

Central NYS is Drying Out – When Can We Expect Relief?

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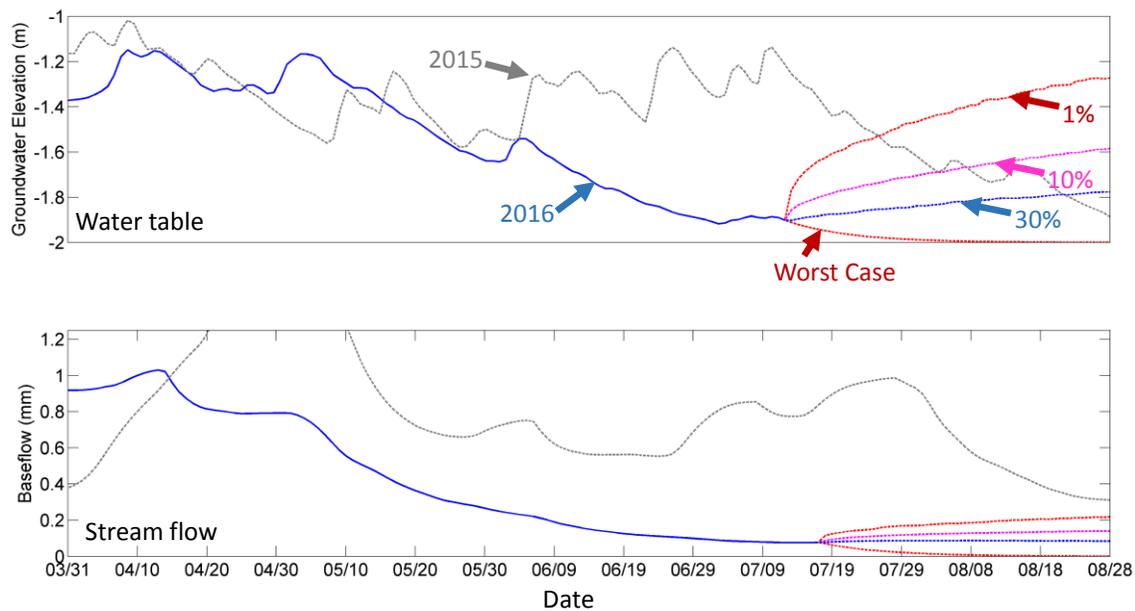
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The rain over the past few days has temporarily halted the steady decline in flow at Fall Creek near Ithaca, NY. However, flow still lingers near the 91-year record lows. People are asking us the question, “**When will this be over?**,” which is largely unknowable.

However, we can use past observations to predict when we might see normal conditions return. In the graphs below, the solid blue lines show 2016 conditions, the gray lines are the 2015 conditions, and the colored dashed lines show our predictions of possible future conditions.

There is roughly a 30% chance that the 2016 water table will be comparable to the 2015 water table by the end of August and a 10% chance that the 2016 will be comparable to the 2015 by early August. There is a small (1%) chance that the 2016 water table will reach the 2015 level in the next week or two. There is, of course, a chance that conditions will continue to get worse. Groundwater is really important because most rural households count on this for potable water. Also, over 60% of the regional stream flow is the result of groundwater leaking to stream channels.

The situation is much direr for stream flows. There is less than a 1% chance stream flows will be comparable to 2015 flows by the end of August. Luckily, things cannot get too much worse.



Water table (top) and Fall Creek stream flow (bottom) near Ithaca, NY: Blue line shows 2016 conditions (this year); Gray line shows a more normal year (2015). The blue, pink, and red dashed-lines show predictions of future conditions: blue dashed line indicates a 30% chance that conditions will reach this level or higher, pink line delaminates a boundary with we expect there to be a 10% chance of being exceeded, and red line has a 1% probability of being exceeded; lowest dashed lines show worst case scenario (stream flow is likely exaggerated).