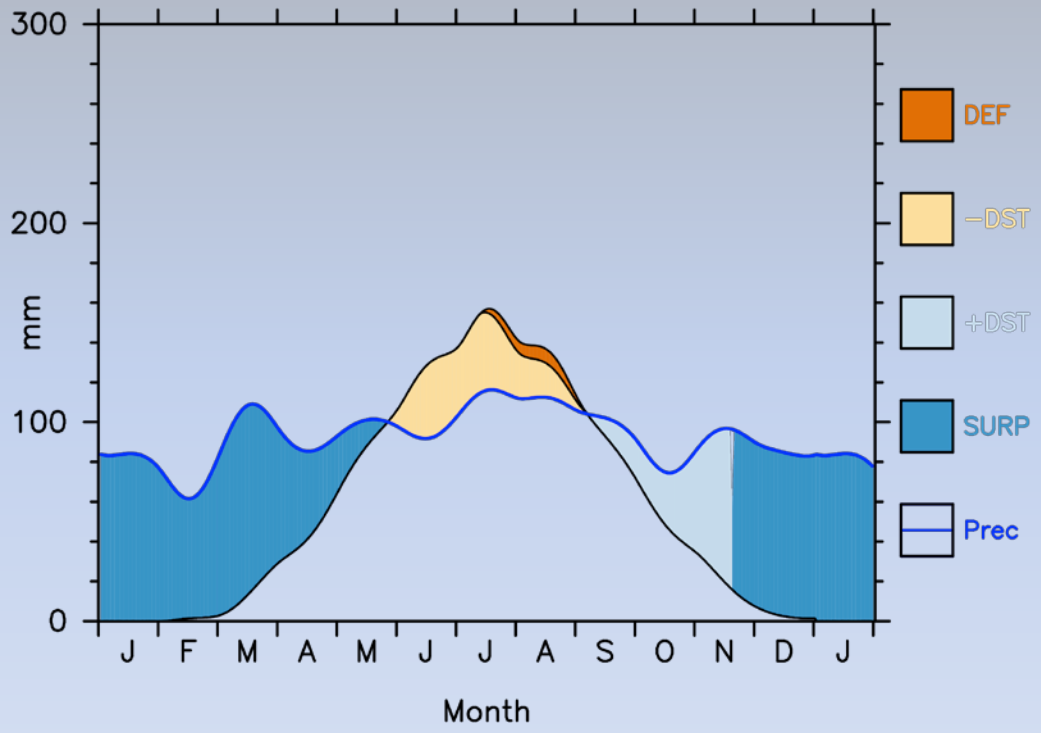


Drought Monitor



- About 18% of Delaware (northern Sussex Co. mainly) in D0 (abnormally dry) as of 7/4/17
- Next update 7/11 (not posted until later today)
- “Drought” area consistent with deficit areas highlighted with DEOS rainfall and ET data.

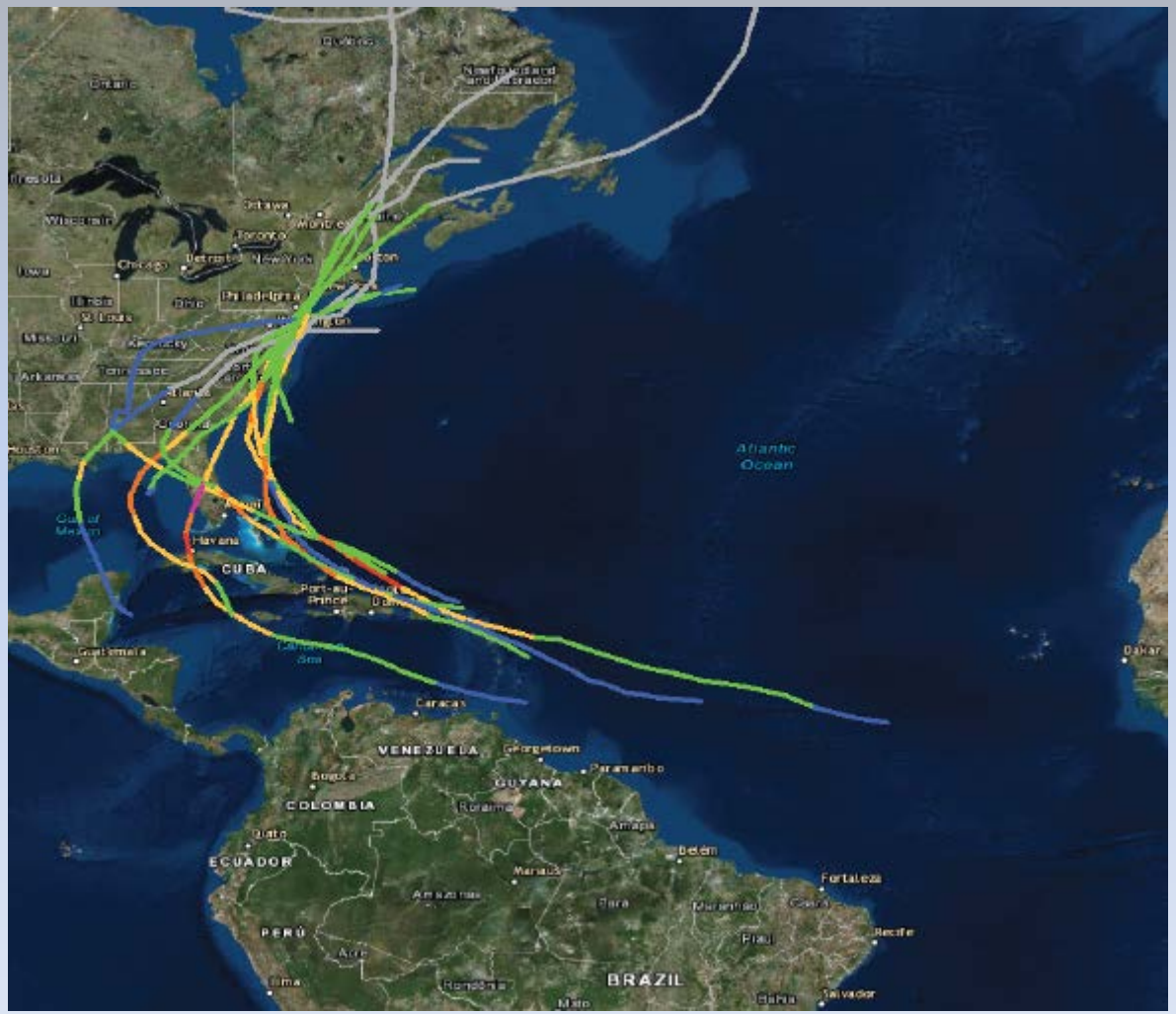
“Average” Water Budget



- Spring 2017 was 3rd Warmest since 1895
- Statewide Precipitation Average was 10.83 inches (very normal)
- Deficit is mostly demand driven
- A little ahead of “typical” springs deficit-wise.
- July-September should continue to add to deficit barring a very wet summer (which is NORMAL)
- **Conclusion: A little dry, particularly in parts of Sussex County.**

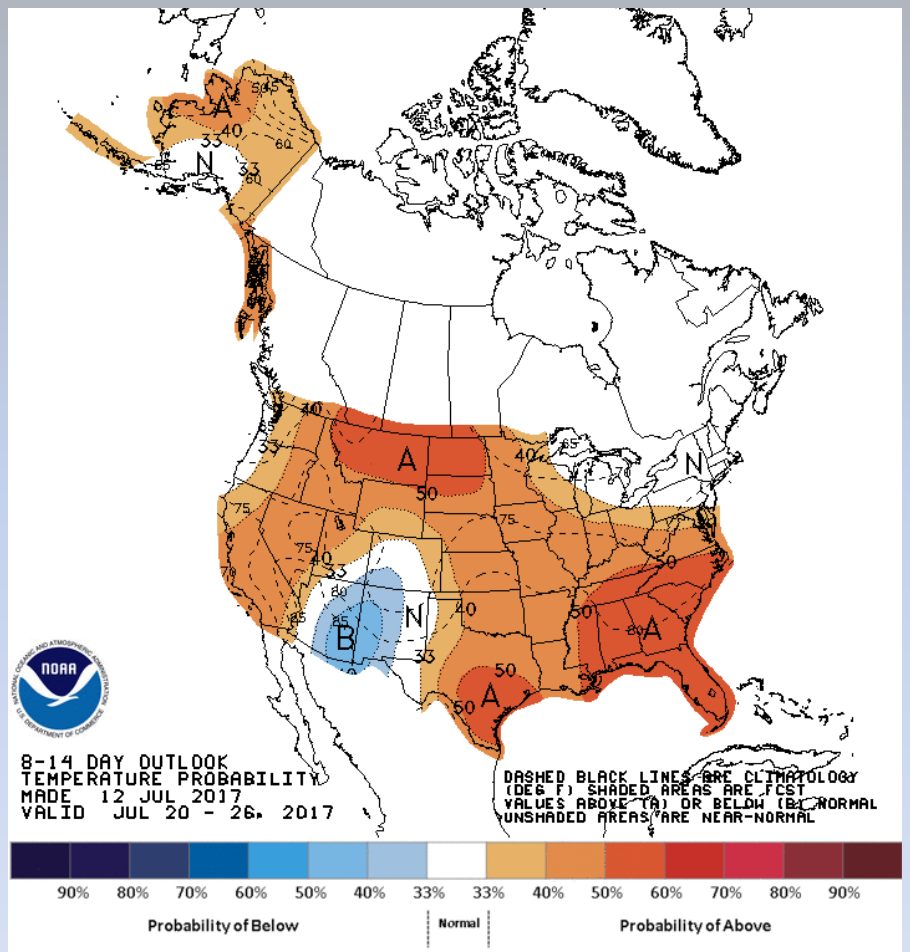
Seasonal Outlook

Tropical Outlook

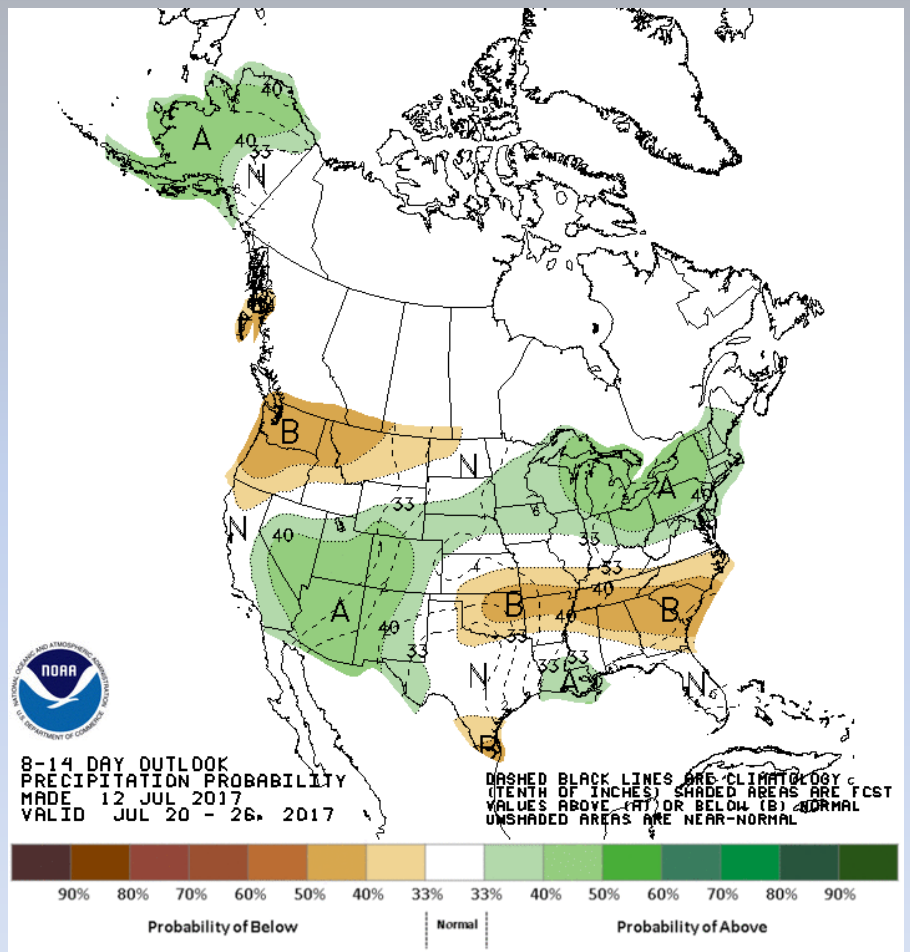


- July & August tropical systems tend to originate in western Atlantic or Gulf of Mexico.
- Last significant storm: Irene in August 2011.
- 2017 Hurricane Outlook:
  - 11-17 Storms (Total)
  - 5-9 Hurricanes
  - 2-4 Major Hurricanes
  - Warmer than normal ocean temperatures main driver for above normal prediction
  - El Nino/La Nina conditions will be neutral (no effect)

Next Two Weeks

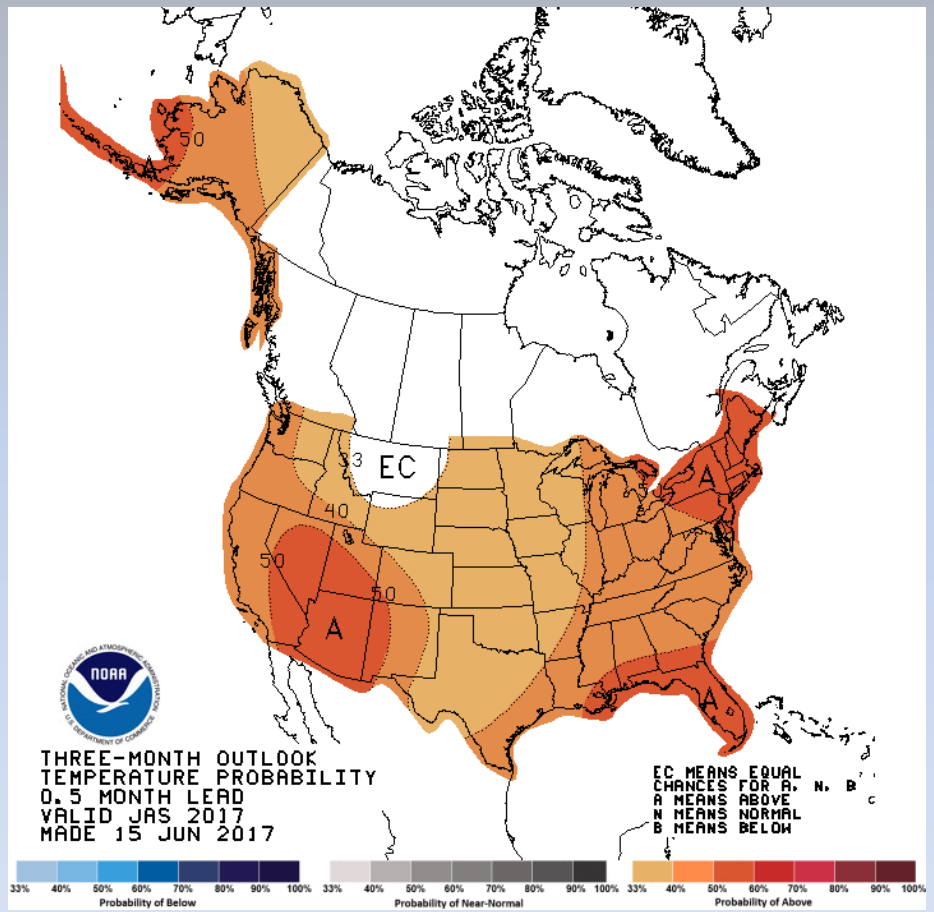


ABOVE Normal Temperatures

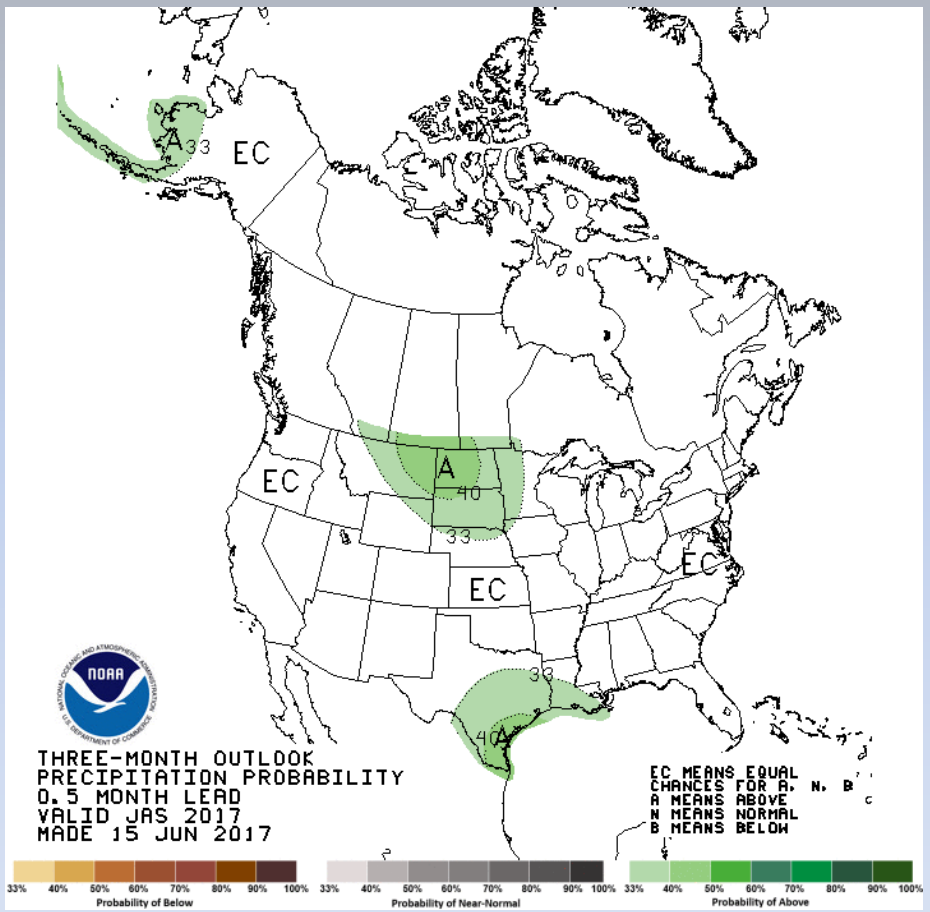


ABOVE Normal Precipitation

July-August-September Outlook



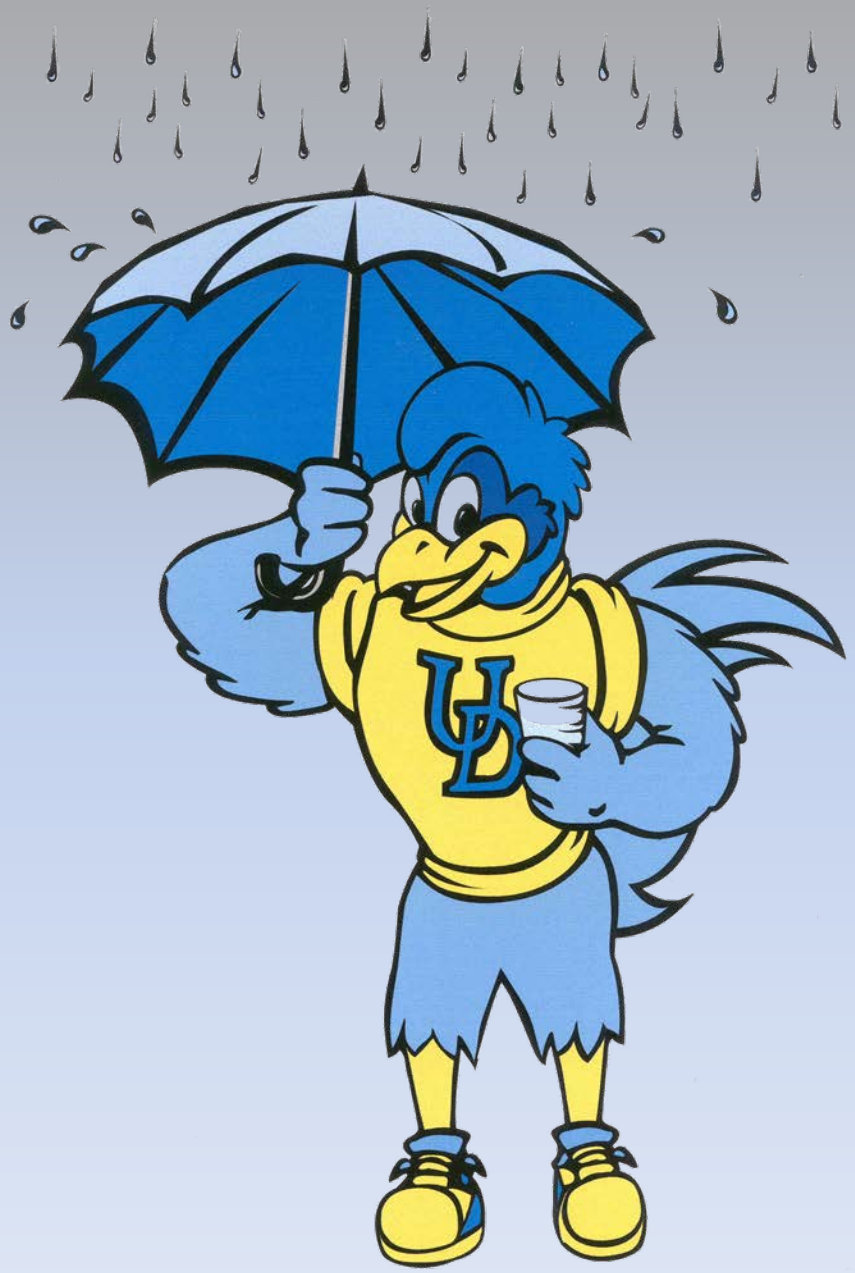
ABOVE Normal Temperatures



"Equal Chances" Precipitation

Summary

- It’s been quite warm and will continue to be warm throughout the summer
- Precipitation has been normal and there’s no indication we’re headed to a prolonged wet OR dry spell
- Combination should lead to drier than normal conditions throughout the remainder of the summer



Questions?