Capital District Data

July/August 2016 Volume 39, Number 4

In this Issue of Capital District Data

It has been a hot & dry summer!

New York State DEC declares drought watch for entire state- first in 14 years.

Did the rains of July and August make a dent?

What have the dry conditions done to agriculture?

What is the outlook?

Data Overview

↑ Improvement ↓ Deterioration ↕ Mixed

↓ From January to July, the Region ran a precipitation deficit of more than 3.77 inches.

↓ Soil moisture is below average, in part due to the mild winter that saw Albany record less than 33% of its typical snowfall.

↓ Over 90% of the Region has been declared as "Abnormally Dry", with "Moderate Drought" in another 4%.

↑ From August 1st through 16th the Region received 4.22 inches of rain, 111.9% greater than the average 1.99 inches for that period of time.

↑ The Region is projected to receive roughly 5.3 inches of rain in total for August, 47.8% above the monthly average.

↕ Vegetable crops have managed to weather the dry conditions, but field crops have been damaged.

↓ Regional aquifers are at, or near, historic lows, with the Schenectady Aquifer in the 90th percentile for dryness.

↑ With Fall approaching, it is possible that demand on water resources will diminish and that Fall rains may recharge groundwater levels.

↓ Despite wet weather in July and August, little improvement was made to long term dry conditions.

CAPITAL DISTRICT Regional Planning Commission

49 Years Service to Albany, Rensselaer, Saratoga, & Schenectady Counties

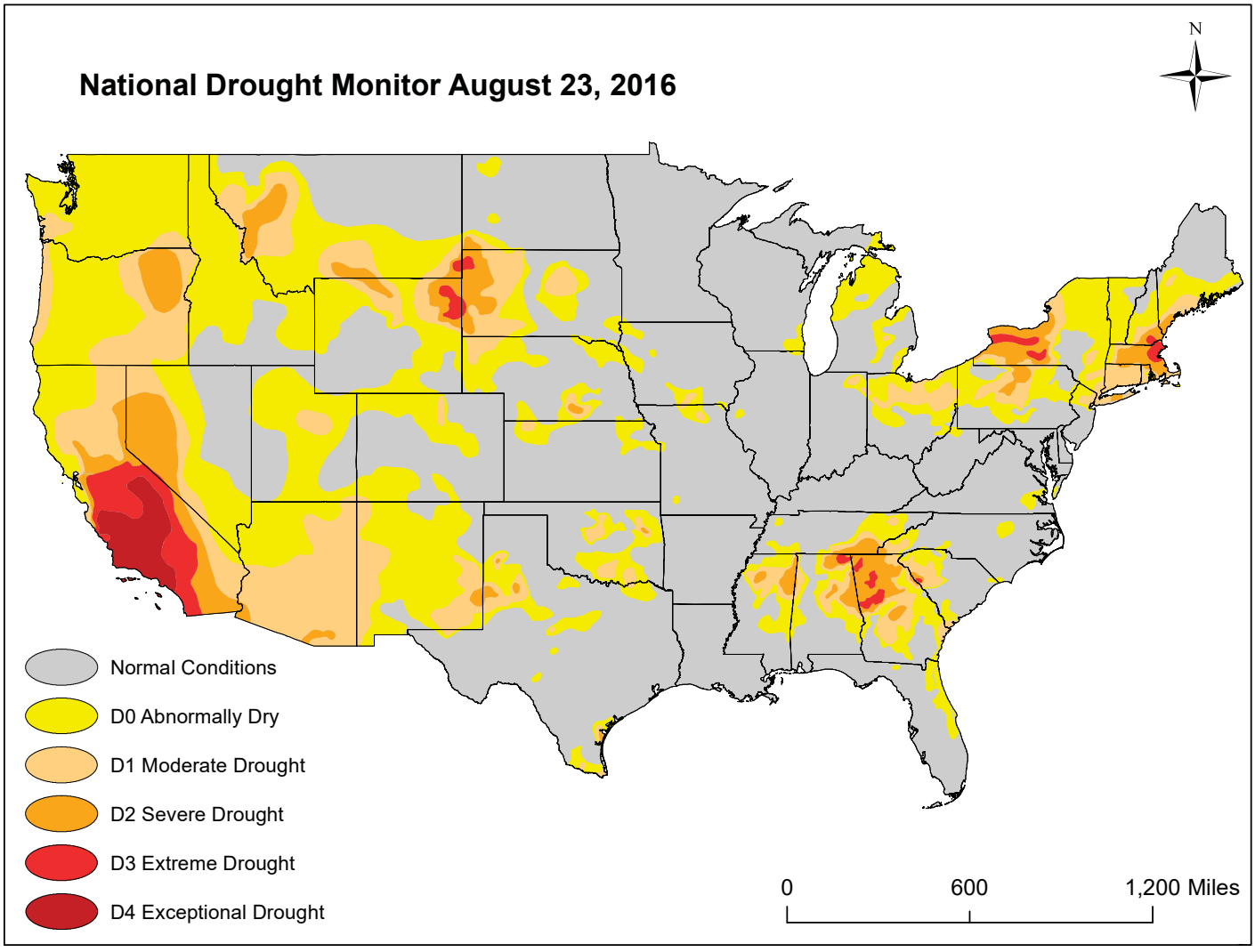
Drought has come to New York State. The New York State Department of Environmental Conservation declared the first state-wide drought in 14 years this summer, due in large part to a mild winter and little precipitation since February. As the Region heads into the typically rainy Fall months it can be easy to think that Spring is in the distant future. However, if the Region is going to recover from the current dry conditions, any relief will need to come in the next few months, otherwise, the Region could be looking at another dry Spring and Summer.

Through the first seven months of 2016, the Capital Region is experiencing one of the driest periods in recent memory. This dryness is not confined to just the Capital Region, almost all of New York State, as well as the Northeast, is experiencing dry conditions. While all of the attention has been on California's historic drought, conditions locally should not be overlooked. According to the Census' 2015 population estimates, New York is the 4th most populated state and, from a Comptroller Report[1], in-State agriculture directly accounted for $5.4 billion in economic activity in 2012, and $37.6 billion in both direct and indirect economic activity in 2011. This means that any drought in New York can impact a lot of people and hurt a large industry.

Are We in a Drought?

Drought is a tricky thing to measure. The most obvious contributing factor to drought is precipitation, but components such as soil composition, temperature, and evaporation rates, contribute towards measuring drought conditions. For our purposes, we will be examining precipitation rates and groundwater depth in the Region's aquifers. This will provide

Figure 1. National Drought Monitor view of the continental United States.

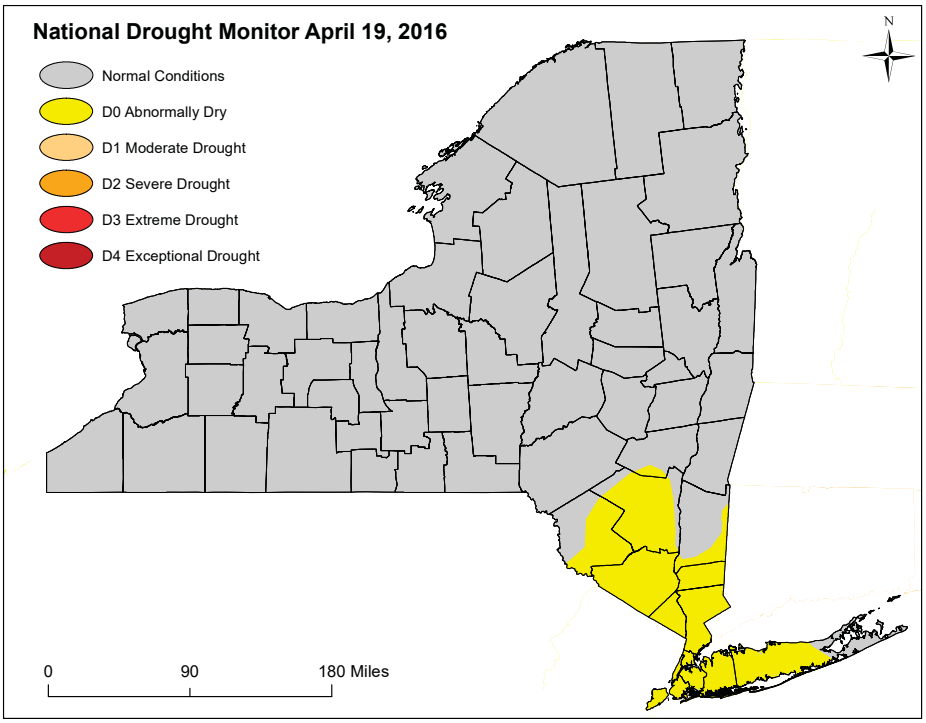


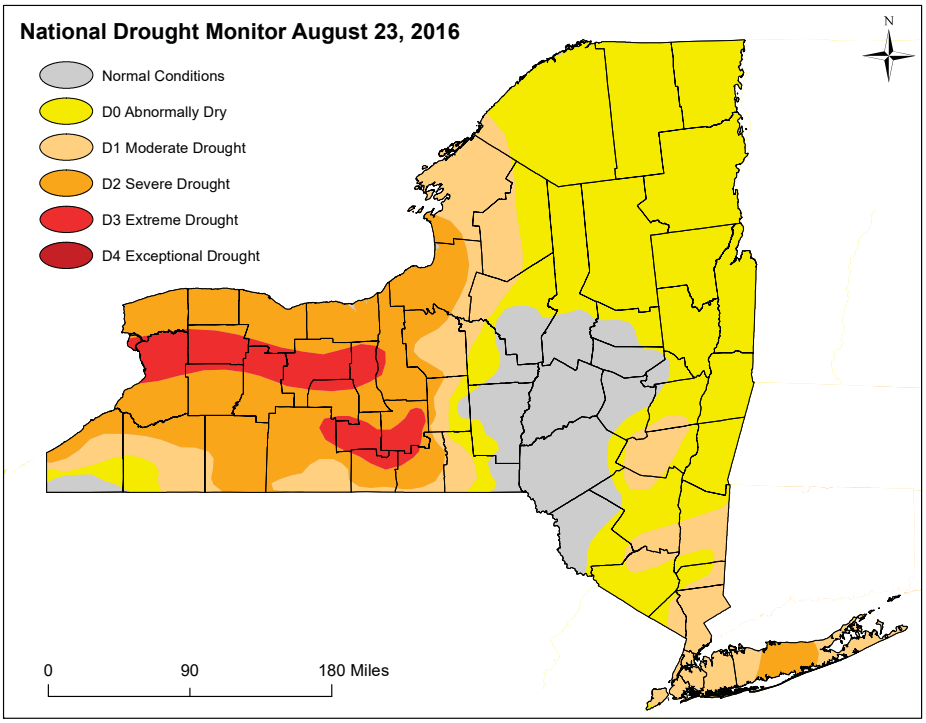
[1] "*The Importance of Agriculture to the New York State Economy*"- Office of the New York State Comptroller, March 2015

an accurate image of how dry the Region is.

First and foremost, how do we determine if we are in a drought or not? There are many agencies that monitor conditions, including the New York State Department of Environmental Conservation (NYSDEC), and the United States National Drought Monitor (NDM). The NDM is CDRPC's preferred tool for monitoring drought-like conditions due to its broader category definitions, including the designation "D0 Abnormally Dry." Since droughts are outgrowths of existing dry conditions, the NDM's inclusion of this designation is helpful for identifying conditions before they reach drought level. The NDM also identifies conditions at a localized level. This allows for a more accurate reflection of conditions on the ground. For example, in Figure 3 the NDM can identify how conditions vary within a county. While this level of detail needs to be viewed carefully (there is some level of inexactness) it is more helpful for pinpointing local conditions than NYSDEC's more generalized method of identifying conditions by county borders.

Figure 2 & 3- Conditions in NYS. April 19 & August 23



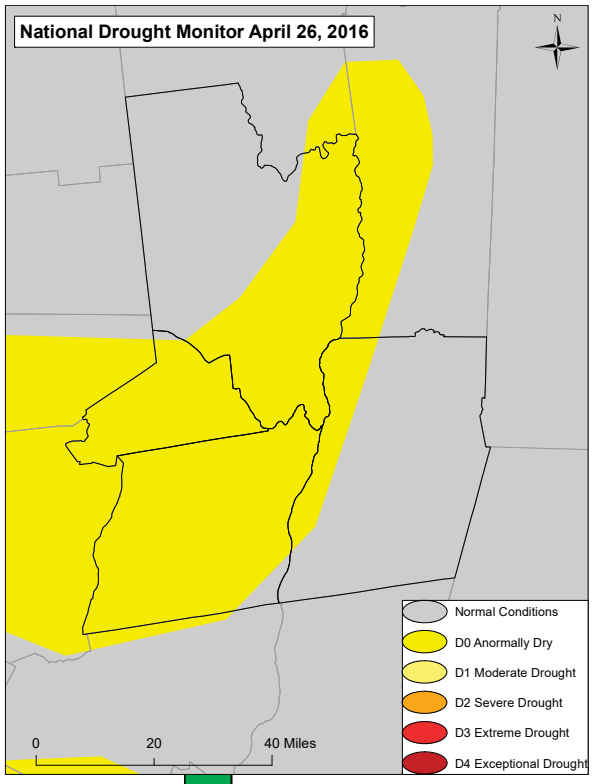


As Figure 1 shows, much of the country is in some form of dry condition. Nationally, the most striking area of drought continues to be located in California where wide spread drought conditions exist over much of the state. The most serious drought is centered in Southern California where both D3 and D4 conditions have been long entrenched.

Conditions in New York State have deteriorated as well. As Figures 2 and 3 show, conditions have deteriorated substantially since April across the state. As late as April 21st, while most of New York State was rated as "normal", abnormally dry conditions had spread into most of downstate from Ulster County to Long Island.

Four months later, the NDM for August 23rd shows how much dry conditions spread over the entire State. In Figure 3, only 14.1% of the State is within normal limits, while 41.3% is classified as D0, 17.4% is D1,

Figure 4



Figures 4-6. Conditions in the Capital Region

Conditions from the National Drought Monitor, from top to bottom, beginning on April 26th, to June 21st, and August 9th.

The NDM for April 26th shows dry conditions encompass 53.5% of the Region, the fist major expansion of dry conditions since September 2015. Almost the entirety of Albany and Schenectady counties found themselves as D0 Abnormally Dry. These conditions spread as far north as Glens Falls, but only affected the Western boarder of Rensselaer County along the Hudson.

By June 21st, D0 conditions had spread, and now included 84.3% of the Region. The entirety of Saratoga County, along with the majority of Albany and Rensselaer counties, found themselves Abnormally Dry. Only Schenectady County saw relief since April, with the western half of the county being upgraded to normal from D0.

Finally, the NDM for August 23rd shows D0 conditions creep above the 90% mark with both Saratoga, and Rensselaer, counties experiencing 100% coverage of D0 conditions.

Figure 5

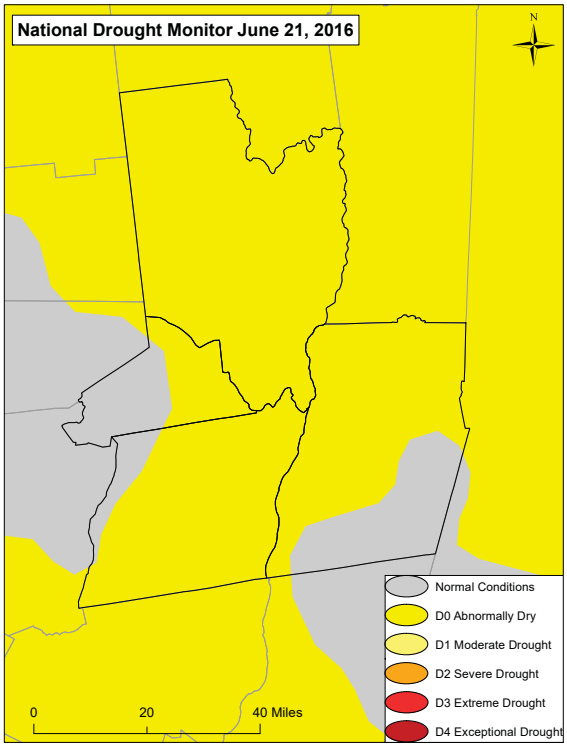
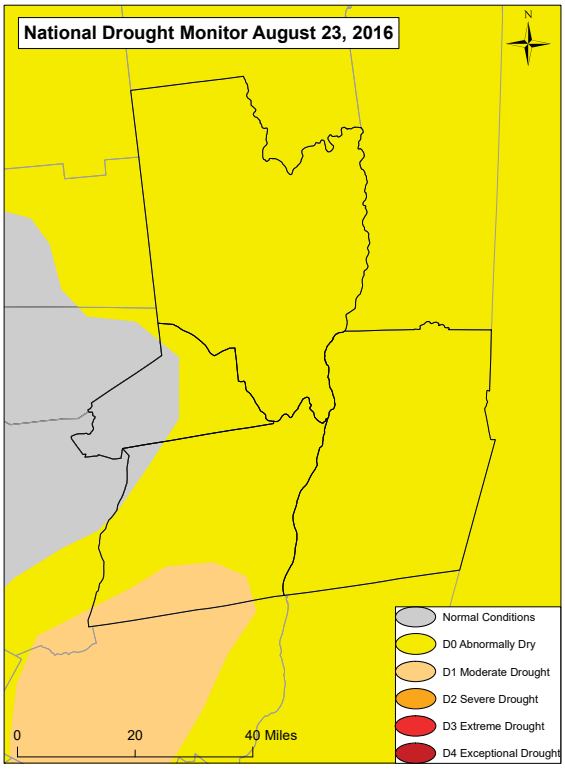


Figure 6



Also of note, D0 conditions in Albany County expanded, and in fact deteriorated slightly into D1 Moderate Drought. This deterioration mostly impacted the towns of Rensselaerville, Westerlo, and Coeymans. Albany County is the only county in the Region to experience three conditions simultaneously, with Normal, D0, and D1 conditions currently present.

The normal conditions seen in Schenectady County are part of a "bubble" of normal conditions that have been maintained for much of the summer in the Mohawk Valley. In speaking with experts from the New York State Department of Environmental Conservation, the most likely reason for the stronger conditions may be related to the region's soil composition. In contrast to the Capital Region's soil composition, the Mohawk Valley's is better suited for capturing and holding moisture from precipitation meaning that even in the event of low rain totals for extended periods, the ground has a higher ability to hold on to the rain that it has captured, increasing the Mohawk Valley's ability to weather dry conditions.

21.2% is D2, and 6.0% is D3. The drought conditions stretch from Buffalo in the west, to Syracuse in the east, and Ithaca in the south. Most of western New York is classified as D2 Severe Drought, but a band of D3 Extreme Drought has recently developed and covers portions of 15 counties.

Local conditions have deteriorated similarly. As recently as April 19th, the Capital Region was free of any dry conditions. But the cumulation of months of dry weather finally resulted in the introduction of D0 conditions. From April 19th to April 26th (Figure 4), moisture levels deteriorated enough to see D0 conditions overtake more than half of the Region. Conditions remained like this for the next two months

In mid-June, the NDM reported a significant deterioration in conditions as continued dry weather was unabated. Region-wide, D0 conditions expanded to incorporate more than 85% of the Region (Figure 5). By mid-July this further deteriorated to exceed 90% of the Region, with the introduction of D1 conditions. By August 23rd, only 5.4% of the Region is free of dry conditions, while 90.5% and 4.1% are in D1 and D2 conditions respectively (Figure 6).

How dry is it?

So, exactly how dry is it? How far behind are we in terms of precipitation?

Determining a logical beginning date for looking at precipitation data is inherently a challenge since no period in time exists in a vacuum. A limiting factor is the difficulty in obtaining long term historical precipitation data from multiple weather stations. For a four county region, collecting data from multiple weather stations is mandatory in order to accurately measure precipitation rates. The challenge lies in the fact that most of the easily accessible data does not reflect region-wide precipitation rates. Instead, most of the datasets emphasize precipitation records from Albany International Airport, but this location does not necessarily give an accurate measurement of precipitation rates from the surrounding area.

In order to blend the needs of localized data with abundant historical data, data was assembled from two sources, the Northeast Regional Climate Center (NRCC), and the National Oceanic and Atmospheric Administration's National Centers for Environmental Information (NOAA and NCEI respectively). NRCC provides precipitation data specifically for the four county region from multiple reporting stations spread across the Region. Data access is limited to the beginning of 2016 due to technical limitations. NCEI provides the historical data that the NRCC lacks, but does it for a slightly larger geographic area. The Capital Region falls within NCEI's "Climate Division 5" for New York State, an area that includes most of the Hudson Valley from Saratoga County to Westchester County.

Based on NRCC's data, from January through July of 2016, the Capital Region has recorded roughly 19.3 inches of precipitation, while the 30-year average for that time period is 23.1 inches, leaving a deficit of 3.77 inches, 16.4% below average. Six of the seven months have recorded below average precipitation rates, with only February showing above average precipitation total.

Special Note- As of publication, precipitation data for all of August was not available. Figure 7 provides projected totals based upon precipitation from August 1st through the 16th. This is discussed at more length later.

Speaking with meteorologists from the NYSDEC and the United States Geological Survey's New York Water Science Center (USGS and NYWSC), they expressed mixed views on the severity of these 3.77 inches. While NYSDEC has issued a state-wide drought watch, an expert when asked about this topic felt that the concern for the deficit had ebbed, and it was not something that they were immediately concerned with. Experts at DEC commented that while July's total precipitation was slightly below average, it was concentrated enough in the later portion of the month that it compensated for the long intervals of dry weather.

Conversely, an expert with the NYWSC, expressed more concern over the deficit. The USGS monitors underground aquifers nationwide, giving the agency a different outlook on precipitation rates. Surface water

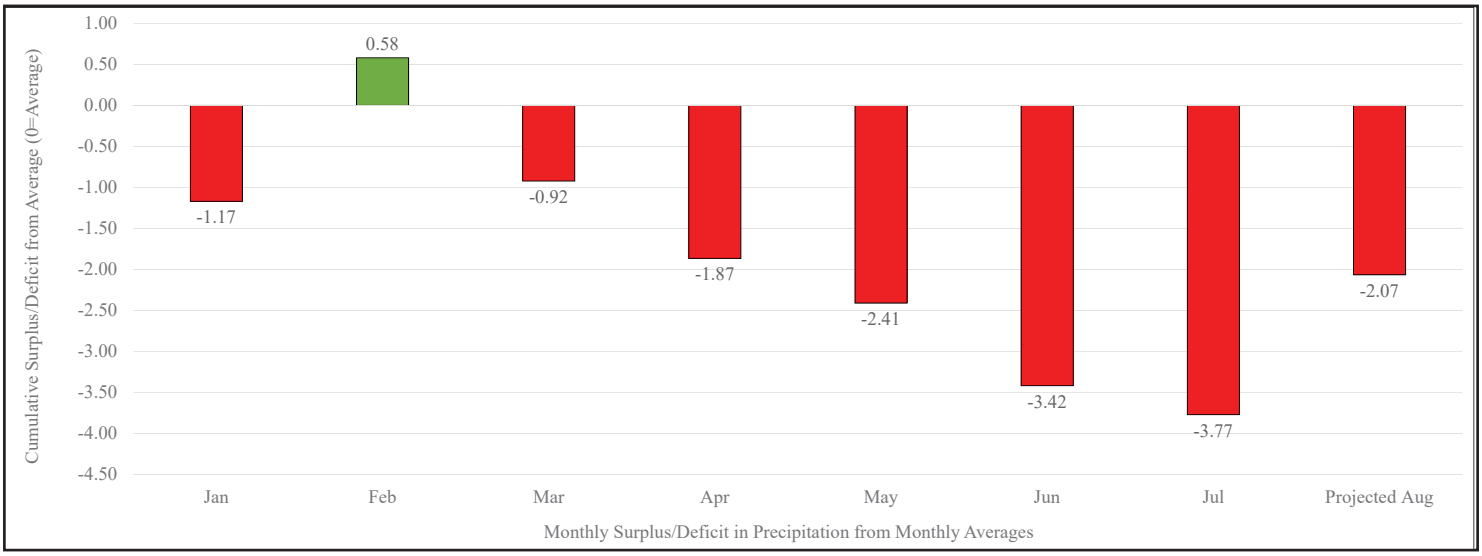


Figure 7. Monthly Precipitation Total Against the Average. For most of the year, the Region has been running a precipitation deficit. After a wet February that saw the Region's total annual precipitation reach more than half an inch above average, the next five months saw the precipitation deficit grow as monthly precipitation rates were below average. By the end of July, the annual cumulative deficit had grown to 3.77 inches below average. A wet August is projected to close the deficit to just over 2 inches below the average.

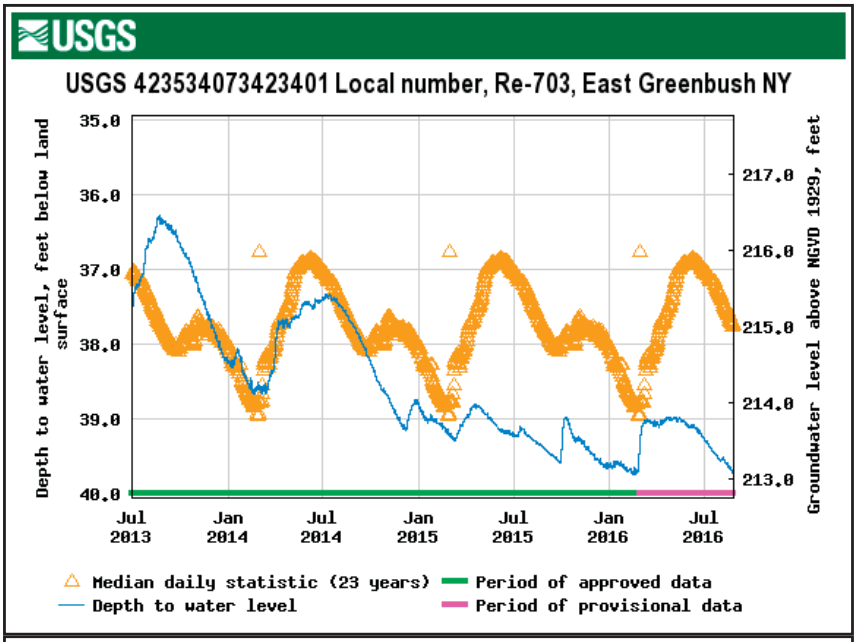


Figure 8. Depth of East Greenbush Aquifer.

As one of the Region's six Aquifers, the long term trend for the East Greenbush Aquifer is one of stagnant recharge. Since the winter of 2014-15, the aquifer has failed to follow the long time median and has instead remained steady between 39 and 40 feet below the surface. The deepest of the Region's aquifers, East Greenbush is likely the least affected by precipitation events, needing long and low intensity events over short and intense events.

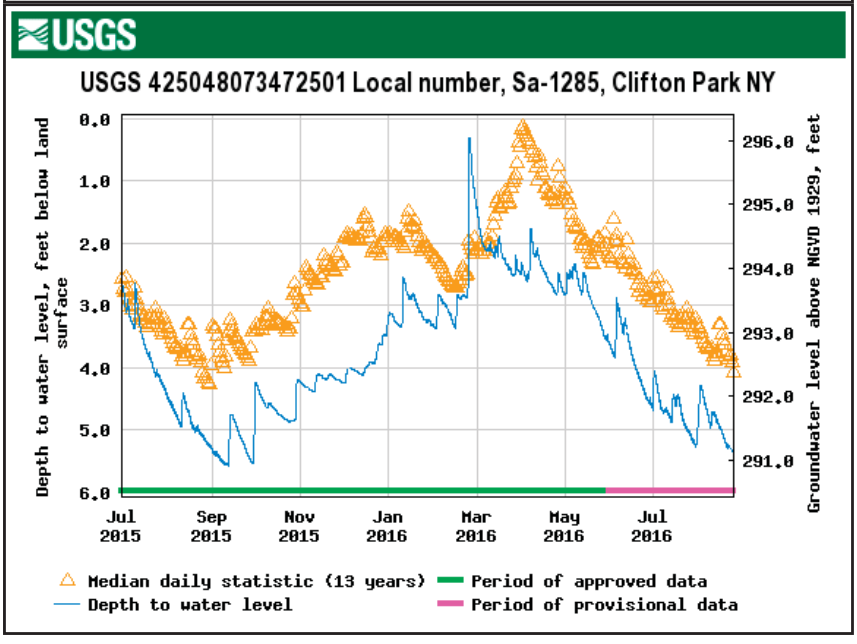


Figure 9. Depth of Clifton Park Primary Aquifer.

The Clifton Park Aquifer also doubles as one of the Region's two primary aquifers due to its size. In general, since July of 2015, Clifton Park has remained consistently below its long time median depth. While it has shown seasonal fluctuations, its depth over the last year is below what would be considered normal. This aquifer is just under the surface, and as a result it is likely influenced by precipitation events more than deeper aquifers. Despite being roughly 1.5 feet below its long term median, it is possible that the aquifer could recharge more quickly than the Region's other aquifers if consistent rains over an extended period of time were to occur.

Figure 10. Depth of SUNY Albany Aquifer.

One of the Region's smaller aquifers, the SUNY Aquifer has been running a consistent deficit since the fall of 2014. Unlike the East Greenbush Aquifer, SUNY has shown seasonal fluctuations that are in line with what would be expected at that time, but the recharge has never been sufficient enough to close the deficit. The deficit has generally increased in recent months. The heavy rains of late July and early August did help the aquifer close the deficit slightly, but the most recently available data indicates that the deficit is again widening.

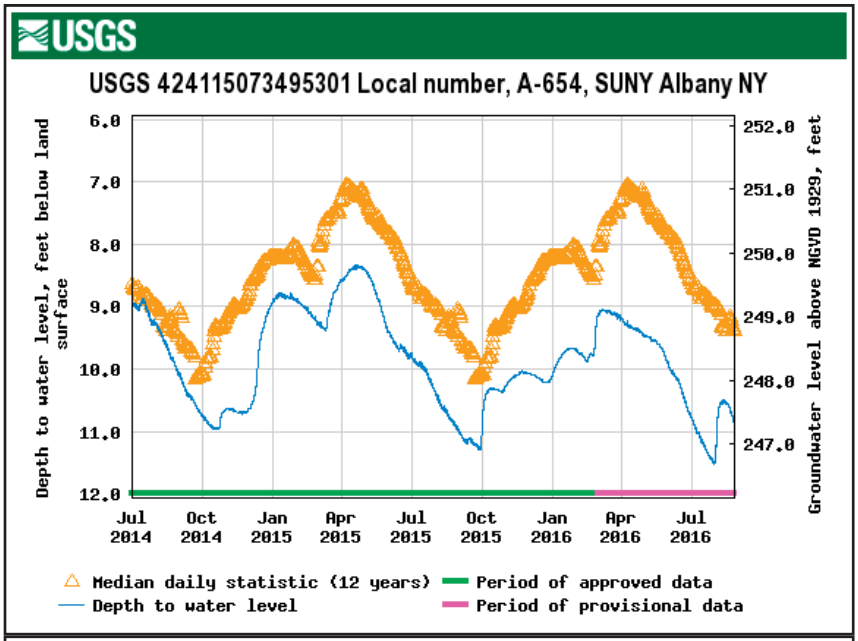


Figure 11. Depth of Schenectady Aquifer.

For much of the last two years, the Schenectady Aquifer has remained below its long term median depth, with only occasional spikes recharging it briefly to a normal level. Beginning in the last summer of 2015, however, the gap between its current depth and its historical median depth began to widen. While a brief spike due to February 2016's heavy rains, did bring its depth back to within historical norms, the depth quickly began to fall below the historical median over the summer months. By July, the aquifer was nearly three feet behind its historic median. The late July/early August rains did provide a spike in the aquifer's depth, but it does not appear that the improvement will be sustained.

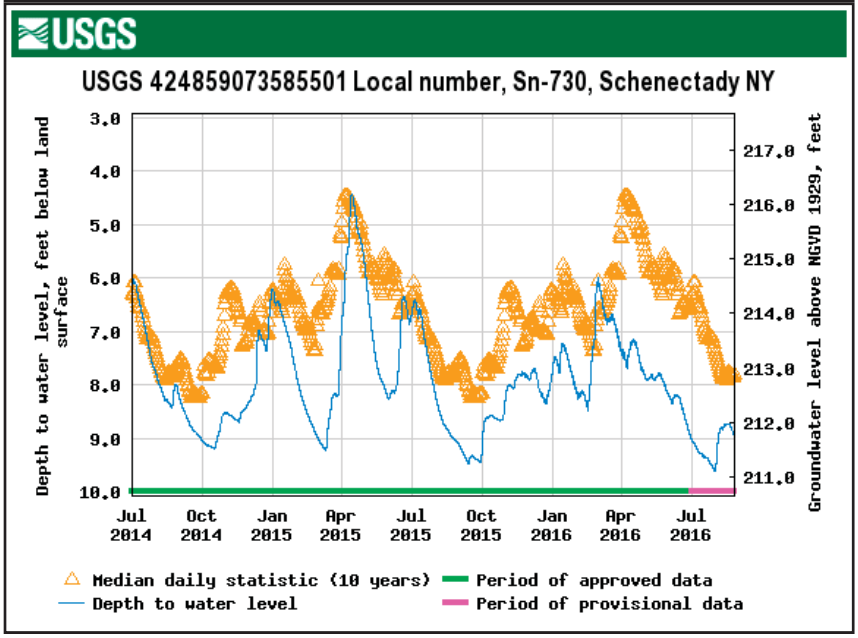
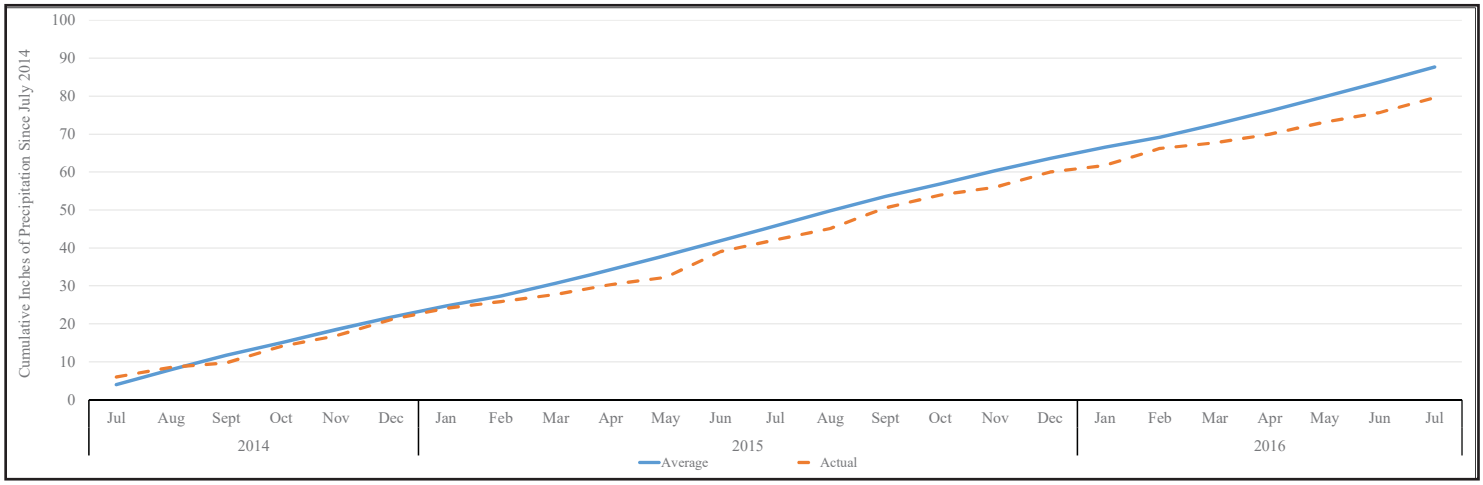


Figure 12. Two Year Precipitation Trends for Climate Division 5.

NCEI's long term historical data for New York State Climate Division 5 provides evidence of the long term nature of the precipitation deficits that have contributed towards deficits for the Capital Region's aquifers. Beginning in the Spring of 2015 a deficit emerged and has not been closed at any time in the subsequent year. As of July 2016, the deficit has widened to over 8 inches. While Climate Division 5 is a broader geographic area than the Capital Region, it is reasonable to compare the trends in Climate Division 5 to the Capital Region where historical data is more limited.



is more quickly recharged by precipitation, while groundwater is affected by precipitation more slowly. Late July and early August have seen brief and intense showers douse much of the Region. In the short term this has provided improved stream flows, and recharged surface water reserves. However, it has provided limited relief to D0 conditions.

Long term trends in aquifer water levels show that 4 of the 6 aquifers in the Region are running deficits. These deficits are helped most by long, low intensity, precipitation events that soak the ground. Brief, high intensity, precipitation events cause high levels of runoff as the sudden deluge of water cannot be absorbed quickly by the soil. As a result, the heavy rains of July and August have not had the impact on improving aquifer levels that many would have suspected. If the long term trend of deficits continues for the Region's aquifers, the availability of water for the Region's wells, streams, crops, and recreation, will become increasingly challenged.

Figures 8 through 11 highlight the four regional aquifers struggling with long term deficits. The first thing to make note of is that the charts measure the depth of the aquifer from the surface, and not the actual depth of the water. If the historical median depth is 6 feet in July, but in 2016 the depth is 8 feet, the aquifer is two feet below its historical median. The more water in an aquifer, the closer it will be to the surface. The second is that each aquifer reacts to precipitation differently. The further below the surface the aquifer, the more insulated it will be from precipitation events. If an aquifer is shallow, heavy rain events may produce a more pronounced impact. Runoff may still be a factor however, so a slow, low intensity rain event is still preferable.

Beginning in the fall of 2014, the East Greenbush Aquifer (Figure 8) began to fall behind its long term median depth. This did not become an immediate concern until the Spring of 2015 when, historically, the depth should have seen improvement by roughly two feet from its winter low. However, in 2015 the aquifer failed to see any improvement and, in fact, saw levels decline through the remainder of the year. While the depth of the aquifer limits its influence from heavy precipitation events, the lack of significant snow melt in the Spring ensured that the aquifer would struggle to improve on its deficit. Depths have remained stagnant for much of the last year, varying only slightly around 39 feet. As of the end of July, according to the USGS, the aquifer was in the 75th percentile for dryness, meaning that it was now dryer than at almost any other time in its recorded history.

The Clifton Park Aquifer (Figure 9) is one of two Primary Aquifers in the Region. Primary Aquifers are larger than the other four regional aquifers. For much of the past year, the Clifton Park Aquifer has been running well below its historic median, at times by almost two feet. As the shallowest aquifer in the region (its median historic depth in the Spring is less than a foot below the surface) the aquifer is influenced by precipitation more immediately than a deeper aquifer would be. This is evident with the spike in depth in February 2016- a month that saw above average precipitation. Since then, however, levels have returned to below average. As of mid-August, the aquifer was roughly 1.5 feet below its historic median depth, also putting it into the 75th percentile for dryness.

Figure 10, the SUNY Albany Aquifer, has shown a more persistent long term deficit in depth. Since the Fall of 2014, it has been running a sizeable deficit from its historical median. In July 2015, its depth was roughly a foot below its historical depth. A year later, in July 2016 it was roughly two feet below its historic depth- a full foot below where it had been just a year before. At the very tail end of the record period, the heavy rains of late July and early August, contributed to an improvement in the aquifer's depth, but that seems to have been short lived as depth continued to decline through the middle of August.

Finally, Figure 11 for the Schenectady Aquifer, rounds out the four aquifers that are abnormally dry. The Schenectady Aquifer is the second Primary Aquifer in the Region, and has experienced sharp peaks and valleys for the last two years. In that time, despite the sharp peaks, the trend has been to run a consistent deficit from the historical median. From early Fall 2014 through the Fall of 2015, the aquifer was below

its median depth in general, but had spikes that temporarily masked its deficits. Since the Fall of 2015, the spikes have become more limited and the deficit has become more persistent. Outside of a sharp spike in March 2016, the Spring and Summer months have seen the deficit grow substantially. In April, the depth was nearly 7.5 feet below the surface, roughly 3.5 feet below its historic median. While a minor improvement in the deficit has occurred since April, the aquifer is still a full foot below its historic median and is in the 90th percentile for dryness.

Figure 12 examines the long term cumulative precipitation totals since July 2014. In it, the actual monthly precipitation rates are compared to the 20th Century average monthly precipitation rates. This data, from the NCEI, is for New York State Climate Division 5, or the Hudson Valley, and is the best long term monthly precipitation data available for analysis.

Since July 2014, if the Hudson Valley had received average precipitation, the cumulative precipitation total should approached 90 inches by the end of July 2016. Instead, beginning in the later winter of 2015, a deficit began to develop between average precipitation and actual precipitation. While there have been individual months of above average precipitation during this period, the precipitation totals have never been enough to close the deficit. Throughout 2015, the deficit stood between 2 and 3 inches. In 2016, the deficit has begun to widen, a trend that is consistent with the data shown in Figure 7 for the Capital Region. By July 2016, the deficit had expanded to more than 8 inches.

This stubborn deficit is certainly reflected in the long term trends shown in Figures 8 through 11. While the deficit is not monumental, a prolonged deficit will compound to stress water reserves. As we've seen, aside from occasional spikes in monthly precipitation totals, there has not been a prolonged opportunity for local groundwater to recharge from an extended period of deficits. It would take consecutive months of average, and above average, precipitation, at slow intervals in order for the long term deficit to be closed and for the aquifers to recharge their depleted reserves.

Ok, it's dry- who's Impacted?

The most immediate ramification of prolonged drought has been on agriculture in the Region. While the conditions in the Region are superior to those in Central and Western New York, it has nonetheless been a taxing year on agricultural output.

The unusually dry summer months were difficult on both vegetable and field crops throughout the Region, but especially the field crops. Field crops, such as corn, hay, and soybeans, are dependent on precipitation more so than vegetable crops which can make better use of irrigation. Speaking with experts from Cornell Cooperative Extension, the corn and hay harvests will likely be impacted as there has simply not been enough precipitation for a healthy harvest. The lack of rain will likely result in diminished yields and quality of these important crops. Even with the heavy rains of late July and August, it is simply too late for most corn crops to overcome months of below average precipitation. Soybeans, on the other hand, could still have a healthy harvest if August continues to be rainy. The soil will still be abnormally dry, but if the Region can get average precipitation, and not in one or two heavy storms, it could go a long way to helping the Soybean harvest.

The economic challenge facing the Region's farms should not be overlooked. Corn in particular is a profitable cash crop that is also expensive to plant and cultivate. With the corn crop likely to be damaged from the dry conditions, farms will be unlikely to see the strong profit margin that they had hoped for. Combined with weak milk prices, as an expert from Cornell said, many farms may find themselves in a difficult financial position.

Vegetable crops are a more complicated matter. In the short term, they have managed to weather the dry summer due to aggressive irrigation. This irrigation has drawn from both wells and surface water sources. While the crops have been successful, they have taxed the available water supplies. According to Cornell, while there have not been any reports of wells going dry, the experts were concerned that many wells and irrigation ponds were taxed and don't have much in reserve. The precipitation that has fallen, including the heavy rains of late July and

early August, did help, but it appears that the precipitation was quickly used for irrigation and has not gone into groundwater storage.

This heavy use of groundwater almost certainly helps to explain the discharge and growing deficits of the Region's aquifers. Without the precipitation, vegetable fields were irrigated from already taxed wells and ponds, both of which are supplied by groundwater from the aquifers. The more the vegetable fields drew on the irrigation sources, the more those sources drew on the aquifers. The precipitation that did fall was immediately soaked up by crops and irrigation ponds, preventing recharging of the aquifers.

Aside from agriculture, the effects of dry conditions on the Region have been mild. Recreational activities have had some issues with lower water levels, the Barge Canal/Mohawk River were forced to draw from feeder sources to ensure safe navigation; and there has been some concern of increased brush fire risk, but overall it has been a pleasant summer to enjoy outdoor activities.

Locally, there has been virtually no effort to curb the recreational use of water with emergency restrictions. Though NYSDEC has issued a drought watch for the entire state, the agency has not called for restrictions, and instead is simply asking for voluntary conservation of water. Unless the situation continues to deteriorate, it is unlikely that any change will be made to this policy in the short term.

What caused this, will it get better?

While most people think of droughts as due from a lack of rain, precipitation in all of its forms are needed to prevent droughts. The Spring of 2015 is when the Region began to develop a precipitation deficit (Figure 12), but it was exacerbated by the very mild winter of 2015-16. While February 2016 saw above average precipitation, it was mostly in the form of rain and not snow. While a mild winter was a pleasant relief after the harsh winters of 2013-14, and 2014-15, the lack of snowfall has had long term consequences. According to the National Weather Service, Albany received only 16.9 inches of snow during the 2015-16 winter, compared to the usual 60 inches. This resulted in very little snow melt during the Spring months, leaving very little moisture in the soil. Combined with low rainfall, the Region was primed to experience abnormally dry conditions.

These conditions won't last forever, but for the near future it is unlikely that conditions will change greatly. For many years, up until 2014, the Region was actually in a period of above average precipitation. Weather patterns can come in cycles, and its likely that we are in the middle of a dry cycle that will give way to a normal/wet cycle eventually. When that will happen is anyone's guess.

Figure 13

	Aug 1-16	Aug 1-16 Average	*Projected Aug Total*	Aug Average	Projected Difference
Albany County	3.53	1.74	*4.41*	3.20	*1.21*
Rensselaer County	4.82	2.22	*6.03*	3.84	*2.19*
Saratoga County	4.34	2.08	*5.43*	3.77	*1.66*
Schenectady County	4.18	1.91	*5.23*	3.47	*1.76*
Capital Region	4.22	1.99	*5.28*	3.57	*1.71*

In the meantime, in order to undo the long term dry conditions, the Region will need significant snow. Experts from NYSDEC and NYSWSC agreed that even an average winter would go a long way to reversing the dry conditions. While the Region is dry, it is not at the point where above average snowfall is needed in order to overcome long term deficits (Western New York may be in need of this), and so 60 inches of snow should suffice to get everything back on track. The worst case scenario is another mild winter, combined with average or below average precipitation in the Spring. If that were to happen, then the deficit would almost certainly grow, and groundwater levels would remain low. This would put the Region into a more precarious position which may require water restrictions.

As mentioned throughout this report, the final weeks in July and August saw strong storms crisscross the Region, dropping large quantities

of precipitation. As of publication, data was only available for August 1st through the 16th. During this time, as shown in Figure 13, the Region received roughly 4.22 inches of rain- shattering the August 1st through 16th average of 1.99. Based upon the rain received, and the forecast for the remainder of the month, it is possible that the cumulative total for August could approach/ exceed 5.28 inches, 1.71 inches above its monthly average.

Unfortunately, despite this heavy rain, the benefits have been mixed. As was described earlier, the short & intense precipitation events have limited impact on relieving long term dry conditions and the accompanying dry soil and low aquifers. Upon closer inspection, the aquifers showcased in Figures 8 through 11 have shown only minimum gains, and virtually none from the heavy rains that came through the Region on the weekend August 12th -14th. Additionally, the Drought Monitor has not been improved by the heavy rains. For seven consecutive weeks, from July 5th through August 23rd, the NDM has held the conditions in the Capital Region steady. More than 90.5% of the Region is classified as D0, while 5.4% is classified as Normal, and 4.1% as D1. These figures do not reflect any significant gains in overall dry conditions despite multiple heavy rain events.

What can be done to prepare?

As with any weather related event, local officials and the public are bystanders to mother nature. While it is unlikely that the dry weather we have been experiencing is part of a fundamental shift in weather patterns, it does mean that over the short term local officials need to keep their eyes on conditions. As Summer gives way to Fall, temperatures will decline, days will shorten, and crops will be harvested. As the crops are harvested, and as most plants prepare to winterize, the demand on water resources will diminish, providing an opportunity for Fall rains to recharge depleted aquifers. It is possible that, with normal Fall rains and normal Winter snows, the dry conditions in the Capital Region could be fully erased by the time that Spring emerges in 2017.

However, it is prudent to prepare for less than ideal situations. If there is a precipitation deficit over the Fall, or if the winter of 2016-17 is another mild one, then local officials will have sufficient time to prepare for dry conditions. While no one is suggesting that the Capital Region, or New York State, should expect a drought on par with California's epic drought, it would be wise for local leaders to plan for challenging conditions.

If, come February, there has not been significant snow accumulation, then local officials may want to consider adopting local ordinances for water conservation in the Spring. These may include, but are not limited to, ordinances implementing day and time restrictions on lawn watering, restrictions on filling swimming pools, restrictions on washing vehicles, and many more.

If such restrictions are necessary, it may behoove officials to address these concerns early and prepare their constituents for such possibilities. By February we should have a good idea of how the Region is situated for the Spring. This will give officials the opportunity to anticipate upcoming conditions, and to communicate with their constituents that there may be challenges ahead.

CAPITAL DISTRICT Regional Planning Commission

One Park Place, Suite 102, Albany, New York 12205
Phone: 518-453-0850 E-mail: cdrpc@cdrpc.org
Fax: 518-453-0856 Web Site: http://cdrpc.org

Lucille McKnight, Chair
Rocco A. Ferraro, AICP, Executive Director
Daniel M. Harp Jr., Senior Planner & Editor

Employment, Unemployment, & Unemployment Rates

Employment	Jul 15	Aug 15	Sep 15	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16
Albany County	151.9	151.5	150.3	151.8	151.8	151.6	151.6	152.3	152.6	151.8	152.6	153.0	151.4
Rensselaer County	78.5	78.2	77.2	78.0	78.0	77.9	77.9	78.3	78.4	78.0	78.4	78.7	77.8
Saratoga County	112.0	111.8	110.8	112.0	112.0	111.8	111.9	112.5	112.7	112.1	112.5	112.9	111.7
Schenectady County	73.1	73.1	72.4	73.1	73.1	73.0	73.0	73.3	73.5	73.1	73.5	73.8	72.9
Capital Region	415.5	414.6	410.7	414.9	414.9	414.3	414.4	416.4	417.2	415.0	417.0	418.4	413.8
Unemployment	**Jul 15**	**Aug 15**	**Sep 15**	**Oct 15**	**Nov 15**	**Dec 15**	**Jan 16**	**Feb 16**	**Mar 16**	**Apr 16**	**May 16**	**Jun 16**	**Jul 16**
Albany County	7.7	6.8	6.7	6.4	6.3	6.2	7.0	6.7	6.5	6.3	5.9	6.4	6.6
Rensselaer County	4.1	3.7	3.6	3.5	3.5	3.5	4.0	3.9	3.7	3.4	3.1	3.3	3.5
Saratoga County	5.0	4.5	4.6	4.5	4.5	4.5	5.1	5.0	4.8	4.3	3.9	4.0	4.2
Schenectady County	4.0	3.6	3.5	3.3	3.2	3.2	3.6	3.5	3.4	3.2	3.0	3.1	3.3
Capital Region	20.8	18.6	18.4	17.7	17.5	17.4	19.7	19.1	18.4	17.2	15.9	16.8	17.6
Unemployment Rates	**Jul 15**	**Aug 15**	**Sep 15**	**Oct 15**	**Nov 15**	**Dec 15**	**Jan 16**	**Feb 16**	**Mar 16**	**Apr 16**	**May 16**	**Jun 16**	**Jul 16**
Albany County	4.8%	4.3%	4.4%	4.0%	4.0%	3.9%	4.4%	4.2%	4.1%	4.0%	3.7%	4.0%	4.2%
Rensselaer County	4.9%	4.5%	4.5%	4.2%	4.2%	4.3%	4.9%	4.7%	4.6%	4.2%	3.8%	4.0%	4.3%
Saratoga County	4.2%	3.9%	4.0%	3.8%	3.9%	3.9%	4.4%	4.3%	4.1%	3.7%	3.4%	3.4%	3.6%
Schenectady County	5.2%	4.7%	4.6%	4.3%	4.2%	4.2%	4.7%	4.6%	4.4%	4.2%	4.0%	4.0%	4.3%
Capital Region	4.8%	4.3%	4.3%	4.1%	4.0%	4.0%	4.5%	4.4%	4.2%	4.0%	3.7%	3.9%	4.1%
New York State	5.4%	5.0%	4.8%	4.7%	4.8%	4.7%	5.4%	5.4%	5.2%	4.6%	4.2%	4.5%	5.0%
United States	5.6%	5.2%	4.9%	4.8%	4.8%	4.8%	5.3%	5.2%	5.1%	4.7%	4.5%	5.1%	5.1%

Source: New York State Department of Labor, and the U.S. Department of Labor, Bureau of Labor Statistics Figures in 1,000s

Consumer Price Index

2014-15 Percent Change in CPI: 0.119%

Unadjusted CPI	July 15	Aug 15	Sept 15	Oct 15	Nov 15	Dec 15	Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	July 16
U.S. City Average	238.7	238.3	237.9	237.8	237.3	236.5	236.9	237.1	238.1	239.3	240.2	241.0	240.6
Northeast Urban Average	253.4	252.9	252.9	252.5	252.6	251.7	251.7	252.3	252.9	254.3	255.0	255.5	255.4
% Change From Same Month in Previous Year	**Jul 14- Jul 15**	**Aug 14- Aug 15**	**Sept 14- Sept 15**	**Oct 14- Oct 15**	**Nov 14- Nov 15**	**Dec 14- Dec 15**	**Jan 15- Jan 16**	**Feb 15- Feb 16**	**Mar 15- Mar 16**	**Apr 15- Apr 16**	**May 15- May 16**	**Jun 15- Jun 16**	**July 15- July 16**
U.S. City Average	0.2%	0.2%	0.0%	0.2%	0.5%	0.7%	1.4%	1.0%	0.9%	1.1%	1.0%	1.0%	0.8%
Northeast Urban Average	-0.2%	-0.1%	-0.1%	-0.1%	0.3%	0.5%	0.7%	0.7%	0.5%	1.0%	0.9%	0.8%	0.8%

Source: U.S. Department of Labor, Bureau of Labor Statistics 1982-84 = 100 Note: Data is NOT Seasonally Adjusted