

Silber, Dijana

From: Gardiner, Robert D.
Sent: Monday, May 18, 2020 1:21 PM
To: Traynoff, Kelcey
Subject: FW: Rainfall from 5/16/2020 - 5/17/2020 and 5/17/2020 to 5/18/2020

Kurt already received this kudo email

From: Bob Hamilton <rhamilton@gha-engineers.com>
Sent: Monday, May 18, 2020 1:14 PM
To: Gardiner, Robert D. <RGardiner@lakecountyil.gov>
Subject: Re: Rainfall from 5/16/2020 - 5/17/2020 and 5/17/2020 to 5/18/2020

Hi Bob,

Thanks for all this info. Especially after a multi day event like this, it is great to have some data to make my subjective impressions more realistic. (The curse of the Civil Engineer is that you end up out in every major rain event, observing. Nicely, I got to see most of this from inside the house.)

I'm west of Wauconda, 0.4m south of 176, 0.25m east of Darrell. We got slammed, but survived very nicely. Now I have a glimmer of an idea of what the folks in Houston felt like during Harvey - it just kept on raining.

Of note, 10 years ago, we experienced power outages on a regular basis, but for the past 5+ years, I don't recall any. Apparently Comm Ed is improving the reliability of their system.

It came to mind because we dropped one phase for about 5 minutes - really odd, and it came right back on. Just had to open and reclose the breaker.

Keep up the good work.

Thanks for your efforts on this.
Say Hi to Mike and Kurt for me.

Bob Hamilton, P.E (ret)., F.ASCE Mooney N2208W
Waukegan Port District -Treasurer for the Board
Gewalt Hamilton Associates, Inc. Chairman Emeritus

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Mobile: [\(847\) 344-4494](tel:847-344-4494) (best number to reach me)
Email: rhamilton@gha-engineers.com

On Mon, May 18, 2020 at 11:24 AM Gardiner, Robert D. <RGardiner@lakecountyil.gov> wrote:

Sorry this is so late but flood response meetings take precedence over everything else.

Needless to say, we've had a lot of rain lately. No one storm was really bad but all of them back to back really added up.

Rainfall from 5/17/2020 to 5/18/2020 – Lake County received between about 1.4” and 3.1” of rain with an overall average of 1.8” +/- 0.4”

Rainfall from 5/16/2020 to 5/17/2020 – Lake County received between about 0.7” and 1.1” of rain with an overall average of 0.86” +/- 0.13”

The 48-hour period from 5/16/2020 at 7am to 5/18/2020 at 7am Lake County received between about 2.1” and 3.7” with an average of 2.7” +/- 0.4”

The 192-hour (8-day) period from 5/10/2020 to 5/18/2020 Lake County received between about 3.7” and 8” with an average of 5.6” +/- 0.8”

Let’s look at the “year rain storm” based on Revised Bulletin 70

5/17/2020 to 5/18/2020 – 24-hour peak storm: 1” in 1 hour gives about a 6-month rainfall event.

5/16/2020 to 5/18/2020 – 48 hour peak storm: 2.8” in 21 hours gives about a 1.2-year rainfall event

5/10/2020 to 5/18/2020 – 192 hour peak storm: 4.93” in 93 hours gives about a 4-year rainfall event.

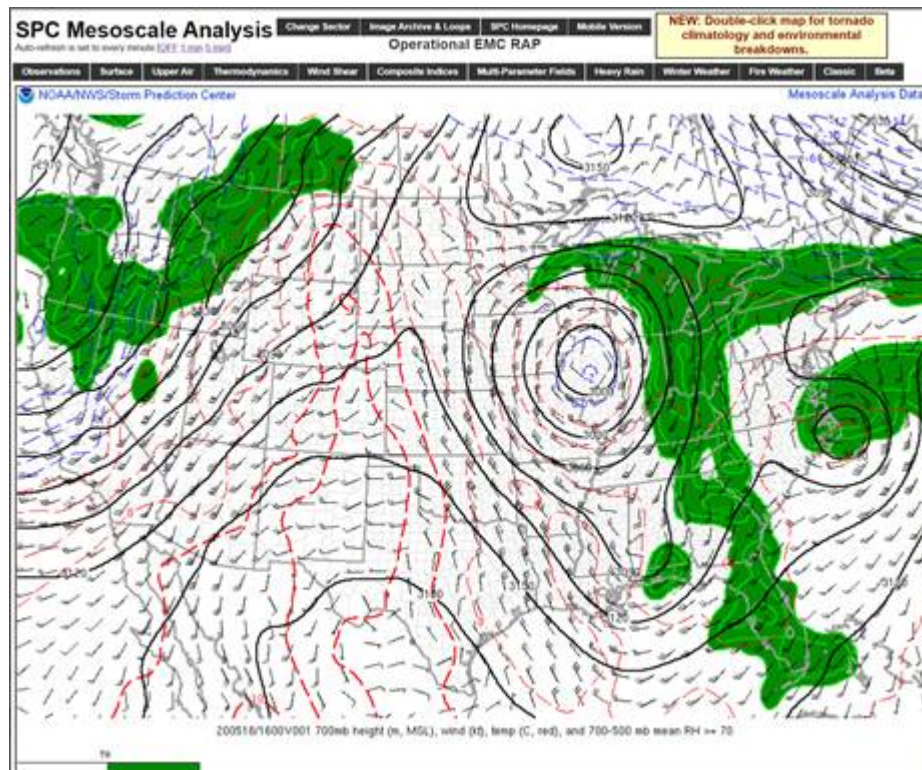
We had a slow moving low pressure system that was bringing Gulf moisture right up through Milwaukee. The storms weren’t convective...there were little or no thunderstorms. That is why the standard deviations (0.4”, 0.13”, etc) were so low...everyone got heavy rain and not just folks under a thunderstorm.

We should expect a “flood wave” coming down the Fox and Des Plaines Rivers from the rain up in Wisconsin. We also got a lot of rain locally so the river levels have risen into flood stage and will probably stay there for awhile as water keeps draining out of Wisconsin.

Everything is saturated. Depressions, ponds, lakes ditches are full. Groundwater is high everywhere. Sump pumps will be going crazy. It’s not just your house that is experiencing high water.

This is what the storm looks like now. The cyclone (low pressure system) has now moved over Michigan so they are getting the rain we received over the past couple of days. Note the counterclockwise flow in the low pressure system. This will keep bringing clouds and cool air off the Lake to us. Some of the heavier rain bands may make it across Lake Michigan and continue to give us light showers off and on. The rain shouldn’t be

much more than a few hundredths inch per day. In other words, the rainfall damage has been done and any continued showers will just serve to make the less pleasant.



The Lake County Skywarn forecast is attached as are all, what I hope are final, rainfall distribution maps.

We would like to be of assistance. If you have any questions, or would like to set up a meeting, please call our office at (847) 377-7705 or feel free to e-mail me. If you have any additional concerns that have not been addressed by the regulatory staff regarding the above comments, you may contact Chief Engineer Kurt Woolford kwoolford@lakecountyil.gov or Executive Director Michael Warner mwarner@lakecountyil.gov at (847) 377-7700.

Sincerely,

LAKE COUNTY STORMWATER MANAGEMENT COMMISSION

Robert D. Gardiner, P.E., CFM

Permit Engineer

Lake County Stormwater Management Commission

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