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2017 UDFCD Heavy Rainfall Guidance Tool

FINAL REPORT

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OVERVIEW

In early 2015, Dewberry designed and developed a Heavy Rainfall Guidance Tool (hereafter, Tool) for the Urban Drainage and Flood Control District (hereafter, UDFCD or District) to address four crucial questions regarding the summertime daily heavy rainfall threat across the UDFCD area: (i) timing, (ii) location, (iii) intensity and (iv) confidence. The Tool is based on an ensemble of high-resolution weather models that are able to directly simulate thunderstorm rainfall. The original 2015 operational version of the Tool was based on raw model data. In 2016, a Technical Memo documenting the 2015 Tool performance noted, among other things, a noticeable “overconfidence” bias where heavy rainfall was being predicted with higher frequency and higher probability than was being observed. Thus, a significant processing step was added for the 2016 operational season to reduce this bias. After the 2016 operational season, further research on bias correction was undertaken, and flow dependent biases were noted and corrections applied to 2017 operations. This Report provides an analysis of the Tool’s performance during 2017 operational season.

Tool description

The Tool accesses hourly Quantitative Precipitation Forecast (QPF) data from up to 40 high resolution weather model simulations from the National Severe Storms Laboratory (NSSL), the National Centers for Environmental Prediction (NCEP) and the National Center for Atmospheric Research (NCAR). All models have horizontal resolution of 4 km (2.4 miles) or less allowing for a drastically more realistic representation of thunderstorm-based rainfall compared weather models with coarser resolution. QPF data from the model “ensemble” is re-gridded to a common ~3.9 km grid across an area centered on the UDFCD, after which maximum hourly QPF (hereafter, QPF-Max) and Probability of Exceedance (POE; for example, chance of exceeding 1 inch per hour) are constructed for each of six forecast Zones (See Figure 1). Although UDFCD’s area is about 1,600 sq. miles, the Tool’s area covers about 7,300 sq. miles for two main reasons. First, to ensure that rainfall is captured within contributing watershed boundaries that extend outside of the official UDFCD boundary but may be of interest to the District, and second, due to the imperfect (but improving) nature of heavy rainfall forecasts.

Tool output is displayed on a web-based user interface, and is publically available at: <http://qpf.udfcd.org>. Snapshots of the “Daily Summary” and “Zone Forecasts” sections of the Tool’s web interface are shown in Figure 1 from July 26th, when rainfall exceeding 1 inch in 1 hour was observed within five of the Tool’s six forecast zones. During 2017, a notable upgrade in the Tool’s operations allowed for four updates per day compared to two daily updates during 2015 and 2016.

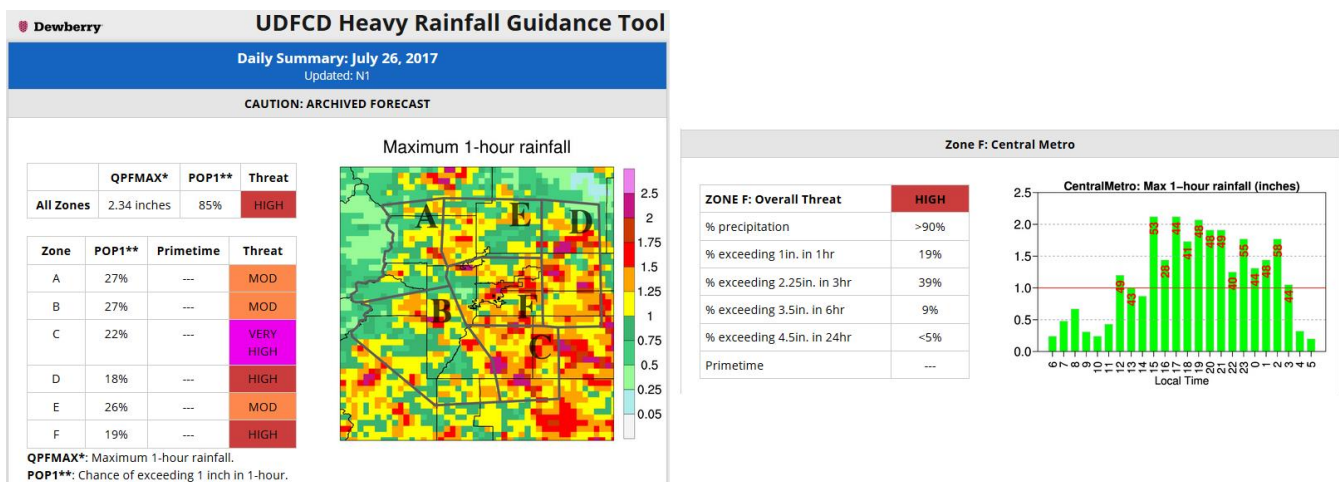


Figure 1: Snapshot of the "Daily Summary" and "Zone-Specific Forecasts" of the Tool's website for the morning update of July 26, 2017. Heavy rainfall was observed in five of the six Forecast Zones during the afternoon and evening hours.

An archive of Tool output is available by clicking on the “Archives” link at the top right of the website. This Final Report represents an official validation of the Tool’s performance during the 2017 operational season spanning May 1 to September 30. In this report, we first discuss the methodology for the validation effort and present Tool validation statistics, as well as an example of a particular event. Finally, we provide conclusions and recommendations for future operation.

METHODOLOGY

Validating the performance of rainfall forecasts is notoriously difficult due to the large spectrum of possible metrics. This is especially relevant when data from multiple weather models is involved, as is the case with the Tool. For the purposes of this report, we must recall that the Tool was designed to detect the *maximum* rainfall amount on any given day. While it is possible and potentially useful to investigate other aspects of rainfall statistics (for example, distribution across the domain, relation to climatology, etc), the primary focus of this report will be on analyzing maximum rainfall amounts in (i) each of the six Forecast Zones individually and (ii) across the six Zones collectively. Furthermore, since we are interested in relatively short-term rainfall capable of producing flash flooding, **the focus of the validation will be on the 1-hour time period.**

Rainfall Observations

We used UDFCD’s roughly 200 active ALERT rainfall gages one of the primary inputs to the validation. Raw tipping bucket data was obtained from Novastar (thanks to Steve Malers of TriLynx for assistance) and processed maximum 30-minute and hourly accumulation. Note that this is a notable upgrade to 2015 and 2016 processing, where ALERT data was binned into hourly increments before a maximum value was calculated. The latter method underestimates maximum rainfall by up to 40%. To supplement the ALERT data, we use two additional products: (i) gridded gauge-adjusted radar estimates provided by the National Oceanic and Atmospheric Administration’s Stage IV product at roughly 4 km resolution and (ii) volunteer-based observations from the CoCoRaHS network. The benefit of Stage IV is that it has full coverage in space and is especially useful due to UDFCD’s proximity to the Denver NEXRAD Doppler radar. However, Stage IV’s limitations are that (i) because it is first derived from radar reflectivity (and then gage corrected) it does not always accurately reflect the true rainfall, and (ii) because the Stage IV product is on a 4-km grid, this may act to smooth out rainfall amounts, especially for spatially explicit storms. Stage IV maximum hourly rainfall is *lower* than corresponding ALERT data during most heavy rainfall events. CoCoRaHS observations were used mainly for quality control especially during cases where only one or two ALERT gages measured heavy rainfall.

For our validation, ***we use the maximum hourly rainfall from either processed ALERT data or Stage IV.*** This represents the best readily available estimate of maximum rainfall, which is what the Tool is designed to forecast. Daily summaries of zone-aggregated and zone-specific precipitation amounts are shown in Appendices A and B, respectively.

Table 1 describes the characteristics of the six forecast zones. Five of the six zones were roughly 1,000 square miles, while Zone B (Southern Foothills) was about 2,000 square miles due to its extension to the Continental Divide. Table 1 also shows that each Zone had a widely varying number of gages within it (note that not all gages may be active at all times), ranging from zero in Zone D (Plains) to 109 in Zone F (Central Metro). The right two columns of Table 1 show rainfall statistics for the 2017 season. The number of days where maximum hourly rainfall exceeded 0.5 inch ranged from 13 in Zone E to 35 in Zones B and C. There were 65 days during the 153 day operational season when at least one Zone measured 0.5 inches in 1 hour. Regarding the more important threshold of 1 inch over 1 hour, there were 21 such days. Last season, Zone C alone observed 25 separate hours when at least 1 inch fell; this year, Zone F held the highest value, but with only 12 hours. In short, **2017 can be described as relatively active across southern areas (B, C) but very quiet across northern areas (Zones A, E).** Finally, note that in the two right columns of Table 1, the sum of the values across each Zone do not equal the total: this occurs

because there are often instances when multiple zones record rainfall accumulations exceeding these thresholds *simultaneously*.

Table 1: Summary of Forecast Zones and 2017 statistics. Note that there are 153 days in the operational season.

Forecast Zone	Area (sq. mi.)	# of ALERT gages	# of days with rainfall ≥ 0.5 in/hr	# of days with rainfall ≥ 1.0 in/hr
(A) Northern Foothills	1,031	67 gages	17 days	0 days
(B) Southern Foothills	1,961	42	35	4
(C) Palmer Divide	933	28	35	11
(D) Plains	1,283	0	31	7
(E) Northern Metro	1,051	18	12	3
(F) Central Metro	1,043	109	30	9
All Zones	7,302	264	64	19

Threat Classification System

Although the Tool outputs forecasted rainfall amounts, its broader purpose is to act as a decision support tool. Accordingly, a translation between rainfall intensity and probability into a threat level(s) is required. As in 2015 and 2016, five threat levels were used: No Threat, Low, Moderate, High and Very High. The Threat Level is based on two considerations: rainfall intensity and probability of exceedance. The following four rainfall duration thresholds are used to identify a possible threat: **1 inch per 1 hour, 2.25 inches per 3 hours, 3.5 inches per 6 hours and 4.5 inches per 24 hours**. Using multiple durations captures the wide array of rainfall events, ranging from very intense, short-duration events (e.g. 1 hour) to low-to-moderate intensity, but long-duration events (e.g. 6+ hours). In addition to the threshold itself, the probabilistic capabilities of the Tool were leveraged to quantify the confidence of a threshold being exceeded. Intuitively, assuming atmospheric model QPF has some skill, a higher POE warrants a higher threat level (as was shown to be true during 2015 and 2016). The classifications are determined using the protocol in Table 2. Note that in addition to the Zone-Specific thresholds, an “All Zones” threshold was also used to assign a single threat across the entire Tool domain. As can be expected, the thresholds for the “All Zone” threat levels were significantly higher than Zone-Specific ones, due to the increased skill that exists as a larger area is considered.

Table 2: Threat classification system.

Threat	Zone-Specific Threshold	All Zones Threshold
LOW	POE $\geq 8\%$	POE $\geq 25\%$
MODERATE	POE $\geq 19\%$	POE $\geq 39\%$
HIGH	POE $\geq 29\%$	POE $\geq 65\%$
VERY HIGH	POE $\geq 45\%$	POE $\geq 90\%$

Table 2 is the culmination of two years’ worth of operational experience, although it is important to realize that as the science continues to evolve, updates to Table 2 can be expected. Table 3 shows the number of threats identified for each Zone, categorized by threat level. For reference, Table 4 shows threat summaries from 2016. Of the 153 days in the operational season, there were 66 days where at least a Low threat was present for All Zones. This represents a modest increase from 61 days during 2016. However, comparing Table 3 and 4 shows significantly more instances of both Low and High threats during 2017, with little to no change in Moderate threats.

Table 3: 2017 Threat Level Summary, by Zone

Zone	None	Low	Mod	High	Very High	>= Low
(A) Northern Foothills	109	21	11	12	---	44
(B) Southern Foothills	106	19	11	14	3	47
(C) Palmer Divide	110	22	7	13	1	43
(D) Plains	104	26	10	11	2	49
(E) Northern Metro	115	20	10	6	2	38
(F) Central Metro	111	19	11	10	2	42
All Zones	87	13	28	24	1	66

Table 4: Same as Table 3, except for 2016, provided for reference. Note that a threat for All Zones was not issued during 2016.

Zone	None	Low	Mod	High	Very High	>= Low
(A) Northern Foothills	123	18	9	3	---	30
(B) Southern Foothills	121	17	12	3	---	32
(C) Palmer Divide	120	17	12	3	1	32
(D) Plains	123	14	10	5	1	30
(E) Northern Metro	125	15	9	4	---	27
(F) Central Metro	121	19	10	3	---	32

VALIDATION

a) Worst-case scenario analysis

A key output of the Tool is the daily 1-hour QPF-Max, which is analogous to the *realistic* worst-case scenario estimate. It is important to appreciate the significance of the term “realistic”. From a simple theoretical standpoint, one can assign a maximum potential rainfall intensity (i.e. worst-case scenario) based on historical rainfall climatology such as NOAA Atlas 14. For example, the 1-in-100 year hourly rainfall in the Denver area is 2.34 inches, while the 1-in-1000 year amount is 3.67 inches. Unfortunately, these values will drastically overestimate observed maximum rainfall the vast majority of the time, decreasing their utility in operations. To add realism, consideration of factors such as Precipitable Water content, atmospheric flow, and seasonality, will allow for a better estimate of the daily worst-case scenario. The Tool accomplishes this by considering the simulations from many weather models, in order to capture the variety of outcomes that are possible given an initial atmospheric state. In a perfect system, the worst-case scenario intensity will be higher than observed maximum rainfall, though occasionally the worst-case scenario will be realized. **Figure 2** shows this worst-case scenario assessment during the 2017 season. Note that the vast majority of the time, the QPF-Max is indeed higher than, or equal to the observed maximum (hereafter, QPE-Max) rainfall. Of the 64 days when hourly rainfall intensity exceeded 0.5 inches, QPF-Max was higher 83% of the time (89% of the time if a 10% margin is added). Focusing only on days when hourly intensity exceeds 1 inch, QPF-Max is higher or equal to observed intensity 67% of the time (81% of the time if allowing for a 10% margin). Furthermore, the correlation between QPF-Max and QPE-Max is a moderately strong 0.63, implying that as the worst-case scenario increases, so does the observed intensity. The presence of a correlation reiterates the “realistic” aspect of the QPF-Max, making it more useful for operations.

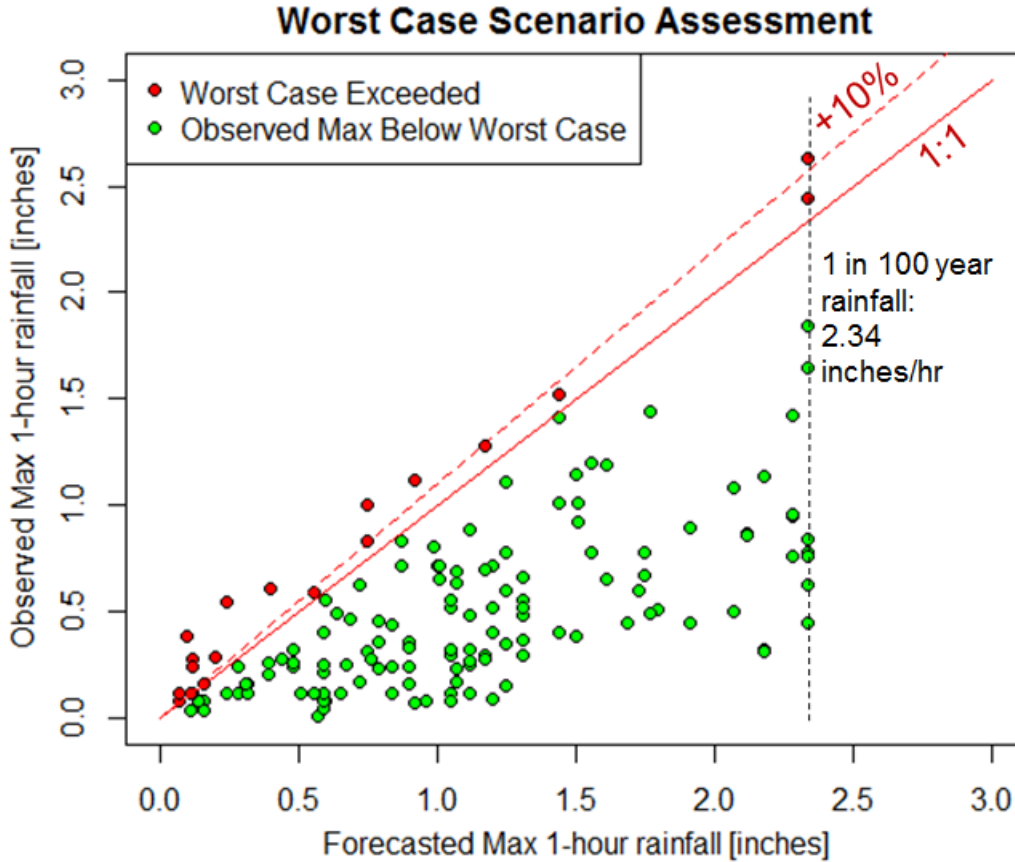


Figure 2: Comparison of bias-corrected daily 1-hour QPF-Max (i.e. “Realistic Worst Case Scenario”) and highest observed 1-hour rainfall across all Forecast Zones. Green dots show instances where QPF-Max was higher than observed, while red dots show where observed rainfall exceeded QPF-Max. The red line shows a one-to-one relationship (while the dotted line shows a 10% buffer, for reference). Note that the highest QPF-Max is limited to 2.34 inches in 1 hour (see 2016 Technical Memo for explanation), which is the NOAA Atlas 14 1-in-100 year event for the Denver area.

Table 5 shows the number of days per month when moderate (0.75 inch in 1 hour) and heavy (1 inch in 1 hour) rainfall rates were observed, compared to climatology. Of the 38 days when moderate and heavy rainfall intensity were observed, 28 occurred during July and August, which is consistent with climatology. Of the 19 days with heavy rainfall intensity, 8 (42%) occurred during July, which climatologically experiences the highest rate of such occurrence, by far.

Table 5: Monthly statistics of heavy rainfall occurrence during the 2017 season.

Month	# of days with rainfall exceeding		Climatological daily probability of exceeding	
	0.75 inch / hour	1 inch / hour	0.75 inch / hour	1 inch / hour
May	4	2	5%	3%
June	4	4	7	4
July	16	8	20	14
August	12	3	13	7
September	2	2	4	4
Total	38	19	N/A	N/A

Table 6 shows the days when QPF-Max underestimated the observed rainfall. Of five such days, QPF-Max was within 10% of the observed max rainfall intensity during four of the five. Interestingly, during two of the days (May 8 and July 26), QPF-Max was capped at 2.34 inches (the highest value allowable), suggesting that some guidance was indicating higher values.

Table 6: Summary of days when 1-hour QPF-Max underestimated rainfall intensity (only shown when observed intensity exceeded 1 inch in 1 hour). Asterisk indicates the QPF-Max was capped at its maximum allowable value (2.34 inches) after bias-correction.

Date	Max hourly observed	Hourly QPF-Max	# of Zones with > 1 in per hour
May 8	2.44 inches	2.34* inches	2
June 5	1.52	1.44	2
July 26	2.63	2.34*	5
August 2	1.28	1.17	2
August 14	1.12	0.92	1

b) Contingency Table

The Contingency Table is a useful metric for evaluating the effectiveness of the Tool’s forecasts; **Table 7** summarizes the information that can be obtained from such a table. A day is categorized as a Flood Day when the Tool forecasts a non-zero threat level. In turn, a Flood Day is observed when maximum 1-hour rainfall across all the Forecast Zones exceeds 1 inch (note that this does not actually indicate that flooding occurred, but acting as a proxy for flooding).

Table 7: Flood Day Contingency Table.

		Flood Day Forecasted	
		NO	YES
Flood Day Observed	NO	HIT	FALSE ALARM
	YES	MISS	HIT

By adding up all of the total Hits and dividing by the number of total days (153), we find the “Accuracy” rate. Meanwhile, we are also interested in the quantifying the occurrence of Misses and False Alarms; these statistics are essential for guiding future refinement of the Tool. We run these calculations for each zone separately. For completeness and a reference point, we also calculate a contingency table across all Forecast Zones to answer the broader question: “if a threat was forecast anywhere in the domain, did it verify anywhere in the domain?” Such a domain-wide contingency table is likely to yield higher Accuracy numbers than each Zone since there is more leniency in the spatial dimension. However, it is still a useful metric given the imperfect nature of heavy rainfall prediction.

Table 8 shows the Tool’s performance showed some variation across the Forecast Zones, with accuracy ranging from 79.8% in Forecast Zone C, but 71.2% in Forecast Zone A. Interestingly, Forecast Zone A did not record a single Flood Day, while Zone C recorded 14 Flood Days (tied with Zone D for the most Flood Days). It is encouraging to see that Tool performance is highest when more events occur. Across all Forecast Zones (**Table 8**, panel g) accuracy was about 73% with a 26% False Alarm Rate and a 1% Miss Rate. **Table 9** shows 2016’s Contingency Table, for reference. Owing to the relatively high Miss Rate in 2016, the 2017 Tool updates lowered the POE thresholds for all threat levels. In turn, the Miss Rate in 2017 was significantly lower than 2016, with only 2 Flood Days being unforecasted (compared to 10 in 2016). On the other hand, the 26% False Alarm Rate during 2017 was twice as high as 2016 (13%), reiterating the conundrum that minimizing the Miss Rate tends to increase the

False Alarm Rate. Nonetheless, a low Miss Rate is perhaps the most important feature that the Tool must provide and all future refinement must consider this while improving the False Alarm Rate.

Table 8: Contingency Tables of the Tool’s performance for each zone separately and for all zones together.

		Flood Day Forecasted				
		a)Zone A	NO	YES		
Flood Day Observed	NO		109 (71.2%)	44 (28.8%)	Accuracy: 71.2%	False Alarm: 28.8%
	YES		0	0 (0%)		
		b)Zone B	NO	YES		
Flood Day Observed	NO		106 (69.3%)	40 (26.1%)	Accuracy: 73.9%	False Alarm: 26.1%
	YES		0 (0%)	7 (4.6%)		
		c)Zone C	NO	YES		
Flood Day Observed	NO		109 (71.2%)	30 (19.6%)	Accuracy: 79.8%	False Alarm: 19.6%
	YES		1 (0.6%)	13 (8.5%)		
		d)Zone D	NO	YES		
Flood Day Observed	NO		102 (66.7%)	37 (24.2%)	Accuracy: 74.6%	False Alarm: 24.2%
	YES		2 (1.2%)	12 (7.8%)		
		e)Zone E	NO	YES		
Flood Day Observed	NO		115 (75.1%)	35 (22.9%)	Accuracy: 77.1%	False Alarm: 22.9%
	YES		0 (%)	3 (1.9%)		
		f)Zone F	NO	YES		
Flood Day Observed	NO		109 (71.2%)	34 (22.2%)	Accuracy: 76.6%	False Alarm: 22.2%
	YES		2 (1.2%)	8 (5.2%)		
		g)All zones	NO	YES		
Flood Day Observed	NO		85 (55.6%)	40 (26.1%)	Accuracy: 72.7%	False Alarm: 26.1%
	YES		2 (1.2%)	26 (17.0%)		

Table 9: Contingency Table from 2016, for reference.

		Flood Day Forecasted				
		All zones	NO	YES		
Flood Day Observed	NO		108 (71%)	20 (13%)	Accuracy: 80%	False Alarm: 13%
	YES		10 (7%)	15 (10%)		

Table 10 shows the Hit Rate (Accuracy) and False Alarm Rate as a function of the Tool threat level (for All Zones). An important feature of a good forecast system is the ability to discriminate between the lower and higher threat days. Indeed, **Table 10** shows that the Hit Rate steadily climbs from 23% for the Low threat to 32%, 54% and 100% for the Moderate, High and Very High threat, although it should be noted that only one day had a Very High threat so it is impossible to make any

conclusions about this threat level. There are two other important findings in **Table 10**. First, the number of threats does not decrease as one moves to a higher threat, as could perhaps be expected from first principles. For example, the number of Low threat days was 13, but the number of Moderate threat days was greater at 28; even more interestingly, there were 24 High threat days. Two possible interpretations are suggested here. First, it is possible that 2017 was a special case where many days had particularly threatening atmospheric ingredients that did not materialize into heavy rainfall. Second, it is possible that the post-processing techniques or POE thresholds were not optimally adjusted resulting in a very low probability of seeing a Low threat. Regarding the first interpretation, analysis of atmospheric anomalies does show that 2017 was remarkably wet in the southern portions of Zones B and C. Thus, it is possible that the high occurrence of Moderate and High threats was warranted, even though they did not always lead to heavy rainfall.

Table 10: Hit and False alarm rate as a function of threat level across all Forecast Zones (compare with **Table 9**, panel g).

Threat Level	# Cases	Hit Rate	False Alarm
Low	13	23%	77%
Moderate	28	32%	68%
High	24	54%	46%
Very High	1	100%	0%
Total	66	39%	61%

CONCLUSIONS

The UDFCD Heavy Rainfall Guidance Tool concluded its third season of operation on September 30th, 2017. The Tool incorporates a large number of state of the art high-resolution weather models to objectively estimate the chances of seeing heavy rainfall across the District. The Tool's methodology has undergone two upgrades since the inaugural 2015 season. In 2016, model bias correction and post-processing was included, which resulted in a notable drop in the False Alarm Rate but a rise in the Miss Rate. In 2017, flow dependent post-processing was included, as well as an estimate of the threat level across all Forecast Zones. The Miss Rate in 2017 was very low, but the False Alarm Rate was higher.

There was significant spatial variation in heavy rainfall occurrence during 2017, with many events observed in the far southern watersheds contributing to UDFCD, while northern areas were relatively quiet. For example, there were 35 days with hourly rainfall intensity exceeding 0.5 inches in Forecast Zone C (Palmer Divide) but only 12 such days in Forecast Zone E (Northern Metro). There were a total of 66 days (out of the 153 day operational season) where at least a Low threat was issued for the entire domain. This number ranged from 38 to 47 days when looking at individual zones.

The Tool continued to provide a good estimate of the *realistic* worst-case scenario of the daily heavy rainfall threat, one of the key metrics that it was designed to forecast. This was manifested by its forecasted 1-hour maximum rainfall rates (QPF-Max) being at or above those that were observed 83% of the time (89% with allowance of a 10% error margin) during situations where observed rainfall intensity exceeded 0.5 inches. This percentage was still at a relatively high 67% (81% with a 10% error margin) when limiting to days when at least 1 inch in 1 hour accumulations were observed. Heavy rainfall (1 inch in 1 hour or more) occurrence was seasonally distributed in a manner consistent with climatology, with 8 of 19 days occurring during July. Of the five events where Tool underestimated observed rainfall intensity, on four of the events the forecast max intensity was within 10%.

Contingency tables monitoring Hits, False Alarms and Misses showed that the Hit rate (or Accuracy rate) was about 73% in 2017, down from 2016's 80% but up from 2015's 69%. The most notable reason for this is the processing algorithms, and changes in the threshold of the Probability of Exceedance (see **Table 2**) resulted in a significant drop in the Miss Rate from 10% in 2016 to 1.2% in 2017. However, at the same time, the False Alarm Rate increased from 13% in 2016 to 26% in 2017. This trade-off between False Alarm Rate and Miss Rate can be expected, but our experience suggests the need to minimize the Miss Rate as being of more importance. Given the low Miss Rate, it is recommended that any refinement work for 2018 operations focus on lowering the False Alarm Rate.

In conclusion, the findings of this Final Report suggest the Heavy Rainfall Guidance Tool continues to show utility in increasing lead time and accuracy of heavy rainfall forecasts for the District. The low Miss Rate observed during 2017 was an encouraging result. It is recommended that post-processing methods be re-assessed before 2018 operations in order to (i) incorporate 2017 observations, (ii) investigate the sensitivity between decreasing the False Alarm Rate while maintaining a low Miss Rate, and (iii) test the threat level thresholds to determine if changes are necessary to reduce the occurrence of Moderate and High threat levels.

REFERENCES

Dewberry, 2016: UDFCD Heavy Rainfall Guidance Tool – Upgrades for 2016 Operational Season. Submitted to the Urban Drainage and Flood Control District on May 27, 2016, revised on July 26, 2016.

APPENDIX A – DISTRICT-WIDE FORECASTS AND OBSERVATIONS

The table below show daily summary of observations and forecasts for all zones. See Appendix B for zone-specific information. Column names are described below:

Column	Units	Description
A	N/A	Date
B	Inches	Max 24-hour from CoCoRaHS gages.
C	#	Number of CoCoRaHS gages exceeding 1 inch.
D	#	Number of CoCoRaHS gages with measurable precipitation.
E	Inches	ALERT max 30 minute precipitation.
F	Inches	ALERT max 1-hour precipitation.
G	Inches	ALERT max 2-hour precipitation.
H	Inches	ALERT second highest 1-hour precipitation.
I	Inches	ALERT max 24-hour precipitation.
J	#	Number of ALERT gages exceeding 1 inch in 1 hour.
K	Inches	NOAA Stage IV max 1-hour precipitation.
L	Inches	NOAA Stage IV max 2-hour precipitation.
M	Inches	NOAA Stage IV max 24-hour precipitation. Note that this can be lower than column (L) because more gages are used during the 24-hour gage adjustment.
N	Yes/No	First guess at whether or not a Flood Day (QPE exceeding 1 inch in 1 hour) is observed.
O	Yes/No	Reassessment of (N) after manual quality control.
NZones	#	Number of zones where a Flood Day was observed.
P	Threat, %	Tool threat level (color), and probability of exceeding 1 inch in 1 hour.

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification			Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	NZones	P
5/1	0.07	0	3	0.12	0.12	0.12	0.04	0.12	0	0.04	0.08	0.13				1
5/2	1.05	1	256	0.24	0.24	0.28	0.24	0.4	0	0.17	0.32	0.36				3
5/3	0.31	0	247	0.16	0.2	0.24	0.16	0.44	0	0.21	0.39	0.49				1
5/4	0.03	0	3	0.28	0.28	0.28	0.04	0.28	0	0	0	0				0
5/5	0.01	0	1	0.08	0.08	0.08	0	0	0	0	0	0				0
5/6	0.12	0	39	0.12	0.12	0.12	0.12	0.12	0	0.25	0.45	0.16				7
5/7	0.4	0	240	0.24	0.24	0.28	0.24	0.28	0	0.81	1.24	0.89	YES			21
5/8	1.77	25	303	2.44	2.44	2.44	1.2	2.8	6	1.34	2.67	1.79	YES	YES	2	84
5/9	1.07	1	208	0.67	0.67	0.67	0.28	0.28	0	0.35	0.66	0.5				85
5/10	1.71	15	292	0.39	0.47	0.64	0.4	2	0	0.66	1.08	1.36	YES			36
5/11	0.09	0	64	0.2	0.24	0.24	0.2	0.24	0	0.07	0.14	0.22				1
5/12	0.09	0	14	0.12	0.12	0.12	0.12	0.12	0	0.09	0.17	0.12				4
5/13	0	0	0	0.04	0.04	0.04	0	0.04	0	0	0	0				1
5/14	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01				3
5/15	0.15	0	6	0.2	0.28	0.28	0.04	0.28	0	0.08	0.47	0.08				2
5/16	0.43	0	179	0.16	0.2	0.24	0.2	0.24	0	0.83	1.44	1.33	YES			21
5/17	3.1	170	267	0.76	0.88	0.92	0.76	2.2	0	1.01	1.97	2.04	YES	YES	2	57
5/18	5.2	124	276	0.43	0.48	0.6	0.36	1.6	0	0.46	0.92	2.54				49
5/19	0.52	0	121	0.24	0.44	0.76	0.4	1.76	0	0.12	0.23	0.72				2
5/20	0.14	0	5	0.47	0.55	0.88	0.53	1.72	0	0	0.03	0				1
5/21	0.72	0	284	0.63	0.63	0.63	0.28	0.72	0	0.48	0.94	0.8				5
5/22	0.8	0	297	0.59	0.59	0.71	0.56	0.71	0	0.28	0.54	0.47				3
5/23	0.03	0	16	0.28	0.29	0.32	0.28	0.32	0	0.01	0.01	0.01				0
5/24	0.03	0	2	0.16	0.16	0.16	0.08	0.16	0	0.02	0.04	0.05				1
5/25	0.86	0	296	0.72	0.72	0.72	0.64	0.76	0	0.69	1.36	0.97	YES			15
5/26	0.49	0	168	0.32	0.32	0.32	0.24	0.32	0	0.6	1.07	0.92	YES			59
5/27	0.76	0	273	0.48	0.64	0.64	0.56	0.72	0	0.46	0.87	0.72				10
5/28	0.26	0	79	0.08	0.12	0.12	0.12	0.12	0	0.17	0.3	0.18				4
5/29	0.72	0	214	0.6	0.72	0.84	0.68	0.84	0	0.41	0.73	0.49				49
5/30	0.43	0	100	0.52	0.52	0.52	0.2	0.52	0	0.34	0.55	0.34				29
5/31	0.21	0	30	0.16	0.16	0.24	0.12	0.28	0	0.3	0.68	0.32				35
6/1	0.41	0	92	0.52	0.56	0.6	0.56	0.6	0	0.39	0.59	0.43				44
6/2	1.01	1	236	0.44	1.01	1.01	0.72	1.01	1	0.74	1.4	0.76	YES	YES	1	27
6/3	0.13	0	17	0.08	0.08	0.08	0.05	0.08	0	0.07	0.14	0.1				2
6/4	0.02	0	1	0.04	0.04	0.08	0	0.04	0	0.05	0.11	0.07				3
6/5	1.11	1	80	0.32	0.4	0.4	0.2	0.44	0	1.52	2.92	2.09	YES	YES	2	61
6/6	0.97	0	93	0.84	0.92	0.92	0.48	0.92	0	1.65	2.16	1.93	YES	YES	2	84
6/7	0.87	0	242	0.96	1	1	0.6	1	0	1.42	2.74	1.73	YES	YES	2	87
6/8	0.09	0	32	0.39	0.39	0.39	0.12	0.39	0	0.2	0.36	0.47				33
6/9	0	0	0	0.08	0.08	0.12	0.04	0.16	0	0	0	0				0

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification			Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	NZones	P
6/10	0.02	0	1	0.12	0.12	0.16	0.08	0.2	0	0	0	0				1
6/11	0.07	0	7	0.2	0.2	0.24	0.12	0.36	0	0.32	0.56	0.32				81
6/12	0.05	0	7	0.04	0.04	0.04	0.04	0.04	0	0.07	0.13	0.07				44
6/13	0	0	0	0.12	0.12	0.12	0.08	0.24	0	0	0	0				1
6/14	0	0	0	0.12	0.12	0.12	0.12	0.16	0	0.04	0.08	0.04				1
6/15	0	0	0	0.12	0.12	0.16	0.08	0.2	0	0	0	0				1
6/16	0.02	0	2	0.04	0.04	0.04	0.04	0.04	0	0	0	0				0
6/17	0.06	0	24	0.12	0.12	0.12	0.08	0.2	0	0.26	0.49	0.28				3
6/18	0	0	0	0.08	0.08	0.08	0.08	0.16	0	0	0	0				1
6/19	0.01	0	1	0.12	0.12	0.16	0.08	0.28	0	0	0	0				1
6/20	0.1	0	66	0.24	0.24	0.24	0.12	0.24	0	0.31	0.6	0.35				2
6/21	0.03	0	10	0.08	0.08	0.08	0.04	0.08	0	0.07	0.13	0.08				11
6/22	0.5	0	286	0.28	0.36	0.4	0.36	0.36	0	0.51	0.98	0.81				48
6/23	0.26	0	151	0.16	0.2	0.24	0.16	0.24	0	0.56	1.08	0.23	YES			4
6/24	0.12	0	6	0.12	0.12	0.12	0.08	0.24	0	0.05	0.29	0.07				12
6/25	0.15	0	6	0.12	0.12	0.12	0.04	0.28	0	0.3	0.99	0.3				25
6/26	0.03	0	5	0.12	0.12	0.12	0.08	0.24	0	0.37	0.69	0.39				48
6/27	0.03	0	7	0.16	0.16	0.16	0.12	0.24	0	0.1	0.17	0.1				1
6/28	0.18	0	19	0.16	0.16	0.16	0.16	0.16	0	0.32	0.6	0.6				3
6/29	0.58	0	274	0.36	0.44	0.44	0.4	0.48	0	0.49	0.96	0.71				5
6/30	0.14	0	11	0.08	0.08	0.08	0.08	0.08	0	0.09	0.18	0.09				22
7/1	0.02	0	4	0.08	0.08	0.08	0.04	0.24	0	0.23	0.39	0.27				5
7/2	0.14	0	12	0.08	0.08	0.16	0.04	0.2	0	0.06	0.13	0.1				3
7/3	0.2	0	56	0.08	0.08	0.12	0.08	0.2	0	0.17	0.45	0.19				4
7/4	0.4	0	20	0.16	0.16	0.16	0.08	0.24	0	0.72	1.22	0.79	YES			10
7/5	0	0	0	0.24	0.24	0.24	0.12	0.12	0	0.26	0.44	0.26				2
7/6	0.26	0	27	0.83	0.83	0.83	0.24	0.87	0	0.54	1.34	0.54	YES			7
7/7	0.94	0	103	0.08	0.08	0.12	0.04	0.16	0	0.5	1	1.09	YES			65
7/8	1.25	1	93	0.64	0.64	0.64	0.48	0.64	0	0.78	1.39	1.91	YES	YES	1	61
7/9	1.03	1	22	0.08	0.08	0.12	0.08	0.16	0	0.12	0.23	0.34				23
7/10	0.37	0	69	0.32	0.36	0.36	0.28	0.68	0	0.4	0.71	0.61				48
7/11	0.94	0	120	0.12	0.16	0.16	0.12	0.28	0	0.45	0.76	0.79				60
7/12	1.24	3	281	0.24	0.36	0.36	0.32	0.68	0	0.84	1.61	1.31	YES	YES	2	74
7/13	0.62	0	42	0.6	0.76	0.8	0.2	0.8	0	0.7	1.41	0.82	YES			68
7/14	1.3	2	143	0.6	0.72	0.72	0.6	1.08	0	1.44	1.78	1.65	YES	YES	1	78
7/15	1.26	3	144	0.76	0.84	0.84	0.8	0.88	0	1.11	2.17	0.82	YES	YES	1	42
7/16	0.16	0	28	0.16	0.16	0.16	0.08	0.2	0	0.25	0.46	0.45				33
7/17	0.83	0	47	0.29	0.29	0.29	0.16	0.29	0	0.78	1.39	1.13	YES			43
7/18	1.18	1	62	0.4	0.4	0.44	0.4	0.56	0	0.63	1.09	0.84	YES	YES	1	56
7/19	0.75	0	126	1.04	1.28	1.48	1.12	1.52	2	1.41	2.64	2.41	YES	YES	2	65

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification			Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	NZones	P
7/20	0.91	0	145	1.12	1.2	1.2	0.6	1.2	1	0.99	2.38	1.45	YES	YES	2	68
7/21	1.42	1	293	0.75	0.75	0.75	0.75	0.87	0	1.14	2.28	1.66	YES	YES	2	84
7/22	0.17	0	28	0.12	0.12	0.12	0.08	0.2	0	0.31	0.55	0.44				71
7/23	0.5	0	27	1.04	1.08	1.08	0.32	1.08	1	1.02	1.94	1.13	YES	YES	1	72
7/24	0.26	0	14	0.2	0.2	0.2	0.04	0.24	0	0.48	0.74	0.54				43
7/25	1.42	1	318	0.44	0.48	0.52	0.4	0.68	0	0.78	1.46	0.92	YES			48
7/26	3	74	334	2.35	2.63	2.71	1.6	3.83	7	1.22	2.3	3.05	YES	YES	5	86
7/27	1.01	1	99	0.39	0.39	0.39	0.24	0.39	0	0.78	1.54	1.16	YES	YES	1	93
7/28	1.73	3	206	1.28	1.84	2	0.76	2.04	2	1.4	2.73	1.81	YES	YES	2	84
7/29	0.43	0	195	0.4	0.4	0.4	0.31	0.64	0	0.45	0.81	0.79				78
7/30	1.54	3	176	0.88	0.92	0.92	0.56	0.96	0	0.95	1.64	1	YES	YES	1	63
7/31	0.38	0	36	0.12	0.12	0.12	0.12	0.12	0	0.35	0.63	0.37				18
8/1	0.1	0	14	0.11	0.11	0.11	0.08	0.11	0	0.23	0.34	0.25				14
8/2	0.91	0	321	1.12	1.28	1.32	1.04	1.48	2	0.88	1.68	1.55	YES	YES	2	12
8/3	0.54	0	277	0.87	0.87	0.87	0.32	0.32	0	0.39	0.74	1.07				65
8/4	0.96	0	150	0.35	0.35	0.35	0.35	0.35	0	0.7	1.38	0.83	YES			21
8/5	1.01	2	284	0.92	0.92	0.92	0.92	0.96	0	0.66	1.27	0.69	YES			35
8/6	1.04	1	301	0.76	0.76	0.76	0.52	0.8	0	0.69	1.22	1.09	YES			80
8/7	1.75	13	334	0.72	0.96	1.2	0.68	1.52	0	0.8	1.48	1.5	YES	YES	2	79
8/8	0.8	0	299	0.44	0.44	0.44	0.36	0.52	0	0.9	1.73	1.08	YES			65
8/9	0.73	0	239	0.44	0.44	0.44	0.4	0.76	0	0.6	1.07	0.78	YES			39
8/10	1.26	1	281	0.44	0.44	0.44	0.4	0.56	0	0.86	1.7	1.24	YES	YES	1	63
8/11	0.39	0	99	0.76	0.76	0.76	0.48	0.76	0	0.58	1.13	0.59	YES			74
8/12	0.7	0	199	1	1	1	0.8	1	0	0.96	1.77	1.26	YES	YES	1	13
8/13	0.59	0	201	0.52	0.52	0.52	0.32	0.56	0	0.65	1.29	0.67	YES			22
8/14	0.69	0	113	1	1.12	1.12	0.76	1.12	1	0.86	1.53	0.87	YES	YES	1	29
8/15	1.03	1	281	1.08	1.36	1.36	0.76	1.36	1	1.41	2.65	1.88	YES	YES	3	59
8/16	0.29	0	182	0.32	0.32	0.32	0.32	0.32	0	0.4	0.66	0.4				39
8/17	0.21	0	68	0.12	0.12	0.12	0.08	0.12	0	0.22	0.36	0.33				3
8/18	0.04	0	4	0.12	0.12	0.12	0.08	0.12	0	0.05	0.1	0.06				4
8/19	0.05	0	25	0.12	0.12	0.12	0.12	0.2	0	0.12	0.22	0.14				5
8/20	0.1	0	11	0.12	0.12	0.12	0.12	0.2	0	0.15	0.28	0.38				33
8/21	0.06	0	13	0.16	0.16	0.16	0.08	0.16	0	0.49	0.8	1.13				41
8/22	0.3	0	33	0.36	0.4	0.4	0.4	0.4	0	0.65	1.17	1.01	YES			89
8/23	0.89	0	81	0.56	0.72	0.72	0.56	0.72	0	0.69	1.28	0.72	YES			21
8/24	0.91	0	80	0.2	0.24	0.3	0.23	0.3	0	0.45	0.88	0.58				41
8/25	0.04	0	12	0.12	0.12	0.12	0.12	0.2	0	0.06	0.28	0.12				7
8/26	0.03	0	5	0.12	0.12	0.12	0.12	0.2	0	0.05	0.07	0.05				3
8/27	0.01	0	1	0.12	0.12	0.12	0.12	0.24	0	0.24	0.38	0.41				8
8/28	0.1	0	2	0.2	0.2	0.2	0.12	0.2	0	0.28	0.53	0.31				5

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification			Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	NZones	P
8/29	0.31	0	23	0.32	0.32	0.32	0.08	0.32	0	0.29	0.54	0.32				29
8/30	0.77	0	69	0.48	0.48	0.48	0.28	0.48	0	0.69	1.36	0.81	YES			11
8/31	0.56	0	113	0.16	0.16	0.16	0.16	0.24	0	0.89	1.64	1.16	YES	YES	1	30
9/1	0.02	0	2	0.16	0.16	0.16	0.16	0.24	0	0.09	0.17	0.11				9
9/2	0.02	0	2	0.12	0.12	0.12	0.12	0.12	0	0.11	0.2	0.12				1
9/3	0.05	0	4	0.12	0.12	0.12	0.12	0.2	0	0	0.01	0				0
9/4	0.15	0	7	0.12	0.12	0.12	0.08	0.2	0	0.61	1.21	0.65	YES			1
9/5	0.02	0	2	0.16	0.16	0.16	0.08	0.2	0	0	0	0				0
9/6	0	0	0	0.12	0.12	0.12	0.08	0.12	0	0	0	0				1
9/7	0.05	0	4	0.12	0.12	0.12	0.08	0.24	0	0.11	0.21	0.13				8
9/8	0.12	0	33	0.32	0.36	0.36	0.12	0.36	0	0.52	1.04	0.72	YES			28
9/9	0.48	0	30	0.32	0.36	0.36	0.32	0.36	0	0.16	0.31	0.16				14
9/10	0.38	0	44	0.44	0.56	0.6	0.44	0.6	0	0.36	0.64	0.49				21
9/11	1.14	2	79	0.68	0.76	0.8	0.4	0.8	0	1.19	2.08	1.43	YES	YES	2	64
9/12	0.4	0	15	0.04	0.04	0.04	0.04	0.04	0	0.3	0.58	0.34				12
9/13	0.43	0	100	0.2	0.2	0.2	0.2	0.24	0	0.25	0.49	0.36				5
9/14	0.16	0	65	0.32	0.32	0.32	0.12	0.32	0	0.3	0.64	0.44				23
9/15	0.39	0	150	0.26	0.26	0.27	0.26	0.27	0	0.47	0.91	0.56				5
9/16	0.07	0	77	0.12	0.12	0.12	0.08	0.24	0	0.06	0.15	0.17				22
9/17	0.4	0	138	0.52	0.52	0.6	0.36	0.6	0	0.4	0.77	0.4				39
9/18	0	0	0	0.39	0.39	0.39	0.12	0.39	0	0	0	0				1
9/19	0.02	0	2	0.08	0.08	0.08	0.04	0.16	0	0.02	0.04	0.04				5
9/20	0	0	0	0.24	0.24	0.24	0.08	0.24	0	0	0	0				1
9/21	0.02	0	1	0.4	0.4	0.4	0.39	0.16	0	0	0.01	0				1
9/22	0.68	0	140	0.12	0.12	0.12	0.08	0.12	0	0.07	0.42	0.24				12
9/23	1.62	33	318	0.52	0.6	0.88	0.56	1.24	0	1.15	2.08	1.77	YES	YES	2	88
9/24	0.86	0	302	0.2	0.24	0.28	0.2	0.8	0	0.14	0.28	0.7				24
9/25	0.38	0	254	0.12	0.2	0.32	0.08	0.4	0	0.33	0.55	0.79				16
9/26	0.69	0	239	0.16	0.24	0.4	0.2	0.6	0	0.46	0.91	1.02				7
9/27	0.76	0	318	0.36	0.36	0.4	0.24	0.68	0	0.19	0.33	0.81				17
9/28	0.84	0	251	0.44	0.60	0.60	0.63	0.63	0	0.2	0.39	0.71				3
9/29	0.4	0	221	0.24	0.28	0.32	0.16	0.32	0	0.23	0.44	0.23				44
9/30	0.4	0	168	0.2	0.2	0.2	0.12	0.24	0	0.27	0.5	0.7				39

APPENDIX B – ZONE SPECIFIC FORECASTS AND OBSERVATIONS

The tables below show daily summaries of observations and forecasts for each of the six forecast zones (i.e. analogous to Appendix A, but for each forecast zone separately). Column names are described below:

Column	Units	Description			
A	N/A	Date		K	Inches NOAA Stage IV max 1-hour precipitation.
B	Inches	Max 24-hour from CoCoRaHS gages.		L	Inches NOAA Stage IV max 2-hour precipitation.
C	#	Number of CoCoRaHS gages exceeding 1 inch.		M	Inches NOAA Stage IV max 24-hour precipitation. Note that this can be lower than column (L) because more gages are used during the gage adjustment of radar estimates.
D	#	Number of CoCoRaHS gages with measurable precipitation.		N	Yes/No First guess at whether or not a Flood Day (QPE exceeding 1 inch in 1 hour) is observed.
E	Inches	ALERT max 30 minute precipitation.		O	Yes/No Reassessment of (N) after manual quality control.
F	Inches	ALERT max 1-hour precipitation.		P	Threat, Tool threat level (color), and probability of exceeding 1 inch in 1 hour.
G	Inches	ALERT max 2-hour precipitation.			
H	Inches	ALERT second highest 1 hour precipitation.			
I	Inches	ALERT max 24-hour precipitation.			
J	#	Number of ALERT gages exceeding 1 inch in 1 hour.			

a) Forecast Zone A: North Foothills

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0.01	0	1	0.12	0.12	0.12	0.04	0.12	0	0.01	0.02	0.13			0
5/2	0.17	0	27	0.08	0.08	0.08	0.08	0.12	0	0.07	0.18	0.36			1
5/3	0.16	0	21	0.16	0.2	0.24	0.16	0.24	0	0.06	0.1	0.15			0
5/4	0.02	0	1	0	0	0	0	0	0	0	0	0			0
5/5	0	0	0	0	0	0	0	0	0	0	0	0			0
5/6	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			1
5/7	0.35	0	28	0.2	0.24	0.28	0.24	0.28	0	0.22	0.34	0.33			3
5/8	0.85	0	31	0.4	0.52	0.72	0.44	1.64	0	0.28	0.49	0.55			30
5/9	1.07	1	29	0.67	0.67	0.67	0.2	0.16	0	0.29	0.52	0.33			28
5/10	1.6	7	32	0.39	0.47	0.64	0.4	2	0	0.21	0.41	1.21			6
5/11	0.02	0	3	0.2	0.24	0.24	0.04	0.24	0	0.01	0.01	0.02			0
5/12	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			2
5/13	0	0	0	0	0	0	0	0	0	0	0	0			1
5/14	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01			1
5/15	0	0	0	0.2	0.28	0.28	0	0.28	0	0	0	0			1
5/16	0.13	0	21	0.08	0.08	0.08	0.08	0.08	0	0.16	0.24	0.34			7
5/17	1.93	25	26	0.71	0.71	0.76	0.6	2.2	0	0.18	0.38	1.41			16
5/18	2.49	25	28	0.16	0.2	0.24	0.12	0.88	0	0.26	0.51	2.44			20
5/19	0.33	0	19	0.24	0.44	0.76	0.4	1.76	0	0.1	0.19	0.72			1
5/20	0	0	0	0.47	0.55	0.88	0.53	1.72	0	0	0	0			0
5/21	0.37	0	28	0.2	0.28	0.36	0.24	0.44	0	0.17	0.31	0.34			1
5/22	0.39	0	30	0.2	0.25	0.28	0.24	0.32	0	0.19	0.37	0.47			1
5/23	0.01	0	2	0.28	0.29	0.32	0.28	0.32	0	0	0	0			0
5/24	0.01	0	1	0.04	0.04	0.04	0.04	0.04	0	0.02	0.04	0.05			0
5/25	0.58	0	29	0.28	0.28	0.28	0.28	0.4	0	0.27	0.5	0.97			3
5/26	0.16	0	25	0.08	0.08	0.08	0.08	0.12	0	0.29	0.45	0.33			10
5/27	0.42	0	28	0.32	0.32	0.32	0.28	0.44	0	0.15	0.27	0.45			1
5/28	0.05	0	9	0.04	0.04	0.04	0.04	0.04	0	0.04	0.07	0.09			1
5/29	0.24	0	29	0.32	0.32	0.32	0.32	0.36	0	0.17	0.27	0.31			6
5/30	0.17	0	24	0.09	0.11	0.11	0.08	0.11	0	0.11	0.21	0.22			2
5/31	0.1	0	7	0.08	0.08	0.08	0.04	0.08	0	0.22	0.37	0.22			6
6/1	0.15	0	10	0.24	0.24	0.24	0.08	0.24	0	0.2	0.26	0.29			21
6/2	0.3	0	23	0.44	0.48	0.48	0.48	0.68	0	0.17	0.22	0.4			7
6/3	0.13	0	12	0.08	0.08	0.08	0.05	0.08	0	0.07	0.14	0.1			1
6/4	0	0	0	0	0	0	0	0	0	0	0	0.05			2
6/5	0.38	0	22	0.32	0.32	0.32	0.2	0.32	0	0.37	0.67	0.46			10
6/6	0.91	0	22	0.32	0.36	0.36	0.32	0.4	0	0.7	1.34	1.01	YES		40
6/7	0.57	0	30	0.32	0.32	0.32	0.32	0.36	0	0.65	1.28	0.68	YES		44
6/8	0.07	0	17	0.16	0.16	0.2	0.12	0.2	0	0.2	0.36	0.42			2
6/9	0	0	0	0	0	0	0	0	0	0	0	0			0

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/10	0	0	0	0	0	0	0	0	0	0	0	0			0
6/11	0.02	0	3	0	0	0	0	0	0	0.03	0.04	0.03			44
6/12	0.03	0	4	0	0	0	0	0	0	0.04	0.06	0.05			3
6/13	0	0	0	0	0	0	0	0	0	0	0	0			1
6/14	0	0	0	0	0	0	0	0	0	0	0	0			1
6/15	0	0	0	0	0	0	0	0	0	0	0	0			0
6/16	0	0	0	0	0	0	0	0	0	0	0	0			0
6/17	0.01	0	1	0	0	0	0	0	0	0.08	0.09	0.08			0
6/18	0	0	0	0	0	0	0	0	0	0	0	0			0
6/19	0	0	0	0	0	0	0	0	0	0	0	0			0
6/20	0.05	0	10	0.08	0.08	0.08	0.04	0.08	0	0.07	0.13	0.14			1
6/21	0	0	0	0	0	0	0	0	0	0.05	0.09	0.08			3
6/22	0.47	0	32	0.28	0.28	0.28	0.16	0.32	0	0.41	0.68	0.69			10
6/23	0.08	0	14	0.08	0.08	0.08	0.08	0.08	0	0.06	0.11	0.01			0
6/24	0.01	0	1	0	0	0	0	0	0	0	0	0			1
6/25	0	0	0	0	0	0	0	0	0	0	0	0			1
6/26	0.03	0	4	0.04	0.04	0.04	0	0.04	0	0.03	0.05	0.03			2
6/27	0	0	0	0	0	0	0	0	0	0.02	0.03	0.02			0
6/28	0.08	0	1	0.16	0.16	0.16	0.16	0.16	0	0.04	0.06	0.05			1
6/29	0.39	0	29	0.28	0.28	0.28	0.2	0.36	0	0.14	0.26	0.21			1
6/30	0.01	0	1	0.08	0.08	0.08	0.08	0.08	0	0	0	0			2
7/1	0	0	0	0	0	0	0	0	0	0	0	0			0
7/2	0.04	0	1	0	0	0	0	0	0	0.03	0.05	0.05			2
7/3	0.07	0	6	0	0	0	0	0	0	0.05	0.11	0.07			1
7/4	0.09	0	10	0.16	0.16	0.16	0.08	0.16	0	0.09	0.18	0.12			2
7/5	0	0	0	0	0	0	0	0	0	0.1	0.18	0.1			1
7/6	0.26	0	9	0.83	0.83	0.83	0.24	0.87	0	0.54	1.05	0.54	YES		5
7/7	0.34	0	22	0.08	0.08	0.12	0.04	0.16	0	0.29	0.63	0.55			12
7/8	0.43	0	28	0.28	0.28	0.28	0.28	0.28	0	0.5	0.92	0.58			12
7/9	1.03	1	18	0.08	0.08	0.08	0.04	0.08	0	0.12	0.23	0.34			6
7/10	0.26	0	31	0.28	0.28	0.28	0.28	0.32	0	0.12	0.19	0.39			15
7/11	0.28	0	24	0.12	0.16	0.16	0.12	0.28	0	0.17	0.35	0.45			21
7/12	0.59	0	31	0.12	0.12	0.16	0.08	0.16	0	0.4	0.74	0.97			16
7/13	0.01	0	1	0	0	0	0	0	0	0.44	0.64	0.52			36
7/14	0.02	0	3	0	0	0	0	0	0	0.18	0.29	0.37			16
7/15	0.17	0	3	0.08	0.08	0.08	0	0.08	0	0.04	0.07	0.12			4
7/16	0.12	0	10	0.04	0.04	0.04	0	0.04	0	0.24	0.38	0.3			5
7/17	0.25	0	18	0.29	0.29	0.29	0.16	0.29	0	0.31	0.6	0.48			15
7/18	0.41	0	14	0.4	0.4	0.4	0.4	0.4	0	0.63	1.04	0.68	YES		20
7/19	0.33	0	25	0.08	0.08	0.08	0.04	0.08	0	0.71	1.24	1.06	YES		23
7/20	0.61	0	20	0.08	0.08	0.12	0.04	0.12	0	0.5	0.97	0.59			17

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/21	1.42	1	32	0.52	0.64	0.64	0.52	0.8	0	0.49	0.96	0.94			42
7/22	0.17	0	19	0.12	0.12	0.12	0.08	0.12	0	0.31	0.55	0.44			26
7/23	0.07	0	8	0.52	0.56	0.56	0	0.56	0	0.36	0.7	0.62			33
7/24	0.17	0	6	0.08	0.08	0.12	0.04	0.12	0	0.23	0.44	0.23			4
7/25	0.59	0	34	0.24	0.29	0.32	0.28	0.56	0	0.17	0.32	0.57			8
7/26	1.49	2	36	0.56	0.68	0.76	0.57	1.12	0	0.61	1.19	1.43	YES		26
7/27	0.17	0	19	0.04	0.04	0.04	0.04	0.08	0	0.22	0.42	0.26			43
7/28	0.6	0	30	0.46	0.46	0.51	0.4	0.52	0	0.44	0.77	0.61			39
7/29	0.3	0	28	0.4	0.4	0.4	0.24	0.4	0	0.11	0.2	0.28			25
7/30	1.54	2	31	0.44	0.48	0.48	0.48	0.56	0	0.41	0.84	0.7			36
7/31	0.15	0	12	0.12	0.12	0.12	0.12	0.12	0	0.11	0.19	0.14			6
8/1	0.02	0	4	0.11	0.11	0.11	0.08	0.11	0	0.09	0.22	0.25			4
8/2	0.67	0	34	0.76	0.8	0.8	0.56	0.8	0	0.33	0.6	0.59			1
8/3	0.2	0	36	0.04	0.08	0.08	0.08	0.08	0	0.39	0.74	0.54			6
8/4	0.28	0	10	0.12	0.12	0.12	0.08	0.12	0	0.68	1.19	0.73	YES		1
8/5	0.55	0	27	0.24	0.24	0.24	0.22	0.24	0	0.32	0.52	0.48			5
8/6	0.63	0	35	0.2	0.2	0.24	0.16	0.24	0	0.28	0.56	0.48			33
8/7	0.89	0	36	0.4	0.44	0.56	0.4	1	0	0.34	0.67	0.83			28
8/8	0.64	0	40	0.28	0.28	0.28	0.24	0.32	0	0.4	0.73	0.67			12
8/9	0.62	0	38	0.32	0.36	0.36	0.28	0.48	0	0.18	0.33	0.56			2
8/10	0.52	0	38	0.4	0.4	0.4	0.32	0.56	0	0.35	0.7	0.53			6
8/11	0.02	0	14	0.04	0.04	0.04	0.04	0.04	0	0.09	0.18	0.09			15
8/12	0.52	0	17	0.12	0.12	0.12	0.08	0.12	0	0.51	0.94	0.51			2
8/13	0.19	0	17	0.16	0.2	0.2	0.12	0.2	0	0.3	0.43	0.3			4
8/14	0.39	0	18	0.2	0.2	0.2	0.12	0.24	0	0.16	0.35	0.25			5
8/15	0.16	0	26	0.32	0.36	0.36	0.12	0.36	0	0.29	0.54	0.3			5
8/16	0.29	0	29	0.28	0.28	0.28	0.24	0.28	0	0.37	0.66	0.38			6
8/17	0.01	0	1	0	0	0	0	0	0	0.06	0.15	0.07			1
8/18	0.01	0	1	0	0	0	0	0	0	0	0	0			1
8/19	0	0	0	0	0	0	0	0	0	0.02	0.04	0.02			1
8/20	0.04	0	4	0	0	0	0	0	0	0.15	0.28	0.21			5
8/21	0.04	0	8	0.04	0.04	0.04	0	0.04	0	0.3	0.32	0.66			9
8/22	0.3	0	22	0.36	0.4	0.4	0.4	0.4	0	0.46	0.88	0.81			31
8/23	0.34	0	30	0.32	0.32	0.32	0.28	0.64	0	0.28	0.54	0.61			4
8/24	0.91	0	27	0.2	0.24	0.3	0.23	0.3	0	0.24	0.37	0.52			10
8/25	0.04	0	8	0.04	0.04	0.04	0.04	0.04	0	0.06	0.12	0.1			2
8/26	0.03	0	3	0.04	0.04	0.04	0	0.04	0	0.05	0.07	0.05			0
8/27	0.01	0	1	0	0	0	0	0	0	0.06	0.1	0.08			2
8/28	0.02	0	1	0	0	0	0	0	0	0.12	0.19	0.14			1
8/29	0.03	0	7	0.04	0.04	0.04	0	0.04	0	0.1	0.18	0.17			2
8/30	0.2	0	18	0.04	0.08	0.08	0.04	0.08	0	0.14	0.23	0.15			2

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/31	0.56	0	27	0.08	0.08	0.08	0.08	0.12	0	0.18	0.37	0.57			9
9/1	0	0	0	0	0	0	0	0	0	0.05	0.13	0.02			2
9/2	0	0	0	0	0	0	0	0	0	0	0.01	0			0
9/3	0	0	0	0	0	0	0	0	0	0	0.01	0			0
9/4	0	0	0	0	0	0	0	0	0	0.02	0.03	0.02			1
9/5	0	0	0	0	0	0	0	0	0	0	0	0			0
9/6	0	0	0	0	0	0	0	0	0	0	0	0			0
9/7	0.01	0	1	0	0	0	0	0	0	0.02	0.04	0.02			1
9/8	0.12	0	15	0.12	0.12	0.12	0.12	0.12	0	0.08	0.16	0.1			5
9/9	0.2	0	10	0.04	0.04	0.04	0	0.04	0	0.12	0.25	0.14			5
9/10	0.21	0	21	0.16	0.2	0.2	0.16	0.2	0	0.14	0.27	0.49			9
9/11	0.16	0	19	0.16	0.19	0.19	0.05	0.19	0	0.16	0.28	0.41			23
9/12	0.08	0	6	0.01	0.01	0.01	0	0.01	0	0.16	0.31	0.2			5
9/13	0.09	0	7	0.16	0.16	0.16	0.12	0.24	0	0.13	0.22	0.2			2
9/14	0.08	0	19	0.16	0.16	0.16	0.12	0.16	0	0.12	0.23	0.16			8
9/15	0.15	0	24	0.12	0.12	0.12	0.12	0.12	0	0.16	0.32	0.23			2
9/16	0.04	0	16	0.04	0.04	0.04	0.04	0.04	0	0.06	0.15	0.17			1
9/17	0.1	0	10	0.12	0.12	0.12	0.08	0.12	0	0.07	0.12	0.07			5
9/18	0	0	0	0	0	0	0	0	0	0	0	0			0
9/19	0	0	0	0.08	0.08	0.08	0	0	0	0.02	0.04	0.04			1
9/20	0	0	0	0	0	0	0	0	0	0	0	0			0
9/21	0	0	0	0.4	0.4	0.4	0.39	0.12	0	0	0.01	0			1
9/22	0.68	0	10	0.01	0.01	0.01	0	0.01	0	0.03	0.05	0.09			2
9/23	0.87	0	37	0.32	0.4	0.52	0.4	0.88	0	0.21	0.46	0.95			10
9/24	0.72	0	37	0.2	0.24	0.28	0.2	0.8	0	0.14	0.27	0.62			2
9/25	0.21	0	28	0.12	0.2	0.32	0.08	0.4	0	0.14	0.27	0.32			3
9/26	0.37	0	30	0.12	0.16	0.2	0.08	0.32	0	0.46	0.91	0.97			2
9/27	0.47	0	36	0.12	0.12	0.2	0.12	0.44	0	0.08	0.15	0.39			6
9/28	0.84	0	35	0.2	0.32	0.48	0.28	0.64	0	0.2	0.39	0.71			1
9/29	0.25	0	35	0.16	0.16	0.16	0.12	0.2	0	0.08	0.15	0.15			5
9/30	0.4	0	36	0.16	0.16	0.16	0.12	0.24	0	0.17	0.3	0.7			8

b) Forecast Zone B: South Foothills

A	CoCoRaHS			ALERT						NOAA Stage IV			Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0	0	0	0.08	0.08	0.08	0	0.08	0	0	0.01	0.06			0
5/2	0.14	0	13	0.08	0.08	0.08	0.08	0.08	0	0.08	0.16	0.31			1
5/3	0.18	0	22	0.08	0.08	0.12	0.08	0.16	0	0.06	0.11	0.12			0
5/4	0	0	0	0	0	0	0	0	0	0	0	0			0
5/5	0	0	0	0	0	0	0	0	0	0	0	0			0
5/6	0.03	0	4	0.04	0.04	0.04	0	0.04	0	0.06	0.11	0.08			2
5/7	0.28	0	26	0.16	0.2	0.2	0.2	0.2	0	0.28	0.55	0.36			3
5/8	1.33	2	28	0.48	0.6	0.68	0.4	1.52	0	0.48	0.73	0.98			29
5/9	0.46	0	16	0.04	0.04	0.04	0.04	0.04	0	0.23	0.44	0.32			29
5/10	1.28	3	32	0.24	0.36	0.48	0.28	1.08	0	0.18	0.32	0.92			6
5/11	0.09	0	17	0.08	0.08	0.08	0.08	0.12	0	0.07	0.14	0.22			0
5/12	0.05	0	9	0.04	0.04	0.04	0.04	0.04	0	0.09	0.17	0.12			4
5/13	0	0	0	0	0	0	0	0	0	0	0	0			0
5/14	0	0	0	0	0	0	0	0	0	0	0	0			1
5/15	0	0	0	0	0	0	0	0	0	0	0	0			1
5/16	0.17	0	15	0.08	0.08	0.08	0.04	0.08	0	0.13	0.26	0.18			9
5/17	1.36	11	24	0.16	0.28	0.4	0.2	0.84	0	0.2	0.36	1.06			12
5/18	1.33	5	25	0.36	0.48	0.6	0.36	1.08	0	0.3	0.85	1.33			18
5/19	0.05	0	5	0.24	0.24	0.24	0.2	0.52	0	0.11	0.21	0.33			1
5/20	0	0	0	0.28	0.44	0.72	0.4	1.36	0	0	0	0			0
5/21	0.51	0	25	0.63	0.63	0.63	0.24	0.63	0	0.19	0.35	0.8			1
5/22	0.8	0	32	0.59	0.59	0.71	0.56	0.71	0	0.28	0.54	0.42			1
5/23	0.01	0	1	0.2	0.24	0.24	0.2	0.28	0	0.01	0.01	0.01			0
5/24	0.03	0	1	0	0	0	0	0	0	0	0	0			0
5/25	0.11	0	22	0.2	0.2	0.2	0.12	0.24	0	0.16	0.25	0.24			2
5/26	0.08	0	11	0.08	0.08	0.08	0.08	0.12	0	0.25	0.5	0.38			7
5/27	0.51	0	25	0.32	0.36	0.36	0.24	0.48	0	0.46	0.84	0.51			1
5/28	0.01	0	1	0.04	0.04	0.04	0.04	0.04	0	0.04	0.08	0.05			1
5/29	0.2	0	26	0.28	0.4	0.4	0.2	0.44	0	0.22	0.42	0.33			11
5/30	0.43	0	7	0.52	0.52	0.52	0.2	0.52	0	0.18	0.3	0.18			7
5/31	0.03	0	6	0	0	0	0	0	0	0.2	0.39	0.22			7
6/1	0.41	0	10	0.52	0.56	0.6	0.56	0.6	0	0.24	0.45	0.42			24
6/2	1.01	1	23	0.2	0.24	0.32	0.24	0.36	0	0.59	1.1	0.71	YES		9
6/3	0.01	0	1	0	0	0	0	0	0	0.02	0.03	0.02			1
6/4	0.02	0	1	0	0	0	0	0	0	0.05	0.11	0.07			2
6/5	0.32	0	23	0.16	0.2	0.2	0.12	0.2	0	0.52	0.78	1			15
6/6	0.97	0	12	0.04	0.04	0.04	0.04	0.04	0	0.84	1.52	1.22	YES		37
6/7	0.87	0	24	0.47	0.47	0.59	0.36	0.59	0	0.97	1.74	1.24	YES		41

CoCoRaHS				ALERT						NOAA Stage IV			Classification		Threat
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/8	0.09	0	8	0.04	0.04	0.04	0.04	0.04	0	0.2	0.32	0.47			6
6/9	0	0	0	0	0	0	0	0	0	0	0	0			0
6/10	0	0	0	0	0	0	0	0	0	0	0	0			0
6/11	0	0	0	0	0	0	0	0	0	0.32	0.56	0.32			19
6/12	0	0	0	0	0	0	0	0	0	0	0	0			2
6/13	0	0	0	0	0	0	0	0	0	0	0	0			0
6/14	0	0	0	0	0	0	0	0	0	0	0	0			1
6/15	0	0	0	0	0	0	0	0	0	0	0	0			0
6/16	0	0	0	0	0	0	0	0	0	0	0	0			0
6/17	0.03	0	3	0	0	0	0	0	0	0.04	0.08	0.06			0
6/18	0	0	0	0.08	0.08	0.08	0	0.08	0	0	0	0			0
6/19	0.01	0	1	0	0	0	0	0	0	0	0	0			0
6/20	0.04	0	2	0.04	0.04	0.04	0.04	0.04	0	0.12	0.19	0.19			1
6/21	0	0	0	0	0	0	0	0	0	0.06	0.12	0.07			4
6/22	0.18	0	20	0.08	0.08	0.12	0.04	0.08	0	0.27	0.59	0.5			5
6/23	0.17	0	12	0.16	0.2	0.24	0.12	0.24	0	0.09	0.13	0.18			1
6/24	0	0	0	0.04	0.04	0.04	0	0.04	0	0.02	0.05	0.03			1
6/25	0	0	0	0.04	0.04	0.04	0	0.04	0	0.08	0.15	0.08			3
6/26	0.01	0	1	0	0	0	0	0	0	0.37	0.69	0.39			11
6/27	0	0	0	0.08	0.08	0.08	0	0.08	0	0.01	0.03	0.02			1
6/28	0	0	0	0	0	0	0	0	0	0.03	0.05	0.04			1
6/29	0.23	0	20	0.16	0.16	0.16	0.16	0.2	0	0.08	0.14	0.15			1
6/30	0	0	0	0.04	0.04	0.04	0.04	0.04	0	0.02	0.04	0.02			3
7/1	0.02	0	1	0.04	0.04	0.04	0	0.04	0	0.19	0.34	0.2			1
7/2	0.14	0	6	0.04	0.04	0.04	0	0.04	0	0.06	0.13	0.1			2
7/3	0.08	0	12	0.04	0.04	0.04	0	0.04	0	0.08	0.15	0.12			2
7/4	0.02	0	2	0	0	0	0	0	0	0.07	0.12	0.08			2
7/5	0	0	0	0.24	0.24	0.24	0.12	0.12	0	0.18	0.21	0.18			1
7/6	0.24	0	9	0	0	0	0	0	0	0.26	0.51	0.28			3
7/7	0.45	0	16	0.04	0.04	0.04	0.04	0.04	0	0.42	0.7	0.66			19
7/8	0.2	0	12	0.2	0.2	0.2	0.12	0.24	0	0.39	0.65	0.52			20
7/9	0.12	0	3	0	0	0	0	0	0	0.04	0.07	0.04			4
7/10	0.24	0	13	0.16	0.2	0.2	0.16	0.2	0	0.27	0.5	0.44			13
7/11	0.94	0	25	0.12	0.12	0.12	0.08	0.16	0	0.33	0.61	0.79			24
7/12	1.11	1	31	0.24	0.36	0.36	0.32	0.68	0	0.84	1.61	1.31	YES	YES	28
7/13	0.31	0	10	0.16	0.16	0.16	0.04	0.16	0	0.7	1.15	0.82	YES		45
7/14	0.79	0	25	0.4	0.4	0.56	0.4	0.56	0	0.81	1.51	1.26	YES		33
7/15	0.25	0	17	0.2	0.2	0.2	0.16	0.2	0	0.23	0.32	0.25			9
7/16	0.16	0	14	0.16	0.16	0.16	0.04	0.16	0	0.25	0.46	0.45			6
7/17	0.37	0	11	0.12	0.12	0.12	0.04	0.12	0	0.78	1.36	1.13	YES		10
7/18	0.9	0	15	0.32	0.36	0.44	0.24	0.56	0	0.5	0.88	0.84			31

CoCoRaHS				ALERT						NOAA Stage IV			Classification		Threat
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/19	0.29	0	12	1.04	1.28	1.48	1.12	1.52	2	1.33	2.57	1.76	YES	YES	27
7/20	0.77	0	29	0.52	0.52	0.52	0.51	1.08	0	0.75	1.45	1.45	YES		21
7/21	0.65	0	28	0.59	0.59	0.59	0.55	0.63	0	0.97	1.42	1.11	YES		44
7/22	0.07	0	3	0.12	0.12	0.12	0	0.12	0	0.27	0.44	0.33			32
7/23	0.3	0	8	0.52	0.56	0.56	0.32	0.56	0	1.02	1.94	1.13	YES		36
7/24	0.04	0	2	0	0	0	0	0	0	0.09	0.17	0.09			9
7/25	1.42	1	33	0.44	0.48	0.52	0.24	0.68	0	0.49	0.93	0.92			9
7/26	1.94	12	34	1.08	1.12	1.2	1	1.52	1	1.11	1.91	1.87	YES	YES	32
7/27	1.01	1	27	0.28	0.32	0.32	0.24	0.32	0	0.78	1.54	1.16	YES	YES	52
7/28	0.51	0	23	0.68	1.04	1.2	0.76	1.32	1	1.11	1.98	1.25	YES	YES	41
7/29	0.36	0	22	0.24	0.24	0.36	0.24	0.64	0	0.29	0.56	0.79			25
7/30	0.96	0	23	0.32	0.32	0.32	0.28	0.56	0	0.52	0.96	0.79			35
7/31	0.38	0	15	0.04	0.04	0.04	0.04	0.04	0	0.12	0.21	0.32			4
8/1	0.09	0	5	0	0	0	0	0	0	0.06	0.22	0.2			2
8/2	0.49	0	30	0.52	0.56	0.56	0.48	0.6	0	0.28	0.46	0.51			1
8/3	0.54	0	27	0.12	0.16	0.2	0.16	0.24	0	0.32	0.63	1.07			15
8/4	0.15	0	9	0.2	0.2	0.2	0.2	0.2	0	0.38	0.75	0.74			3
8/5	0.97	0	22	0.52	0.64	0.72	0.4	0.88	0	0.64	1.27	0.65	YES		6
8/6	0.51	0	26	0.76	0.76	0.76	0.48	0.8	0	0.69	1.22	1.09	YES		39
8/7	1.04	1	30	0.68	0.68	0.8	0.6	1.2	0	0.8	1.48	1.5	YES	YES	36
8/8	0.76	0	30	0.44	0.44	0.44	0.36	0.52	0	0.86	1.52	1.07	YES		14
8/9	0.41	0	30	0.44	0.44	0.44	0.4	0.76	0	0.46	0.9	0.78			3
8/10	0.14	0	23	0.12	0.12	0.12	0.04	0.12	0	0.38	0.7	0.41			6
8/11	0.38	0	24	0.76	0.76	0.76	0.48	0.76	0	0.58	1.13	0.59	YES		22
8/12	0.27	0	25	0.64	0.76	0.76	0.52	0.76	0	0.55	0.95	0.55			2
8/13	0.27	0	26	0.24	0.24	0.24	0.2	0.24	0	0.44	0.83	0.45			5
8/14	0.15	0	17	0.12	0.16	0.16	0.08	0.2	0	0.26	0.49	0.36			5
8/15	0.69	0	23	0.28	0.28	0.28	0.08	0.44	0	0.4	0.78	0.62			7
8/16	0.19	0	19	0.16	0.16	0.2	0.12	0.2	0	0.27	0.48	0.29			4
8/17	0.02	0	6	0.04	0.04	0.04	0.04	0.04	0	0.13	0.23	0.23			1
8/18	0	0	0	0	0	0	0	0	0	0.05	0.1	0.06			2
8/19	0.04	0	9	0.04	0.04	0.04	0	0.04	0	0.09	0.18	0.14			2
8/20	0.1	0	7	0.04	0.04	0.04	0	0.04	0	0.12	0.23	0.38			6
8/21	0.06	0	4	0.16	0.16	0.16	0	0.16	0	0.17	0.28	0.2			11
8/22	0.14	0	7	0.04	0.04	0.08	0.04	0.08	0	0.65	1.17	1.01	YES		53
8/23	0.89	0	13	0.08	0.08	0.08	0.04	0.08	0	0.47	0.93	0.68			5
8/24	0.2	0	16	0.08	0.08	0.08	0.04	0.08	0	0.25	0.48	0.58			12
8/25	0	0	0	0.04	0.04	0.04	0	0.04	0	0.06	0.11	0.12			3
8/26	0	0	0	0	0	0	0	0	0	0.03	0.05	0.03			0
8/27	0	0	0	0	0	0	0	0	0	0.24	0.38	0.41			2
8/28	0	0	0	0	0	0	0	0	0	0.28	0.53	0.31			1

CoCoRaHS				ALERT						NOAA Stage IV			Classification		Threat
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/29	0.1	0	7	0	0	0	0	0	0	0.15	0.26	0.31			3
8/30	0.11	0	11	0.32	0.32	0.32	0.28	0.32	0	0.69	1.36	0.74	YES		6
8/31	0.38	0	29	0.16	0.16	0.16	0.16	0.2	0	0.31	0.54	0.36			10
9/1	0.02	0	2	0.04	0.04	0.04	0.04	0.04	0	0.09	0.17	0.11			1
9/2	0.02	0	1	0	0	0	0	0	0	0.11	0.2	0.12			0
9/3	0.05	0	2	0	0	0	0	0	0	0	0	0			0
9/4	0.02	0	3	0.04	0.04	0.04	0	0.04	0	0.06	0.1	0.06			1
9/5	0.02	0	2	0	0	0	0	0	0	0	0	0			0
9/6	0	0	0	0	0	0	0	0	0	0	0	0			0
9/7	0.05	0	2	0.08	0.08	0.08	0	0.08	0	0.11	0.21	0.13			1
9/8	0.02	0	4	0.08	0.08	0.08	0	0.08	0	0.1	0.19	0.12			7
9/9	0.48	0	15	0.32	0.36	0.36	0.32	0.36	0	0.1	0.16	0.13			4
9/10	0.38	0	8	0.44	0.56	0.6	0.44	0.6	0	0.36	0.64	0.41			8
9/11	0.36	0	24	0.08	0.08	0.08	0.08	0.08	0	0.78	1.39	0.95	YES		26
9/12	0.4	0	8	0.04	0.04	0.04	0.04	0.04	0	0.3	0.58	0.34			5
9/13	0.43	0	18	0.12	0.12	0.12	0.08	0.12	0	0.13	0.25	0.28			2
9/14	0.16	0	11	0.32	0.32	0.32	0.08	0.32	0	0.3	0.58	0.44			6
9/15	0.07	0	6	0.04	0.04	0.04	0.04	0.04	0	0.07	0.13	0.11			1
9/16	0.05	0	2	0	0	0	0	0	0	0.02	0.03	0.06			1
9/17	0.4	0	22	0.52	0.52	0.6	0.36	0.6	0	0.4	0.77	0.4			7
9/18	0	0	0	0	0	0	0	0	0	0	0	0			0
9/19	0.02	0	1	0	0	0	0	0	0	0	0	0			0
9/20	0	0	0	0	0	0	0	0	0	0	0	0			0
9/21	0	0	0	0	0	0	0	0	0	0	0	0			1
9/22	0.12	0	26	0.04	0.08	0.08	0	0.08	0	0.05	0.09	0.24			2
9/23	0.98	0	27	0.52	0.6	0.68	0.56	0.88	0	0.65	1.28	1.08	YES	YES	16
9/24	0.37	0	24	0.08	0.08	0.16	0.08	0.24	0	0.11	0.21	0.25			1
9/25	0.32	0	27	0.08	0.08	0.12	0.08	0.28	0	0.29	0.55	0.79			3
9/26	0.69	0	28	0.12	0.24	0.4	0.2	0.6	0	0.27	0.54	1.02			2
9/27	0.66	0	28	0.16	0.2	0.32	0.2	0.68	0	0.19	0.33	0.81			7
9/28	0.61	0	26	0.16	0.16	0.2	0.16	0.2	0	0.1	0.2	0.52			1
9/29	0.13	0	18	0.24	0.28	0.32	0.16	0.32	0	0.23	0.44	0.23			6
9/30	0.02	0	7	0.04	0.04	0.04	0.04	0.04	0	0.16	0.3	0.4			5

c) Forecast Zone C: Palmer Divide

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0	0	0	0	0	0	0	0	0	0	0	0			0
5/2	0.38	0	37	0.08	0.12	0.12	0.08	0.12	0	0.09	0.18	0.3			1
5/3	0.3	0	31	0.12	0.16	0.24	0.12	0.44	0	0.08	0.15	0.24			0
5/4	0	0	0	0	0	0	0	0	0	0	0	0			0
5/5	0	0	0	0	0	0	0	0	0	0	0	0			0
5/6	0.12	0	12	0	0	0	0	0	0	0.09	0.17	0.1			1
5/7	0.09	0	23	0.04	0.04	0.08	0.04	0.08	0	0.24	0.51	0.31			2
5/8	0.78	0	38	0.36	0.4	0.44	0.32	0.72	0	0.52	0.99	0.89			27
5/9	0.06	0	19	0.04	0.04	0.04	0.04	0.04	0	0.05	0.09	0.08			32
5/10	0.68	0	37	0.2	0.32	0.36	0.24	0.6	0	0.18	0.34	0.85			7
5/11	0.07	0	13	0	0	0	0	0	0	0.05	0.12	0.1			0
5/12	0	0	0	0	0	0	0	0	0	0	0	0			2
5/13	0	0	0	0	0	0	0	0	0	0	0	0			0
5/14	0	0	0	0	0	0	0	0	0	0	0	0			1
5/15	0	0	0	0	0	0	0	0	0	0	0	0			1
5/16	0.1	0	14	0.04	0.04	0.04	0	0.04	0	0.14	0.24	0.26			5
5/17	1.4	11	41	0.67	0.67	0.67	0.48	0.96	0	0.57	1.06	1.15	YES		15
5/18	1.35	1	40	0.43	0.43	0.52	0.36	0.96	0	0.22	0.44	1.33			18
5/19	0.41	0	15	0.12	0.16	0.28	0.16	0.64	0	0.03	0.07	0.11			1
5/20	0.1	0	2	0.24	0.4	0.56	0.32	0.72	0	0	0	0			0
5/21	0.72	0	37	0.28	0.28	0.48	0.28	0.72	0	0.2	0.37	0.57			1
5/22	0.51	0	39	0.12	0.2	0.28	0.16	0.44	0	0.26	0.52	0.39			1
5/23	0.03	0	2	0.04	0.04	0.04	0.04	0.04	0	0	0.01	0			0
5/24	0	0	0	0	0	0	0	0	0	0	0	0			0
5/25	0.27	0	41	0.28	0.28	0.28	0.16	0.28	0	0.24	0.47	0.28			1
5/26	0.32	0	36	0.16	0.16	0.24	0.16	0.28	0	0.6	1.07	0.92	YES		10
5/27	0.59	0	39	0.48	0.52	0.52	0.48	0.56	0	0.25	0.49	0.43			1
5/28	0.21	0	3	0	0	0	0	0	0	0.01	0.02	0.01			1
5/29	0.36	0	36	0.4	0.44	0.44	0.4	0.44	0	0.41	0.73	0.49			9
5/30	0.17	0	6	0.16	0.16	0.16	0.12	0.16	0	0.22	0.4	0.22			9
5/31	0.21	0	5	0.16	0.16	0.16	0	0.16	0	0.22	0.41	0.29			6
6/1	0.03	0	2	0.04	0.04	0.04	0.04	0.04	0	0.02	0.08	0.13			15
6/2	0.82	0	36	0.12	0.12	0.12	0.12	0.12	0	0.74	1.4	0.76	YES		11
6/3	0.04	0	1	0	0	0	0	0	0	0.06	0.11	0.09			1
6/4	0	0	0	0	0	0	0	0	0	0	0	0			1
6/5	0.05	0	7	0.04	0.04	0.04	0	0.04	0	0.32	0.62	0.35			17
6/6	0.77	0	23	0.28	0.28	0.28	0.24	0.28	0	0.71	1.22	0.88	YES		36
6/7	0.37	0	31	0.28	0.32	0.32	0.28	0.4	0	0.38	0.7	0.74			43
6/8	0	0	0	0.39	0.39	0.39	0	0.39	0	0.18	0.34	0.21			7

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/9	0	0	0	0	0	0	0	0	0	0	0	0			0
6/10	0	0	0	0	0	0	0	0	0	0	0	0			0
6/11	0.07	0	3	0	0	0	0	0	0	0.18	0.42	0.18			9
6/12	0	0	0	0	0	0	0	0	0	0	0	0			2
6/13	0	0	0	0	0	0	0	0	0	0	0	0			0
6/14	0	0	0	0.08	0.08	0.08	0	0.08	0	0.01	0.01	0.01			1
6/15	0	0	0	0	0	0	0	0	0	0	0	0			0
6/16	0	0	0	0	0	0	0	0	0	0	0	0			0
6/17	0	0	0	0	0	0	0	0	0	0	0	0			0
6/18	0	0	0	0	0	0	0	0	0	0	0	0			0
6/19	0	0	0	0	0	0	0	0	0	0	0	0			0
6/20	0.09	0	15	0	0	0	0	0	0	0.13	0.21	0.13			1
6/21	0.03	0	6	0	0	0	0	0	0	0.07	0.13	0.07			2
6/22	0.25	0	33	0.04	0.04	0.04	0	0.04	0	0.23	0.42	0.27			7
6/23	0.17	0	33	0.16	0.2	0.2	0.16	0.2	0	0.1	0.19	0.23			1
6/24	0.01	0	1	0	0	0	0	0	0	0	0	0			2
6/25	0.12	0	5	0	0	0	0	0	0	0.3	0.55	0.3			3
6/26	0	0	0	0	0	0	0	0	0	0	0.01	0.01			10
6/27	0.03	0	2	0.08	0.08	0.08	0.04	0.08	0	0.09	0.17	0.1			1
6/28	0.1	0	9	0	0	0	0	0	0	0.2	0.34	0.26			1
6/29	0.35	0	23	0.16	0.16	0.16	0.08	0.16	0	0.38	0.67	0.63			0
6/30	0.01	0	3	0	0	0	0	0	0	0.02	0.04	0.02			4
7/1	0.02	0	3	0.04	0.04	0.04	0	0.04	0	0.23	0.39	0.27			1
7/2	0	0	0	0	0	0	0	0	0	0	0	0			1
7/3	0.02	0	4	0	0	0	0	0	0	0.04	0.08	0.05			1
7/4	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			1
7/5	0	0	0	0	0	0	0	0	0	0.26	0.44	0.26			0
7/6	0.08	0	7	0	0	0	0	0	0	0.19	0.28	0.21			2
7/7	0.94	0	15	0.04	0.04	0.04	0.04	0.08	0	0.5	1	1.09	YES		20
7/8	0.32	0	21	0.28	0.28	0.28	0.2	0.28	0	0.54	0.98	0.55			16
7/9	0	0	0	0.04	0.04	0.04	0	0.04	0	0	0	0			1
7/10	0.24	0	13	0.32	0.36	0.36	0.16	0.68	0	0.4	0.71	0.61			5
7/11	0.29	0	27	0.04	0.04	0.04	0.04	0.04	0	0.45	0.76	0.67			17
7/12	1.24	2	42	0.16	0.24	0.36	0.24	0.36	0	0.57	1.09	0.89	YES	YES	29
7/13	0.62	0	26	0.6	0.76	0.8	0.08	0.8	0	0.59	1.41	0.71	YES		52
7/14	0.85	0	40	0.56	0.72	0.72	0.32	0.8	0	1.44	1.78	1.65	YES	YES	37
7/15	1.26	3	38	0.76	0.84	0.84	0.8	0.88	0	0.41	0.79	0.67			6
7/16	0.01	0	3	0	0	0	0	0	0	0	0.02	0			2
7/17	0.83	0	16	0.08	0.08	0.08	0.04	0.08	0	0.7	1.39	1.05	YES		14
7/18	1.18	1	23	0.2	0.24	0.24	0.2	0.24	0	0.61	1.09	0.74	YES	YES	25

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/19	0.54	0	33	0.04	0.04	0.04	0.04	0.04	0	1.41	2.64	2.41	YES	YES	18
7/20	0.91	0	23	0	0	0	0	0	0	0.99	2.38	1.18	YES	YES	10
7/21	0.69	0	37	0.75	0.75	0.75	0.75	0.87	0	1.14	2.28	1.66	YES	YES	40
7/22	0.04	0	3	0	0	0	0	0	0	0.01	0.02	0.03			29
7/23	0.45	0	5	1.04	1.08	1.08	0	1.08	1	0.71	1.38	0.82	YES	YES	33
7/24	0.26	0	4	0.2	0.2	0.2	0	0.2	0	0.48	0.74	0.54			3
7/25	1	0	40	0.32	0.44	0.44	0.4	0.48	0	0.78	1.46	0.9	YES		5
7/26	3	26	47	2.35	2.63	2.71	1.28	3.83	2	1.22	2.3	3.05	YES	YES	24
7/27	0.53	0	10	0.39	0.39	0.39	0	0.39	0	0.04	0.08	0.04			37
7/28	1.73	3	29	1.28	1.84	2	0.72	2.04	1	1.4	2.73	1.81	YES	YES	37
7/29	0.43	0	35	0.31	0.36	0.4	0.31	0.59	0	0.27	0.53	0.64			26
7/30	0.98	0	33	0.56	0.64	0.64	0.56	0.64	0	0.87	1.62	0.92	YES		32
7/31	0.02	0	5	0.04	0.04	0.04	0	0.04	0	0.07	0.12	0.08			5
8/1	0	0	0	0	0	0	0	0	0	0	0	0			1
8/2	0.91	0	40	1.12	1.28	1.32	1.04	1.48	2	0.67	1.2	0.99	YES	YES	1
8/3	0.08	0	33	0.32	0.32	0.32	0.08	0.32	0	0.11	0.2	0.11			17
8/4	0.19	0	15	0.04	0.04	0.04	0.04	0.04	0	0.39	0.67	0.39			3
8/5	1	0	34	0.92	0.92	0.92	0.92	0.96	0	0.43	0.87	0.61			5
8/6	0.65	0	38	0.24	0.24	0.24	0.08	0.28	0	0.26	0.5	0.32			40
8/7	1.75	5	39	0.72	0.96	1.2	0.36	1.52	0	0.39	0.8	1.21		YES	38
8/8	0.8	0	38	0.16	0.16	0.16	0.16	0.24	0	0.9	1.73	1.08	YES		13
8/9	0.73	0	38	0.36	0.36	0.4	0.28	0.56	0	0.6	1.07	0.75	YES		5
8/10	0.34	0	37	0.2	0.24	0.24	0.2	0.24	0	0.48	0.96	0.96			12
8/11	0.39	0	33	0.08	0.08	0.12	0.04	0.12	0	0.21	0.46	0.44			17
8/12	0.45	0	35	1	1	1	0.8	1	0	0.6	1.12	0.79	YES		2
8/13	0.33	0	32	0.12	0.12	0.12	0.08	0.2	0	0.34	0.62	0.37			3
8/14	0.69	0	21	0.08	0.08	0.08	0.04	0.08	0	0.55	0.93	0.57			5
8/15	0.86	0	32	0.64	0.8	0.8	0.76	0.8	0	1.41	2.65	1.88	YES	YES	10
8/16	0.13	0	17	0.12	0.12	0.12	0	0.12	0	0.4	0.64	0.4			5
8/17	0.21	0	22	0.08	0.08	0.08	0.08	0.12	0	0.13	0.24	0.22			1
8/18	0.01	0	1	0	0	0	0	0	0	0	0	0			1
8/19	0.02	0	3	0	0	0	0	0	0	0.02	0.05	0.03			1
8/20	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			5
8/21	0	0	0	0	0	0	0	0	0	0.08	0.1	0.11			9
8/22	0.04	0	3	0	0	0	0	0	0	0.06	0.18	0.09			7
8/23	0.54	0	19	0.56	0.72	0.72	0.56	0.72	0	0.46	0.82	0.62			7
8/24	0.28	0	18	0.12	0.12	0.12	0.04	0.12	0	0.23	0.46	0.26			13
8/25	0.03	0	4	0	0	0	0	0	0	0.03	0.04	0.03			1
8/26	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			0
8/27	0	0	0	0	0	0	0	0	0	0	0	0			0

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/28	0.1	0	1	0	0	0	0	0	0	0.1	0.17	0.13			1
8/29	0.31	0	9	0.32	0.32	0.32	0.04	0.32	0	0.29	0.54	0.32			6
8/30	0.21	0	16	0.08	0.08	0.08	0.08	0.08	0	0.69	1.3	0.7	YES		3
8/31	0.03	0	17	0.04	0.04	0.04	0	0.04	0	0.41	0.59	0.61			7
9/1	0	0	0	0	0	0	0	0	0	0	0	0			1
9/2	0	0	0	0	0	0	0	0	0	0	0	0			0
9/3	0	0	0	0	0	0	0	0	0	0	0	0			0
9/4	0.15	0	2	0.04	0.04	0.04	0	0.04	0	0.17	0.32	0.17			1
9/5	0	0	0	0	0	0	0	0	0	0	0	0			0
9/6	0	0	0	0	0	0	0	0	0	0	0	0			0
9/7	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01			0
9/8	0.05	0	3	0.32	0.36	0.36	0.04	0.36	0	0.52	1.04	0.72	YES		7
9/9	0.21	0	5	0	0	0	0	0	0	0.16	0.31	0.16			4
9/10	0.22	0	10	0.08	0.08	0.08	0.04	0.08	0	0.13	0.24	0.21			6
9/11	1.14	2	22	0.68	0.76	0.8	0.4	0.8	0	1.09	2.08	1.32	YES	YES	25
9/12	0	0	0	0	0	0	0	0	0	0.03	0.03	0.03			3
9/13	0.05	0	6	0	0	0	0	0	0	0.03	0.09	0.05			1
9/14	0.1	0	17	0.04	0.04	0.04	0.04	0.04	0	0.1	0.21	0.13			7
9/15	0.02	0	4	0	0	0	0	0	0	0.03	0.08	0.05			1
9/16	0.01	0	2	0	0	0	0	0	0	0	0.01	0			3
9/17	0.19	0	19	0.4	0.4	0.4	0.28	0.4	0	0.34	0.59	0.36			6
9/18	0	0	0	0.39	0.39	0.39	0	0.39	0	0	0	0			0
9/19	0	0	0	0	0	0	0	0	0	0	0	0			0
9/20	0	0	0	0	0	0	0	0	0	0	0	0			0
9/21	0	0	0	0	0	0	0	0	0	0	0	0			0
9/22	0.6	0	17	0	0	0	0	0	0	0.02	0.03	0.03			1
9/23	1.62	24	42	0.4	0.6	0.88	0.56	1.24	0	1.15	2.08	1.77	YES	YES	20
9/24	0.31	0	41	0.08	0.08	0.12	0.08	0.16	0	0.02	0.04	0.21			1
9/25	0.38	0	37	0.12	0.12	0.12	0.08	0.12	0	0.33	0.55	0.52			3
9/26	0.14	0	34	0.04	0.08	0.08	0.08	0.12	0	0.07	0.12	0.09			1
9/27	0.76	0	43	0.12	0.16	0.24	0.16	0.48	0	0.16	0.33	0.79			5
9/28	0.4	0	29	0.04	0.04	0.04	0.04	0.04	0	0.08	0.16	0.19			1
9/29	0.4	0	36	0.2	0.2	0.2	0.08	0.2	0	0.16	0.34	0.19			6
9/30	0.03	0	11	0.04	0.04	0.04	0	0.04	0	0.01	0.02	0.04			5

A	CoCoRaHS			ALERT						NOAA Stage IV			Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0	0	0	0	0	0	0	0	0	0	0	0			0
5/2	0.38	0	37	0.08	0.12	0.12	0.08	0.12	0	0.09	0.18	0.3			1
5/3	0.3	0	31	0.12	0.16	0.24	0.12	0.44	0	0.08	0.15	0.24			0

5/4	0	0	0	0	0	0	0	0	0	0	0	0			0
5/5	0	0	0	0	0	0	0	0	0	0	0	0			0
5/6	0.12	0	12	0	0	0	0	0	0	0.09	0.17	0.1			1
5/7	0.09	0	23	0.04	0.04	0.08	0.04	0.08	0	0.24	0.51	0.31			2
5/8	0.78	0	38	0.36	0.4	0.44	0.32	0.72	0	0.52	0.99	0.89			27
5/9	0.06	0	19	0.04	0.04	0.04	0.04	0.04	0	0.05	0.09	0.08			32
5/10	0.68	0	37	0.2	0.32	0.36	0.24	0.6	0	0.18	0.34	0.85			7
5/11	0.07	0	13	0	0	0	0	0	0	0.05	0.12	0.1			0
5/12	0	0	0	0	0	0	0	0	0	0	0	0			2
5/13	0	0	0	0	0	0	0	0	0	0	0	0			0
5/14	0	0	0	0	0	0	0	0	0	0	0	0			1
5/15	0	0	0	0	0	0	0	0	0	0	0	0			1
5/16	0.1	0	14	0.04	0.04	0.04	0	0.04	0	0.14	0.24	0.26			5
5/17	1.4	11	41	0.67	0.67	0.67	0.48	0.96	0	0.57	1.06	1.15	YES		15
5/18	1.35	1	40	0.43	0.43	0.52	0.36	0.96	0	0.22	0.44	1.33			18
5/19	0.41	0	15	0.12	0.16	0.28	0.16	0.64	0	0.03	0.07	0.11			1
5/20	0.1	0	2	0.24	0.4	0.56	0.32	0.72	0	0	0	0			0
5/21	0.72	0	37	0.28	0.28	0.48	0.28	0.72	0	0.2	0.37	0.57			1
5/22	0.51	0	39	0.12	0.2	0.28	0.16	0.44	0	0.26	0.52	0.39			1
5/23	0.03	0	2	0.04	0.04	0.04	0.04	0.04	0	0	0.01	0			0
5/24	0	0	0	0	0	0	0	0	0	0	0	0			0
5/25	0.27	0	41	0.28	0.28	0.28	0.16	0.28	0	0.24	0.47	0.28			1
5/26	0.32	0	36	0.16	0.16	0.24	0.16	0.28	0	0.6	1.07	0.92	YES		10
5/27	0.59	0	39	0.48	0.52	0.52	0.48	0.56	0	0.25	0.49	0.43			1
5/28	0.21	0	3	0	0	0	0	0	0	0.01	0.02	0.01			1
5/29	0.36	0	36	0.4	0.44	0.44	0.4	0.44	0	0.41	0.73	0.49			9
5/30	0.17	0	6	0.16	0.16	0.16	0.12	0.16	0	0.22	0.4	0.22			9
5/31	0.21	0	5	0.16	0.16	0.16	0	0.16	0	0.22	0.41	0.29			6
6/1	0.03	0	2	0.04	0.04	0.04	0.04	0.04	0	0.02	0.08	0.13			15
6/2	0.82	0	36	0.12	0.12	0.12	0.12	0.12	0	0.74	1.4	0.76	YES		11
6/3	0.04	0	1	0	0	0	0	0	0	0.06	0.11	0.09			1
6/4	0	0	0	0	0	0	0	0	0	0	0	0			1
6/5	0.05	0	7	0.04	0.04	0.04	0	0.04	0	0.32	0.62	0.35			17
6/6	0.77	0	23	0.28	0.28	0.28	0.24	0.28	0	0.71	1.22	0.88	YES		36
6/7	0.37	0	31	0.28	0.32	0.32	0.28	0.4	0	0.38	0.7	0.74			43
6/8	0	0	0	0.39	0.39	0.39	0	0.39	0	0.18	0.34	0.21			7
6/9	0	0	0	0	0	0	0	0	0	0	0	0			0
6/10	0	0	0	0	0	0	0	0	0	0	0	0			0
6/11	0.07	0	3	0	0	0	0	0	0	0.18	0.42	0.18			9
6/12	0	0	0	0	0	0	0	0	0	0	0	0			2
6/13	0	0	0	0	0	0	0	0	0	0	0	0			0
6/14	0	0	0	0.08	0.08	0.08	0	0.08	0	0.01	0.01	0.01			1
6/15	0	0	0	0	0	0	0	0	0	0	0	0			0

6/16	0	0	0	0	0	0	0	0	0	0	0	0			0
6/17	0	0	0	0	0	0	0	0	0	0	0	0			0
6/18	0	0	0	0	0	0	0	0	0	0	0	0			0
6/19	0	0	0	0	0	0	0	0	0	0	0	0			0
6/20	0.09	0	15	0	0	0	0	0	0	0.13	0.21	0.13			1
6/21	0.03	0	6	0	0	0	0	0	0	0.07	0.13	0.07			2
6/22	0.25	0	33	0.04	0.04	0.04	0	0.04	0	0.23	0.42	0.27			7
6/23	0.17	0	33	0.16	0.2	0.2	0.16	0.2	0	0.1	0.19	0.23			1
6/24	0.01	0	1	0	0	0	0	0	0	0	0	0			2
6/25	0.12	0	5	0	0	0	0	0	0	0.3	0.55	0.3			3
6/26	0	0	0	0	0	0	0	0	0	0	0.01	0.01			10
6/27	0.03	0	2	0.08	0.08	0.08	0.04	0.08	0	0.09	0.17	0.1			1
6/28	0.1	0	9	0	0	0	0	0	0	0.2	0.34	0.26			1
6/29	0.35	0	23	0.16	0.16	0.16	0.08	0.16	0	0.38	0.67	0.63			0
6/30	0.01	0	3	0	0	0	0	0	0	0.02	0.04	0.02			4
7/1	0.02	0	3	0.04	0.04	0.04	0	0.04	0	0.23	0.39	0.27			1
7/2	0	0	0	0	0	0	0	0	0	0	0	0			1
7/3	0.02	0	4	0	0	0	0	0	0	0.04	0.08	0.05			1
7/4	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			1
7/5	0	0	0	0	0	0	0	0	0	0.26	0.44	0.26			0
7/6	0.08	0	7	0	0	0	0	0	0	0.19	0.28	0.21			2
7/7	0.94	0	15	0.04	0.04	0.04	0.04	0.08	0	0.5	1	1.09	YES		20
7/8	0.32	0	21	0.28	0.28	0.28	0.2	0.28	0	0.54	0.98	0.55			16
7/9	0	0	0	0.04	0.04	0.04	0	0.04	0	0	0	0			1
7/10	0.24	0	13	0.32	0.36	0.36	0.16	0.68	0	0.4	0.71	0.61			5
7/11	0.29	0	27	0.04	0.04	0.04	0.04	0.04	0	0.45	0.76	0.67			17
7/12	1.24	2	42	0.16	0.24	0.36	0.24	0.36	0	0.57	1.09	0.89	YES	YES	29
7/13	0.62	0	26	0.6	0.76	0.8	0.08	0.8	0	0.59	1.41	0.71	YES		52
7/14	0.85	0	40	0.56	0.72	0.72	0.32	0.8	0	1.44	1.78	1.65	YES	YES	37
7/15	1.26	3	38	0.76	0.84	0.84	0.8	0.88	0	0.41	0.79	0.67			6
7/16	0.01	0	3	0	0	0	0	0	0	0	0.02	0			2
7/17	0.83	0	16	0.08	0.08	0.08	0.04	0.08	0	0.7	1.39	1.05	YES		14
7/18	1.18	1	23	0.2	0.24	0.24	0.2	0.24	0	0.61	1.09	0.74	YES	YES	25
7/19	0.54	0	33	0.04	0.04	0.04	0.04	0.04	0	1.41	2.64	2.41	YES	YES	18
7/20	0.91	0	23	0	0	0	0	0	0	0.99	2.38	1.18	YES	YES	10
7/21	0.69	0	37	0.75	0.75	0.75	0.75	0.87	0	1.14	2.28	1.66	YES	YES	40
7/22	0.04	0	3	0	0	0	0	0	0	0.01	0.02	0.03			29
7/23	0.45	0	5	1.04	1.08	1.08	0	1.08	1	0.71	1.38	0.82	YES	YES	33
7/24	0.26	0	4	0.2	0.2	0.2	0	0.2	0	0.48	0.74	0.54			3
7/25	1	0	40	0.32	0.44	0.44	0.4	0.48	0	0.78	1.46	0.9	YES		5
7/26	3	26	47	2.35	2.63	2.71	1.28	3.83	2	1.22	2.3	3.05	YES	YES	24
7/27	0.53	0	10	0.39	0.39	0.39	0	0.39	0	0.04	0.08	0.04			37
7/28	1.73	3	29	1.28	1.84	2	0.72	2.04	1	1.4	2.73	1.81	YES	YES	37

7/29	0.43	0	35	0.31	0.36	0.4	0.31	0.59	0	0.27	0.53	0.64			26
7/30	0.98	0	33	0.56	0.64	0.64	0.56	0.64	0	0.87	1.62	0.92	YES		32
7/31	0.02	0	5	0.04	0.04	0.04	0	0.04	0	0.07	0.12	0.08			5
8/1	0	0	0	0	0	0	0	0	0	0	0	0			1
8/2	0.91	0	40	1.12	1.28	1.32	1.04	1.48	2	0.67	1.2	0.99	YES	YES	1
8/3	0.08	0	33	0.32	0.32	0.32	0.08	0.32	0	0.11	0.2	0.11			17
8/4	0.19	0	15	0.04	0.04	0.04	0.04	0.04	0	0.39	0.67	0.39			3
8/5	1	0	34	0.92	0.92	0.92	0.92	0.96	0	0.43	0.87	0.61			5
8/6	0.65	0	38	0.24	0.24	0.24	0.08	0.28	0	0.26	0.5	0.32			40
8/7	1.75	5	39	0.72	0.96	1.2	0.36	1.52	0	0.39	0.8	1.21		YES	38
8/8	0.8	0	38	0.16	0.16	0.16	0.16	0.24	0	0.9	1.73	1.08	YES		13
8/9	0.73	0	38	0.36	0.36	0.4	0.28	0.56	0	0.6	1.07	0.75	YES		5
8/10	0.34	0	37	0.2	0.24	0.24	0.2	0.24	0	0.48	0.96	0.96			12
8/11	0.39	0	33	0.08	0.08	0.12	0.04	0.12	0	0.21	0.46	0.44			17
8/12	0.45	0	35	1	1	1	0.8	1	0	0.6	1.12	0.79	YES		2
8/13	0.33	0	32	0.12	0.12	0.12	0.08	0.2	0	0.34	0.62	0.37			3
8/14	0.69	0	21	0.08	0.08	0.08	0.04	0.08	0	0.55	0.93	0.57			5
8/15	0.86	0	32	0.64	0.8	0.8	0.76	0.8	0	1.41	2.65	1.88	YES	YES	10
8/16	0.13	0	17	0.12	0.12	0.12	0	0.12	0	0.4	0.64	0.4			5
8/17	0.21	0	22	0.08	0.08	0.08	0.08	0.12	0	0.13	0.24	0.22			1
8/18	0.01	0	1	0	0	0	0	0	0	0	0	0			1
8/19	0.02	0	3	0	0	0	0	0	0	0.02	0.05	0.03			1
8/20	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			5
8/21	0	0	0	0	0	0	0	0	0	0.08	0.1	0.11			9
8/22	0.04	0	3	0	0	0	0	0	0	0.06	0.18	0.09			7
8/23	0.54	0	19	0.56	0.72	0.72	0.56	0.72	0	0.46	0.82	0.62			7
8/24	0.28	0	18	0.12	0.12	0.12	0.04	0.12	0	0.23	0.46	0.26			13
8/25	0.03	0	4	0	0	0	0	0	0	0.03	0.04	0.03			1
8/26	0	0	0	0	0	0	0	0	0	0.01	0.02	0.01			0
8/27	0	0	0	0	0	0	0	0	0	0	0	0			0
8/28	0.1	0	1	0	0	0	0	0	0	0.1	0.17	0.13			1
8/29	0.31	0	9	0.32	0.32	0.32	0.04	0.32	0	0.29	0.54	0.32			6
8/30	0.21	0	16	0.08	0.08	0.08	0.08	0.08	0	0.69	1.3	0.7	YES		3
8/31	0.03	0	17	0.04	0.04	0.04	0	0.04	0	0.41	0.59	0.61			7
9/1	0	0	0	0	0	0	0	0	0	0	0	0			1
9/2	0	0	0	0	0	0	0	0	0	0	0	0			0
9/3	0	0	0	0	0	0	0	0	0	0	0	0			0
9/4	0.15	0	2	0.04	0.04	0.04	0	0.04	0	0.17	0.32	0.17			1
9/5	0	0	0	0	0	0	0	0	0	0	0	0			0
9/6	0	0	0	0	0	0	0	0	0	0	0	0			0
9/7	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01			0
9/8	0.05	0	3	0.32	0.36	0.36	0.04	0.36	0	0.52	1.04	0.72	YES		7
9/9	0.21	0	5	0	0	0	0	0	0	0.16	0.31	0.16			4

9/10	0.22	0	10	0.08	0.08	0.08	0.04	0.08	0	0.13	0.24	0.21			6
9/11	1.14	2	22	0.68	0.76	0.8	0.4	0.8	0	1.09	2.08	1.32	YES	YES	25
9/12	0	0	0	0	0	0	0	0	0	0.03	0.03	0.03			3
9/13	0.05	0	6	0	0	0	0	0	0	0.03	0.09	0.05			1
9/14	0.1	0	17	0.04	0.04	0.04	0.04	0.04	0	0.1	0.21	0.13			7
9/15	0.02	0	4	0	0	0	0	0	0	0.03	0.08	0.05			1
9/16	0.01	0	2	0	0	0	0	0	0	0	0.01	0			3
9/17	0.19	0	19	0.4	0.4	0.4	0.28	0.4	0	0.34	0.59	0.36			6
9/18	0	0	0	0.39	0.39	0.39	0	0.39	0	0	0	0			0
9/19	0	0	0	0	0	0	0	0	0	0	0	0			0
9/20	0	0	0	0	0	0	0	0	0	0	0	0			0
9/21	0	0	0	0	0	0	0	0	0	0	0	0			0
9/22	0.6	0	17	0	0	0	0	0	0	0.02	0.03	0.03			1
9/23	1.62	24	42	0.4	0.6	0.88	0.56	1.24	0	1.15	2.08	1.77	YES	YES	20
9/24	0.31	0	41	0.08	0.08	0.12	0.08	0.16	0	0.02	0.04	0.21			1
9/25	0.38	0	37	0.12	0.12	0.12	0.08	0.12	0	0.33	0.55	0.52			3
9/26	0.14	0	34	0.04	0.08	0.08	0.08	0.12	0	0.07	0.12	0.09			1
9/27	0.76	0	43	0.12	0.16	0.24	0.16	0.48	0	0.16	0.33	0.79			5
9/28	0.4	0	29	0.04	0.04	0.04	0.04	0.04	0	0.08	0.16	0.19			1
9/29	0.4	0	36	0.2	0.2	0.2	0.08	0.2	0	0.16	0.34	0.19			6
9/30	0.03	0	11	0.04	0.04	0.04	0	0.04	0	0.01	0.02	0.04			5

d) Forecast Zone D: Plains

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0	0	0	No ALERT gages in Forecast Zone D.						0.04	0.08	0.04			0
5/2	0.55	0	10							0.09	0.17	0.24			0
5/3	0.31	0	7							0.21	0.39	0.49			0
5/4	0	0	0							0	0	0			0
5/5	0	0	0							0	0	0			0
5/6	0	0	0							0.01	0.05	0.02			1
5/7	0.4	0	8							0.34	0.66	0.38			3
5/8	0.8	0	9							0.57	1.37	1.12	YES		32
5/9	0.25	0	9							0.34	0.66	0.5			44
5/10	0.3	0	9							0.08	0.17	0.31			9
5/11	0.01	0	1							0	0	0			0
5/12	0	0	0							0	0	0			1
5/13	0	0	0							0	0	0			0
5/14	0	0	0							0	0	0			1
5/15	0.11	0	1							0	0	0			1
5/16	0.32	0	9							0.59	1.12	0.63	YES		5
5/17	2.25	11	12							0.55	1.07	2.02	YES	YES	17
5/18	1.97	8	13							0.46	0.92	2.03			21
5/19	0.18	0	8							0.12	0.23	0.36			1
5/20	0.14	0	1							0	0	0			0
5/21	0.3	0	9							0.48	0.94	0.5			1
5/22	0.15	0	8							0.2	0.4	0.24			0
5/23	0.01	0	1							0	0	0			0
5/24	0	0	0							0	0	0			0
5/25	0.29	0	10							0.13	0.49	0.26			2
5/26	0.2	0	7							0.51	0.96	0.65			21
5/27	0.45	0	9							0.45	0.87	0.59			1
5/28	0.26	0	7							0.17	0.3	0.18			1
5/29	0.24	0	7							0.29	0.55	0.42			7
5/30	0.08	0	1							0.34	0.55	0.34			2
5/31	0.13	0	3							0.3	0.57	0.32			14
6/1	0.01	0	1							0	0.08	0			18
6/2	0.17	0	5							0.25	0.37	0.34			8
6/3	0.03	0	1							0.05	0.09	0.06			1
6/4	0	0	0							0	0	0			1
6/5	1.11	1	6							1.52	2.92	2.09	YES	YES	27
6/6	0.21	0	3							1.46	2.16	1.8	YES	YES	39
6/7	0.26	0	9							1.42	2.74	1.73	YES	YES	55
6/8	0	0	0							0	0	0			6

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/9	0	0	0							0	0	0			0
6/10	0	0	0							0	0	0			0
6/11	0	0	0							0	0	0			57
6/12	0	0	0							0	0	0			13
6/13	0	0	0							0	0	0			0
6/14	0	0	0							0.04	0.08	0.04			1
6/15	0	0	0							0	0	0			0
6/16	0	0	0							0	0	0			0
6/17	0	0	0							0.04	0.06	0.05			0
6/18	0	0	0							0	0	0			0
6/19	0	0	0							0	0	0			0
6/20	0.04	0	2							0.31	0.6	0.35			1
6/21	0	0	0							0.01	0.02	0.01			4
6/22	0.28	0	8							0.51	0.98	0.81			10
6/23	0.08	0	4							0.56	1.08	0.11	YES		1
6/24	0.01	0	1							0.05	0.07	0.07			2
6/25	0.15	0	1							0	0	0			3
6/26	0	0	0							0	0	0			11
6/27	0	0	0							0.1	0.17	0.1			1
6/28	0.18	0	5							0.32	0.6	0.6			1
6/29	0.33	0	11							0.49	0.96	0.71			1
6/30	0	0	0							0.09	0.18	0.09			2
7/1	0	0	0							0.02	0.04	0.02			0
7/2	0	0	0							0	0.01	0			1
7/3	0.2	0	1							0.06	0.12	0.06			1
7/4	0.4	0	3							0.72	1.22	0.79	YES		2
7/5	0	0	0							0	0	0			0
7/6	0	0	0							0.26	0.44	0.32			2
7/7	0	0	0							0.01	0.01	0.03			21
7/8	1.25	1	3							0.78	1.39	1.91	YES	YES	11
7/9	0	0	0							0	0	0			1
7/10	0.37	0	1							0.16	0.27	0.2			4
7/11	0	0	0							0.02	0.04	0.03			11
7/12	0.2	0	6							0.17	0.32	0.47			35
7/13	0.07	0	1							0.02	0.02	0.14			31
7/14	0.77	0	5							0.03	0.08	1.28			11
7/15	0.56	0	5							1.11	2.17	0.82	YES	YES	8
7/16	0.01	0	1							0	0	0			1
7/17	0.03	0	1							0.14	0.19	0.14			3
7/18	0	0	0							0.01	0.03	0.01			32

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/19	0.05	0	3							0.59	1.04	1	YES		18
7/20	0.2	0	2							0.76	1.51	0.83	YES		11
7/21	0.66	0	7							1.04	1.99	1.32	YES	YES	38
7/22	0	0	0							0	0	0			25
7/23	0	0	0							0.03	0.05	0.04			41
7/24	0.04	0	1							0.01	0.02	0.01			12
7/25	0.07	0	6							0.12	0.21	0.18			4
7/26	2.56	1	8							0.84	1.59	1.58	YES	YES	20
7/27	0.01	0	1							0.02	0.05	0.02			10
7/28	0.02	0	1							0.33	0.57	0.36			38
7/29	0.2	0	2							0.45	0.81	0.63			26
7/30	0.48	0	7							0.51	0.85	0.53			27
7/31	0.01	0	1							0.35	0.63	0.37			2
8/1	0.1	0	2							0.03	0.05	0.05			1
8/2	0.61	0	10							0.88	1.68	1.55	YES	YES	1
8/3	0.07	0	7							0.35	0.68	0.3			7
8/4	0.15	0	7							0.53	1.04	0.55	YES		2
8/5	0.33	0	10							0.66	1.14	0.68	YES		7
8/6	0.4	0	7							0.47	0.91	0.72			44
8/7	0.78	0	9							0.45	0.85	1.48			36
8/8	0.46	0	6							0.56	0.84	0.73			17
8/9	0.07	0	2							0.1	0.19	0.2			4
8/10	0.5	0	6							0.86	1.7	1.24	YES	YES	15
8/11	0.06	0	3							0.17	0.32	0.21			24
8/12	0.6	0	9							0.94	1.69	1.26	YES	YES	2
8/13	0.04	0	4							0.41	0.74	0.63			2
8/14	0.28	0	7							0.56	1.08	0.57	YES		4
8/15	0.41	0	9							1.1	2.11	1.2	YES	YES	10
8/16	0	0	0							0	0	0			5
8/17	0	0	0							0	0.01	0			0
8/18	0	0	0							0	0	0			0
8/19	0	0	0							0.06	0.12	0.08			1
8/20	0	0	0							0	0	0			7
8/21	0	0	0							0.05	0.08	0.13			3
8/22	0	0	0							0	0	0			8
8/23	0.26	0	2							0.69	1.28	0.72	YES		6
8/24	0.02	0	1							0.45	0.88	0.45			14
8/25	0	0	0							0	0	0.03			2
8/26	0	0	0							0.01	0.02	0			0
8/27	0	0	0							0	0	0			0

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/28	0	0	0							0	0	0			0
8/29	0	0	0							0	0	0			8
8/30	0.4	0	2							0.53	1.19	0.73	YES		6
8/31	0.02	0	2							0.89	1.64	1.16	YES	YES	9
9/1	0	0	0							0	0	0			0
9/2	0	0	0							0	0	0			0
9/3	0	0	0							0	0	0			0
9/4	0.01	0	1							0.61	1.21	0.65	YES		1
9/5	0	0	0							0	0	0			0
9/6	0	0	0							0	0	0			0
9/7	0	0	0							0	0	0			0
9/8	0.08	0	3							0.36	0.61	0.4			5
9/9	0	0	0							0.05	0.06	0.05			3
9/10	0	0	0							0.01	0.01	0.08			3
9/11	0.25	0	5							1.19	1.97	1.43	YES	YES	13
9/12	0	0	0							0	0	0			1
9/13	0.26	0	2							0.06	0.09	0.06			2
9/14	0	0	0							0.11	0.21	0.12			7
9/15	0.01	0	1							0.35	0.65	0.35			1
9/16	0	0	0							0.06	0.12	0.06			3
9/17	0.26	0	3							0.37	0.68	0.37			8
9/18	0	0	0							0	0	0			0
9/19	0	0	0							0	0	0			0
9/20	0	0	0							0	0	0			0
9/21	0	0	0							0	0	0			0
9/22	0.03	0	3							0.02	0.07	0.03			2
9/23	1.11	3	11							0.64	1.24	1.42	YES		19
9/24	0.14	0	8							0.04	0.08	0.13			1
9/25	0.06	0	4							0.05	0.1	0.07			1
9/26	0.29	0	5							0.11	0.2	0.18			1
9/27	0.42	0	10							0.1	0.2	0.63			4
9/28	0.2	0	3							0.1	0.19	0.14			1
9/29	0.03	0	4							0.05	0.09	0.05			7
9/30	0.24	0	1							0	0	0.11			8

e) Forecast Zone E: North Metro

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0	0	0	0	0	0	0	0	0	0.01	0.04	0.01			0
5/2	0.35	0	68	0.12	0.13	0.16	0.13	0.18	0	0.09	0.17	0.18			0
5/3	0.19	0	62	0.12	0.16	0.2	0.16	0.2	0	0.07	0.13	0.14			0
5/4	0	0	0	0	0	0	0	0	0	0	0	0			0
5/5	0	0	0	0	0	0	0	0	0	0	0	0			0
5/6	0.02	0	2	0.12	0.12	0.12	0.12	0.12	0	0.23	0.36	0.14			0
5/7	0.24	0	60	0.2	0.2	0.2	0.2	0.2	0	0.4	0.74	0.4			3
5/8	1.27	5	79	0.64	0.76	0.76	0.76	1.2	0	1.04	2.05	1.79	YES	YES	33
5/9	0.49	0	51	0.28	0.28	0.28	0.28	0.28	0	0.04	0.21	0.09			35
5/10	1.71	2	68	0.2	0.32	0.48	0.32	1.08	0	0.66	1.08	1.36	YES		10
5/11	0.08	0	16	0.08	0.08	0.08	0.08	0.08	0	0.02	0.04	0.05			0
5/12	0	0	0	0	0	0	0	0	0	0	0	0			1
5/13	0	0	0	0	0	0	0	0	0	0	0	0			0
5/14	0	0	0	0	0	0	0	0	0	0.01	0.01	0.01			1
5/15	0.15	0	5	0.04	0.04	0.04	0.04	0.08	0	0.08	0.25	0.08			1
5/16	0.43	0	74	0.12	0.2	0.24	0.2	0.24	0	0.83	1.44	1.33	YES		7
5/17	3.1	56	68	0.72	0.72	0.88	0.72	1.8	0	1.01	1.97	2.04	YES	YES	17
5/18	5.2	66	69	0.16	0.28	0.48	0.28	1.4	0	0.31	0.6	2.54			22
5/19	0.13	0	30	0.24	0.36	0.6	0.36	1.6	0	0.08	0.16	0.23			1
5/20	0.02	0	1	0.28	0.48	0.76	0.48	1.28	0	0	0.03	0			0
5/21	0.5	0	73	0.2	0.28	0.32	0.28	0.44	0	0.25	0.48	0.5			1
5/22	0.31	0	74	0.2	0.24	0.4	0.24	0.44	0	0.16	0.31	0.35			0
5/23	0.01	0	2	0	0	0	0	0	0	0	0	0			0
5/24	0	0	0	0	0	0	0	0	0	0	0	0			0
5/25	0.64	0	79	0.44	0.44	0.48	0.44	0.52	0	0.29	0.58	0.62			2
5/26	0.11	0	39	0.08	0.08	0.08	0.08	0.12	0	0.26	0.57	0.36			8
5/27	0.32	0	69	0.12	0.12	0.16	0.12	0.28	0	0.28	0.49	0.71			1
5/28	0.12	0	49	0.08	0.12	0.12	0.12	0.12	0	0.08	0.16	0.13			1
5/29	0.18	0	46	0.08	0.08	0.08	0.08	0.08	0	0.08	0.18	0.11			5
5/30	0.03	0	18	0	0	0	0	0	0	0.06	0.15	0.06			2
5/31	0.04	0	1	0	0	0	0	0	0	0.02	0.68	0.02			5
6/1	0.29	0	32	0.28	0.32	0.32	0.32	0.32	0	0.39	0.59	0.43			16
6/2	0.14	0	44	0.24	0.24	0.24	0.24	0.24	0	0.21	0.57	0.28			6
6/3	0	0	0	0	0	0	0	0	0	0	0.02	0			0
6/4	0	0	0	0	0	0	0	0	0	0	0	0			1
6/5	0.08	0	9	0	0	0	0	0	0	0.27	0.52	0.48			10
6/6	0.76	0	5	0.4	0.48	0.52	0.48	0.52	0	0.87	1.64	1.24	YES		39
6/7	0.38	0	46	0.36	0.36	0.36	0.36	0.4	0	0.71	1.37	1.14	YES		47
6/8	0.02	0	7	0	0	0	0	0	0	0.05	0.14	0.13			7

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/9	0	0	0	0	0	0	0	0	0	0	0	0			0
6/10	0.02	0	1	0	0	0	0	0	0	0	0	0			0
6/11	0	0	0	0	0	0	0	0	0	0	0	0			46
6/12	0.05	0	3	0	0	0	0	0	0	0.07	0.13	0.07			10
6/13	0	0	0	0	0	0	0	0	0	0	0	0			0
6/14	0	0	0	0	0	0	0	0	0	0.04	0.07	0.04			0
6/15	0	0	0	0.08	0.08	0.08	0.08	0.08	0	0	0	0			0
6/16	0.01	0	1	0	0	0	0	0	0	0	0	0			0
6/17	0.01	0	1	0	0	0	0	0	0	0.05	0.07	0.05			0
6/18	0	0	0	0	0	0	0	0	0	0	0	0			0
6/19	0	0	0	0	0	0	0	0	0	0	0	0			0
6/20	0.1	0	22	0	0	0	0	0	0	0.06	0.11	0.06			1
6/21	0	0	0	0	0	0	0	0	0	0.03	0.06	0.04			3
6/22	0.5	0	89	0.24	0.36	0.4	0.36	0.36	0	0.34	0.64	0.64			6
6/23	0.26	0	15	0.04	0.04	0.04	0.04	0.04	0	0.43	0.85	0.05			0
6/24	0.12	0	1	0	0	0	0	0	0	0	0.05	0			1
6/25	0	0	0	0	0	0	0	0	0	0	0.99	0			1
6/26	0	0	0	0.08	0.08	0.08	0.08	0.12	0	0	0.11	0			2
6/27	0.01	0	2	0.12	0.12	0.12	0.12	0.12	0	0.04	0.07	0.04			0
6/28	0.01	0	1	0.08	0.08	0.08	0.08	0.08	0	0.08	0.32	0.08			1
6/29	0.39	0	84	0.08	0.08	0.08	0.08	0.08	0	0.4	0.75	0.61			1
6/30	0.08	0	1	0	0	0	0	0	0	0.01	0.13	0			2
7/1	0	0	0	0	0	0	0	0	0	0	0	0			0
7/2	0.03	0	5	0	0	0	0	0	0	0.03	0.05	0.03			1
7/3	0.11	0	26	0.08	0.08	0.08	0.08	0.08	0	0.17	0.45	0.19			1
7/4	0.09	0	4	0.02	0.02	0.02	0.02	0.02	0	0.08	0.13	0.08			3
7/5	0	0	0	0	0	0	0	0	0	0	0	0			0
7/6	0.03	0	2	0.08	0.08	0.08	0.08	0.08	0	0.12	0.29	0.12			2
7/7	0.21	0	41	0.04	0.04	0.04	0.04	0.04	0	0.25	0.49	0.33			11
7/8	0.04	0	6	0	0	0	0	0	0	0.23	0.45	0.23			3
7/9	0.04	0	1	0	0	0	0	0	0	0	0.01	0.1			2
7/10	0.14	0	9	0.04	0.04	0.04	0.04	0.04	0	0.13	0.25	0.16			5
7/11	0.07	0	17	0	0	0	0	0	0	0.06	0.14	0.12			13
7/12	0.15	0	77	0.08	0.12	0.12	0.12	0.12	0	0.05	0.1	0.11			11
7/13	0	0	0	0	0	0	0	0	0	0	0	0			15
7/14	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1			7
7/15	0.09	0	20	0.08	0.08	0.08	0.08	0.08	0	0.06	0.18	0.09			1
7/16	0	0	0	0	0	0	0	0	0	0	0.06	0			1
7/17	0	0	0	0	0	0	0	0	0	0.02	0.08	0.02			4
7/18	0.1	0	9	0	0	0	0	0	0	0.17	1.04	0.2	YES		21

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/19	0.15	0	2	0	0	0	0	0	0	0.01	0.03	0.02			5
7/20	0.01	0	1	0	0	0	0	0	0	0.03	0.06	0.07			11
7/21	0.61	0	88	0.68	0.68	0.68	0.68	0.72	0	0.88	1.79	1.01	YES		21
7/22	0.01	0	1	0	0	0	0	0	0	0.05	0.3	0.05			19
7/23	0.11	0	1	0	0	0	0	0	0	0	0	0			15
7/24	0	0	0	0	0	0	0	0	0	0.02	0.08	0.02			3
7/25	0.2	0	95	0.08	0.12	0.12	0.12	0.12	0	0.09	0.17	0.28			3
7/26	1.13	4	94	0.52	0.6	0.64	0.6	0.72	0	1.12	2.2	1.13	YES	YES	27
7/27	0.37	0	3	0	0	0	0	0	0	0.29	0.45	0.29			23
7/28	0.44	0	49	0.04	0.04	0.04	0.04	0.04	0	0.35	0.65	0.45			25
7/29	0.04	0	38	0.04	0.04	0.04	0.04	0.04	0	0.02	0.08	0.04			21
7/30	0.03	0	6	0.08	0.08	0.08	0.08	0.08	0	0.43	0.61	0.46			30
7/31	0	0	0	0	0	0	0	0	0	0.05	0.09	0.05			4
8/1	0.03	0	3	0	0	0	0	0	0	0.23	0.34	0.23			1
8/2	0.33	0	88	0.76	0.76	0.76	0.76	0.76	0	0.29	0.71	0.34			1
8/3	0.2	0	81	0.19	0.19	0.19	0.19	0.23	0	0.09	0.17	0.19			3
8/4	0.96	0	77	0.35	0.35	0.35	0.35	0.35	0	0.7	1.38	0.83	YES		1
8/5	0.6	0	99	0.36	0.4	0.44	0.4	0.44	0	0.44	0.87	0.69			10
8/6	1.04	1	96	0.12	0.16	0.28	0.16	0.2	0	0.33	0.55	0.66			41
8/7	0.86	0	108	0.48	0.6	0.72	0.6	1	0	0.26	0.5	0.73			33
8/8	0.12	0	83	0.08	0.08	0.08	0.08	0.12	0	0.08	0.18	0.22			15
8/9	0.51	0	89	0.08	0.12	0.12	0.12	0.12	0	0.4	0.78	0.53			2
8/10	1.26	1	89	0.16	0.16	0.16	0.16	0.2	0	0.44	0.86	1.2			9
8/11	0.05	0	8	0.04	0.04	0.04	0.04	0.04	0	0.04	0.42	0.05			26
8/12	0.21	0	20	0.04	0.04	0.04	0.04	0.04	0	0.25	0.87	0.3			2
8/13	0.15	0	42	0.12	0.12	0.12	0.12	0.12	0	0.41	0.77	0.41			2
8/14	0.05	0	18	0	0	0	0	0	0	0.03	0.08	0.05			2
8/15	0.69	0	94	0.36	0.36	0.36	0.36	0.36	0	0.73	1.39	0.8	YES		10
8/16	0.12	0	67	0.32	0.32	0.32	0.32	0.32	0	0.29	0.57	0.34			6
8/17	0.08	0	21	0.04	0.04	0.04	0.04	0.04	0	0.22	0.36	0.33			0
8/18	0.01	0	1	0	0	0	0	0	0	0	0	0			0
8/19	0.02	0	2	0	0	0	0	0	0	0.03	0.06	0.03			1
8/20	0	0	0	0	0	0	0	0	0	0	0.02	0.01			3
8/21	0.02	0	1	0	0	0	0	0	0	0.13	0.16	0.18			9
8/22	0.01	0	1	0	0	0	0	0	0	0.01	0.03	0.01			23
8/23	0.08	0	17	0	0	0	0	0	0	0.07	0.13	0.08			2
8/24	0.06	0	18	0	0	0	0	0	0	0.06	0.15	0.1			8
8/25	0	0	0	0	0	0	0	0	0	0.01	0.28	0.02			2
8/26	0.01	0	2	0	0	0	0	0	0	0.02	0.05	0.02			0
8/27	0	0	0	0	0	0	0	0	0	0	0	0			1

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/28	0	0	0	0	0	0	0	0	0	0	0	0			0
8/29	0	0	0	0	0	0	0	0	0	0	0	0			2
8/30	0.01	0	1	0	0	0	0	0	0	0.02	0.04	0.02			5
8/31	0.01	0	15	0.04	0.04	0.04	0.04	0.04	0	0.03	0.07	0.07			5
9/1	0	0	0	0	0	0	0	0	0	0	0.02	0			0
9/2	0.01	0	1	0	0	0	0	0	0	0	0	0			0
9/3	0.02	0	2	0	0	0	0	0	0	0	0	0			0
9/4	0.01	0	1	0	0	0	0	0	0	0	0	0			0
9/5	0	0	0	0	0	0	0	0	0	0	0	0			0
9/6	0	0	0	0	0	0	0	0	0	0	0	0			0
9/7	0.03	0	1	0	0	0	0	0	0	0	0	0			0
9/8	0.01	0	6	0	0	0	0	0	0	0.04	0.09	0.07			3
9/9	0	0	0	0	0	0	0	0	0	0.04	0.06	0.04			2
9/10	0.05	0	4	0	0	0	0	0	0	0.02	0.07	0.02			5
9/11	0.01	0	1	0	0	0	0	0	0	0.03	0.04	0.03			14
9/12	0.01	0	1	0	0	0	0	0	0	0.01	0.04	0.01			1
9/13	0.37	0	42	0.2	0.2	0.2	0.2	0.2	0	0.25	0.49	0.36			1
9/14	0.05	0	5	0	0	0	0	0	0	0.05	0.3	0.11			4
9/15	0.39	0	64	0.26	0.26	0.27	0.26	0.27	0	0.47	0.91	0.56			1
9/16	0.07	0	44	0.01	0.01	0.01	0.01	0.01	0	0.04	0.06	0.07			2
9/17	0.19	0	5	0.01	0.01	0.01	0.01	0.01	0	0.01	0.02	0.05			5
9/18	0	0	0	0	0	0	0	0	0	0	0	0			0
9/19	0.02	0	1	0	0	0	0	0	0	0	0	0			0
9/20	0	0	0	0	0	0	0	0	0	0	0	0			0
9/21	0	0	0	0.08	0.08	0.08	0.08	0	0	0	0	0			0
9/22	0.15	0	31	0	0	0	0	0	0	0.06	0.42	0.09			1
9/23	1.23	1	97	0.28	0.48	0.68	0.48	1.04	0	0.46	0.9	0.91			10
9/24	0.86	0	89	0.12	0.2	0.24	0.2	0.64	0	0.1	0.28	0.7			2
9/25	0.13	0	59	0.04	0.04	0.04	0.04	0.04	0	0.04	0.12	0.04			1
9/26	0.23	0	73	0.04	0.04	0.04	0.04	0.04	0	0.06	0.12	0.06			1
9/27	0.56	0	90	0.16	0.24	0.32	0.24	0.44	0	0.11	0.21	0.52			4
9/28	0.32	0	83	0.44	0.60	0.60	0.63	0.63	0	0.15	0.29	0.3			1
9/29	0.1	0	71	0.12	0.12	0.12	0.12	0.12	0	0.06	0.16	0.08			3
9/30	0.11	0	68	0.12	0.12	0.12	0.12	0.12	0	0.06	0.12	0.19			4

f) Forecast Zone F: Central Metro

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
5/1	0.07	0	2	0	0	0	0	0	0	0	0	0			0
5/2	1.05	1	101	0.24	0.24	0.28	0.24	0.4	0	0.17	0.32	0.21			1
5/3	0.29	0	104	0.16	0.16	0.2	0.16	0.32	0	0.14	0.27	0.31			0
5/4	0.03	0	2	0.28	0.28	0.28	0.04	0.28	0	0	0	0			0
5/5	0.01	0	1	0.08	0.08	0.08	0	0	0	0	0	0			0
5/6	0.12	0	21	0.12	0.12	0.12	0.12	0.12	0	0.25	0.45	0.16			1
5/7	0.37	0	95	0.24	0.24	0.24	0.24	0.24	0	0.81	1.24	0.89	YES		3
5/8	1.77	18	118	2.44	2.44	2.44	1.2	2.8	6	1.34	2.67	1.26	YES	YES	31
5/9	0.81	0	84	0.28	0.28	0.28	0.28	0.28	0	0.35	0.62	0.42			42
5/10	1.58	3	114	0.31	0.44	0.6	0.36	1.56	0	0.39	0.67	1.28			6
5/11	0.06	0	14	0.2	0.2	0.2	0.2	0.2	0	0.06	0.1	0.08			0
5/12	0.09	0	5	0.12	0.12	0.12	0.12	0.12	0	0.04	0.08	0.05			2
5/13	0	0	0	0.04	0.04	0.04	0	0.04	0	0	0	0			0
5/14	0	0	0	0	0	0	0	0	0	0	0	0			1
5/15	0	0	0	0.08	0.08	0.08	0	0.08	0	0	0.47	0			1
5/16	0.11	0	46	0.16	0.2	0.2	0.16	0.2	0	0.54	1.04	0.73	YES		8
5/17	1.98	56	96	0.76	0.88	0.92	0.76	1.32	0	0.52	0.95	1.7			16
5/18	1.7	19	101	0.24	0.32	0.52	0.32	1.6	0	0.31	0.6	1.56			18
5/19	0.52	0	44	0.16	0.24	0.32	0.2	0.8	0	0.07	0.14	0.13			0
5/20	0.1	0	1	0.16	0.24	0.32	0.12	0.48	0	0	0.01	0			0
5/21	0.42	0	112	0.16	0.2	0.24	0.2	0.32	0	0.2	0.39	0.41			1
5/22	0.36	0	114	0.16	0.2	0.28	0.2	0.32	0	0.25	0.48	0.38			1
5/23	0.02	0	8	0.04	0.04	0.08	0.04	0.04	0	0	0	0			0
5/24	0	0	0	0.16	0.16	0.16	0.08	0.16	0	0	0	0			0
5/25	0.86	0	115	0.72	0.72	0.72	0.64	0.76	0	0.69	1.36	0.78	YES		1
5/26	0.49	0	50	0.32	0.32	0.32	0.24	0.32	0	0.49	0.96	0.53			12
5/27	0.76	0	103	0.48	0.64	0.64	0.56	0.72	0	0.36	0.67	0.72			1
5/28	0.23	0	10	0.04	0.08	0.08	0.04	0.08	0	0.14	0.22	0.17			1
5/29	0.72	0	70	0.6	0.72	0.84	0.68	0.84	0	0.24	0.46	0.36			7
5/30	0.08	0	44	0.08	0.12	0.12	0.08	0.12	0	0.09	0.12	0.09			2
5/31	0.06	0	8	0.16	0.16	0.24	0.12	0.28	0	0.13	0.52	0.19			6
6/1	0.22	0	37	0.4	0.4	0.4	0.24	0.4	0	0.3	0.52	0.37			14
6/2	0.75	0	105	NA	1.01	1.01	0.72	1.01	1	0.51	0.98	0.64	YES	YES	7
6/3	0.01	0	2	0	0	0	0	0	0	0.01	0.01	0.01			0
6/4	0	0	0	0.04	0.04	0.08	0	0.04	0	0	0	0			1
6/5	0.5	0	13	0.28	0.4	0.4	0.12	0.44	0	1.42	2.7	1.47	YES	YES	19
6/6	0.97	0	28	0.84	0.92	0.92	0.36	0.92	0	1.65	1.9	1.93	YES	YES	38
6/7	0.84	0	102	0.96	1	1	0.6	1	0	1.18	2.34	1.62	YES	YES	47
6/8	0	0	0	0.12	0.12	0.12	0.08	0.12	0	0.03	0.08	0.03			9

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
6/9	0	0	0	0.08	0.08	0.12	0.04	0.16	0	0	0	0			0
6/10	0	0	0	0.12	0.12	0.16	0.08	0.2	0	0	0	0			0
6/11	0.03	0	1	0.2	0.2	0.24	0.12	0.36	0	0.05	0.1	0.05			24
6/12	0	0	0	0.04	0.04	0.04	0.04	0.04	0	0	0	0			2
6/13	0	0	0	0.12	0.12	0.12	0.08	0.24	0	0	0	0			0
6/14	0	0	0	0.12	0.12	0.12	0.12	0.16	0	0.01	0.01	0.01			0
6/15	0	0	0	0.12	0.12	0.16	0.08	0.2	0	0	0	0			0
6/16	0.02	0	1	0.04	0.04	0.04	0.04	0.04	0	0	0	0			0
6/17	0.06	0	19	0.12	0.12	0.12	0.08	0.2	0	0.26	0.49	0.28			0
6/18	0	0	0	0.08	0.08	0.08	0.08	0.16	0	0	0	0			0
6/19	0	0	0	0.12	0.12	0.16	0.08	0.28	0	0	0	0			0
6/20	0.1	0	15	0.24	0.24	0.24	0.12	0.24	0	0.17	0.3	0.17			1
6/21	0.01	0	4	0.08	0.08	0.08	0.04	0.08	0	0.03	0.05	0.04			2
6/22	0.33	0	104	0.16	0.24	0.28	0.16	0.24	0	0.48	0.89	0.51			6
6/23	0.25	0	73	0.16	0.16	0.24	0.16	0.2	0	0.25	0.48	0.19			1
6/24	0.02	0	2	0.12	0.12	0.12	0.08	0.24	0	0	0.29	0			1
6/25	0	0	0	0.12	0.12	0.12	0.04	0.28	0	0	0.4	0			1
6/26	0	0	0	0.12	0.12	0.12	0.08	0.24	0	0	0.05	0			7
6/27	0.03	0	3	0.16	0.16	0.16	0.08	0.24	0	0.07	0.13	0.07			0
6/28	0.02	0	3	0.08	0.08	0.08	0.08	0.12	0	0.19	0.35	0.21			1
6/29	0.58	0	107	0.36	0.44	0.44	0.4	0.48	0	0.42	0.68	0.55			1
6/30	0.14	0	6	0.08	0.08	0.08	0.04	0.08	0	0	0.11	0			1
7/1	0	0	0	0.08	0.08	0.08	0.04	0.24	0	0.02	0.03	0.02			0
7/2	0	0	0	0.08	0.08	0.16	0.04	0.2	0	0.01	0.04	0.01			1
7/3	0.03	0	7	0.08	0.08	0.12	0.08	0.2	0	0.01	0.12	0.02			1
7/4	0.01	0	1	0.08	0.08	0.16	0.04	0.24	0	0.06	0.15	0.06			2
7/5	0	0	0	0.04	0.04	0.04	0.04	0.04	0	0	0	0			0
7/6	0	0	0	0.12	0.12	0.12	0.08	0.16	0	0.03	1.34	0.03	YES		2
7/7	0.09	0	9	0.08	0.08	0.08	0.04	0.08	0	0.06	0.2	0.06			20
7/8	0.74	0	23	0.64	0.64	0.64	0.48	0.64	0	0.67	1.34	0.75	YES		5
7/9	0	0	0	0.08	0.08	0.12	0.08	0.16	0	0	0	0			1
7/10	0.03	0	2	0.08	0.08	0.16	0.08	0.24	0	0.01	0.03	0.03			3
7/11	0.07	0	27	0.08	0.08	0.16	0.08	0.2	0	0.07	0.15	0.12			11
7/12	0.25	0	94	0.08	0.12	0.12	0.08	0.12	0	0.12	0.23	0.21			36
7/13	0.12	0	4	0.32	0.32	0.32	0.2	0.32	0	0.17	0.31	0.35			44
7/14	1.3	2	70	0.6	0.64	0.64	0.6	1.08	0	0.76	1.41	1.18	YES		17
7/15	0.21	0	61	0.24	0.24	0.24	0.2	0.24	0	0.29	0.47	0.18			10
7/16	0	0	0	0.08	0.08	0.12	0.08	0.2	0	0	0.03	0			1
7/17	0.01	0	1	0.08	0.08	0.12	0.08	0.12	0	0.03	0.07	0.04			2
7/18	0.03	0	1	0.08	0.08	0.08	0.08	0.16	0	0.03	1.03	0.03	YES		21

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
7/19	0.75	0	51	0.12	0.12	0.12	0.08	0.04	0	0.39	0.59	0.45			12
7/20	0.47	0	70	1.12	1.2	1.2	0.6	1.2	1	0.75	1.39	0.84	YES	YES	10
7/21	0.29	0	101	0.31	0.31	0.31	0.28	0.52	0	0.41	0.79	0.46			32
7/22	0.01	0	2	0.08	0.08	0.12	0.04	0.2	0	0	0.06	0			29
7/23	0.5	0	5	0.16	0.16	0.16	0.08	0.24	0	0.07	0.12	0.1			37
7/24	0.13	0	1	0.08	0.08	0.16	0.04	0.24	0	0.12	0.2	0.16			5
7/25	0.51	0	110	0.12	0.16	0.2	0.12	0.24	0	0.17	0.38	0.4			5
7/26	2.42	29	115	1.56	1.64	1.68	1.6	1.76	4	0.82	1.57	1.49	YES	YES	19
7/27	0.5	0	39	0.16	0.16	0.16	0.08	0.16	0	0.28	0.39	0.28			27
7/28	0.51	0	74	0.28	0.28	0.32	0.24	0.36	0	0.57	0.94	0.6			39
7/29	0.3	0	70	0.16	0.2	0.2	0.12	0.36	0	0.07	0.14	0.1			26
7/30	1.31	1	76	0.88	0.92	0.92	0.56	0.96	0	0.95	1.64	1	YES	YES	24
7/31	0.12	0	3	0.12	0.12	0.12	0.08	0.12	0	0	0.02	0.06			3
8/1	0	0	0	0.04	0.04	0.04	0.04	0.04	0	0	0	0			1
8/2	0.79	0	119	0.68	0.8	0.8	0.6	0.8	0	0.52	1.02	0.57	YES		1
8/3	0.25	0	93	0.87	0.87	0.87	0.32	0.32	0	0.18	0.35	0.19			6
8/4	0.14	0	32	0.08	0.08	0.08	0.08	0.08	0	0.33	0.61	0.33			1
8/5	1.01	2	92	0.88	0.92	0.92	0.44	0.92	0	0.57	1.21	0.63	YES		8
8/6	0.58	0	99	0.52	0.52	0.52	0.52	0.76	0	0.32	0.69	0.34			45
8/7	1.36	7	112	0.6	0.76	0.96	0.68	1.4	0	0.4	0.72	1.35			38
8/8	0.56	0	102	0.28	0.28	0.28	0.28	0.28	0	0.38	0.74	0.44			15
8/9	0.12	0	42	0.36	0.36	0.36	0.16	0.36	0	0.06	0.11	0.09			2
8/10	0.59	0	88	0.44	0.44	0.44	0.4	0.48	0	0.57	1.08	0.59	YES		14
8/11	0.3	0	17	0.12	0.12	0.12	0.04	0.12	0	0.06	0.97	0.08			21
8/12	0.7	0	93	0.8	0.84	0.88	0.56	0.88	0	0.96	1.77	0.99	YES		1
8/13	0.59	0	80	0.52	0.52	0.52	0.32	0.56	0	0.65	1.29	0.67	YES		1
8/14	0.57	0	32	1	1.12	1.12	0.76	1.12	1	0.86	1.53	0.87	YES	YES	3
8/15	1.03	1	97	1.08	1.36	1.36	0.4	1.36	1	0.55	1	0.9	YES	YES	11
8/16	0.17	0	50	0.16	0.16	0.16	0.16	0.32	0	0.34	0.64	0.34			4
8/17	0.05	0	18	0.12	0.12	0.12	0.08	0.12	0	0.04	0.33	0.04			0
8/18	0.04	0	1	0.12	0.12	0.12	0.08	0.12	0	0	0	0			1
8/19	0.05	0	11	0.12	0.12	0.12	0.12	0.2	0	0.12	0.22	0.13			1
8/20	0	0	0	0.12	0.12	0.12	0.12	0.2	0	0	0	0			2
8/21	0	0	0	0.08	0.08	0.08	0.08	0.16	0	0.49	0.8	1.13			9
8/22	0	0	0	0.16	0.16	0.16	0.08	0.28	0	0.01	0.03	0.01			27
8/23	0	0	0	0.24	0.24	0.24	0.16	0.24	0	0.02	0.06	0.02			2
8/24	0	0	0	0.12	0.12	0.12	0.08	0.2	0	0.1	0.22	0.15			13
8/25	0	0	0	0.12	0.12	0.12	0.12	0.2	0	0	0.01	0			1
8/26	0	0	0	0.12	0.12	0.12	0.12	0.2	0	0.02	0.03	0.02			0
8/27	0	0	0	0.12	0.12	0.12	0.12	0.24	0	0	0	0			0

A	CoCoRaHS			ALERT						NOAA Stage IV			Flood Day Classification		Threat
	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
8/28	0	0	0	0.2	0.2	0.2	0.12	0.2	0	0	0	0			0
8/29	0	0	0	0.12	0.12	0.12	0.08	0.16	0	0	0.01	0			6
8/30	0.77	0	21	0.48	0.48	0.48	0.28	0.48	0	0.69	1.34	0.81	YES		3
8/31	0.05	0	23	0.12	0.12	0.12	0.12	0.24	0	0.02	0.04	0.02			4
9/1	0	0	0	0.16	0.16	0.16	0.16	0.24	0	0	0.01	0			0
9/2	0	0	0	0.12	0.12	0.12	0.12	0.12	0	0	0	0			0
9/3	0	0	0	0.12	0.12	0.12	0.12	0.2	0	0	0	0			0
9/4	0	0	0	0.12	0.12	0.12	0.08	0.2	0	0.04	0.04	0.04			1
9/5	0	0	0	0.16	0.16	0.16	0.08	0.2	0	0	0	0			0
9/6	0	0	0	0.12	0.12	0.12	0.08	0.12	0	0	0	0			0
9/7	0	0	0	0.12	0.12	0.12	0.08	0.24	0	0	0	0			0
9/8	0.01	0	2	0.16	0.16	0.16	0.12	0.2	0	0.03	0.07	0.03			2
9/9	0	0	0	0.16	0.16	0.16	0.08	0.28	0	0	0	0			2
9/10	0.03	0	1	0.2	0.2	0.2	0.12	0.2	0	0	0	0			4
9/11	0.12	0	8	0.16	0.16	0.16	0.08	0.16	0	0.78	1.06	1.06	YES		21
9/12	0	0	0	0.04	0.04	0.04	0.04	0.04	0	0	0	0			1
9/13	0.1	0	25	0.12	0.12	0.12	0.08	0.2	0	0.16	0.32	0.24			2
9/14	0.13	0	13	0.12	0.12	0.12	0.08	0.16	0	0.13	0.64	0.14			5
9/15	0.05	0	51	0.2	0.2	0.2	0.12	0.2	0	0.08	0.13	0.08			1
9/16	0.04	0	13	0.12	0.12	0.12	0.08	0.24	0	0.06	0.11	0.06			2
9/17	0.24	0	79	0.16	0.16	0.16	0.16	0.24	0	0.22	0.34	0.25			7
9/18	0	0	0	0.12	0.12	0.12	0.12	0.16	0	0	0	0			0
9/19	0	0	0	0.08	0.08	0.08	0.04	0.16	0	0	0	0			0
9/20	0	0	0	0.24	0.24	0.24	0.08	0.24	0	0	0	0			0
9/21	0.02	0	1	0.16	0.16	0.16	0.08	0.16	0	0	0	0			0
9/22	0.09	0	53	0.12	0.12	0.12	0.08	0.12	0	0.07	0.11	0.07			1
9/23	1.24	5	104	0.28	0.52	0.8	0.52	1.16	0	0.28	0.55	1.1			13
9/24	0.81	0	103	0.12	0.12	0.16	0.12	0.32	0	0.02	0.2	0.25			2
9/25	0.32	0	99	0.08	0.08	0.08	0.08	0.12	0	0.19	0.37	0.44			2
9/26	0.69	0	69	0.16	0.24	0.28	0.16	0.32	0	0.17	0.29	0.37			1
9/27	0.61	0	111	0.36	0.36	0.4	0.2	0.6	0	0.13	0.28	0.68			6
9/28	0.2	0	75	0.36	0.36	0.36	0.16	0.36	0	0.08	0.16	0.41			1
9/29	0.15	0	57	0.08	0.08	0.08	0.04	0.08	0	0.06	0.1	0.08			11
9/30	0.15	0	45	0.2	0.2	0.2	0.12	0.2	0	0.27	0.5	0.29			6