

# Memo

**Date:** July 7, 2014  
**To:** Kevin Stewart  
**From:** Markus Ritsch  
**Subject:** June 2014 ALERT Data Analysis

## I. ALERT Data Source

Raw ALERT data records extracted from the Urban Drainage and Flood Control District's NovaStar 5 base station were analyzed for the period June 1 through June 30, 2014.

## II. General System Analysis Summary

In 2014 data will be received at the District through both the legacy ALERT channel and through the ALERT2 (concentrator plus A2 self-reports) channel. The following (Table 1) quantifies the data reception through each telemetry source. The West Creek repeater in Douglas County processes both incoming data on A1 and A2 but passes on only A2 format messages to Diamond Hill. All other repeaters in the system send data on both legacy and A2 channels.

**Table 1. Reception of A1/A2 Data at Diamond Hill**

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Legacy	320,303	214,698	279,782	293,137	351,946	318,434						
Concentrator	508,306	370,222	495,874	515,526	537,996	430,118						
ALERT2	129,855	86,506	110,086	107,478	113,674	109,244						
<b>TOTAL</b>	<b>958,464</b>	<b>671,426</b>	<b>885,742</b>	<b>916,141</b>	<b>1,003,616</b>	<b>857,796</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Conc+A2	638,161	456,728	605,960	623,004	651,670	539,362						
Conc/Leg	1.59	1.72	1.77	1.76	1.53	1.35						
DataChron	498,846	444,211	599,923	630,962	663,576	583,568						

The daily ratio of ALERT2 reports received versus legacy ALERT reports received is shown (Figure 1). The data show a general decreasing trend in the ratio for the month of May. During June the ratio decreases to a value of 1.0 for several days then comes back up. This is due to an antenna failure at the Diamond Hill base station which is described later on in this report.

Beginning in June of 2014 the District will operate two redundant NovaStar5 base stations: a primary base station (ns5a) at Diamond Hill and the redundant base (ns5b) at Greenhouse Data. Additional analyses will be conducted on the data received by these two base stations. The data received by both base stations for short periods in June are shown below. The short comparison (Table 2) shows an interesting trend in that ns5b (Greenhouse Data) receives more data reports than does ns5a. This was especially true in the early part of the month.

**Table 2. Comparison of Data Reception by ns5a and ns5b**

NS5-A	June 5	June 6	June 7	June 8	June 9	June 26	June 27	June 28	June 29	June 30
Legacy	10,254	10,286	9,307	13,048	10,079	11,037	9,199	9,535	9,070	9,170
Concentrator	16,190	16,109	14,214	20,024	15,683	14,658	14,786	14,961	14,391	15,004
ALERT2	3,482	3,681	3,634	4,154	3,697	3,672	3,709	3,741	3,639	3,670
<b>NS5-B</b>										
Legacy	10,254	10,285	9,308	13,050	10,078	11,039	9,190	9,534	9,071	9,168
Concentrator	16,217	16,126	14,247	20,155	15,732	14,659	14,786	14,972	14,400	15,008
ALERT2	3,761	3,755	3,691	4,332	3,771	3,673	3,715	3,751	3,672	3,684
<b>Diff (NS5a-NS5b)</b>										
Legacy	0.00	1.00	-1.00	-2.00	1.00	-2.00	9.00	1.00	-1.00	2.00
Concentrator	-27.00	-17.00	-33.00	-131.00	-49.00	-1.00	0.00	-11.00	-9.00	-4.00
ALERT2	-279.00	-74.00	-57.00	-178.00	-74.00	-1.00	-6.00	-10.00	-33.00	-14.00

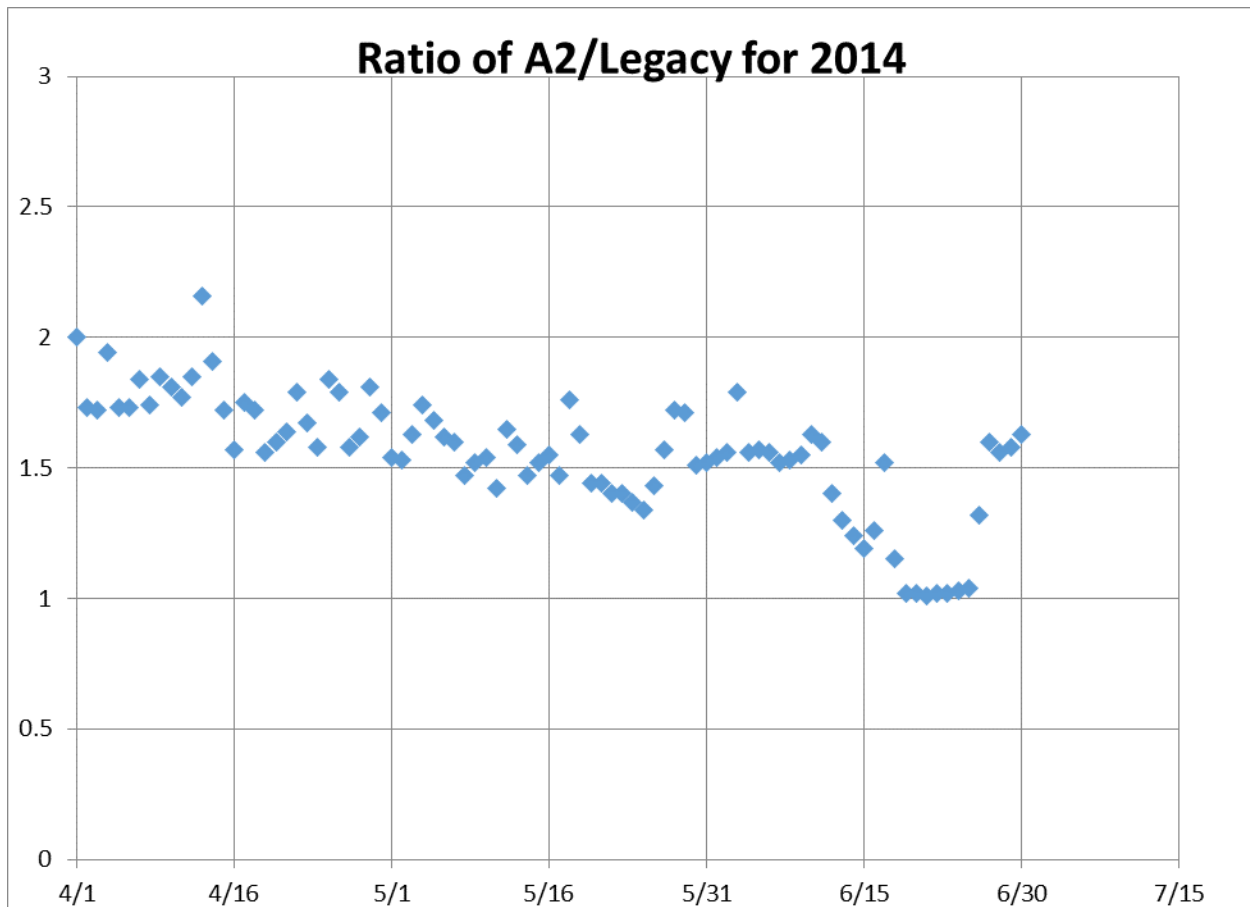


Figure 1. Daily Ratio of ALERT2/Legacy Reports

### ***A. Continuous Operation of Base Receiver/Decoder***

The NS5 base stations were NOT in continuous operation for the entire month. The reception of concentrator and A2 reports from Douglas County stopped at approximately 2:30 PM on June 12, 2014. On Friday, June 13, Markus and Rob traveled to the Douglas County West Creek repeater to troubleshoot and found the repeater was working just fine. On Saturday, June 14, Markus returned to the West Creek repeater to enable the legacy ALERT reporting from West Creek for the Douglas County system. In the evening of June 14, legacy ALERT data reports were being decoded in the parking lot of the Diamond Hill complex using a field decoder and laptop. The legacy ALERT reports however were not being received by the Diamond Hill base station. The evening of June 14, an email was sent from Markus to Kevin Stewart and OneRain indicating there may be a problem with the receiving equipment at Diamond Hill. On Monday, June 16, Kevin Stewart called OneRain to request a service visit to Diamond Hill where it was discovered the receiving antenna had been taken down from the roof and was lying flat on the roof. It turns out that the dismantled antenna was still able to receive data reports from the nearby repeaters and only the furthest repeater, West Creek had a low enough fade margin where its reports were no longer being received. A new antenna was installed by OneRain and full data reception returned on Wednesday, June 18.

On Thursday, June 26, WET returned to West Creek to disable the legacy ALERT reporting. Beginning on June 26, West Creek forwards data only on the concentrator and A2 channel to Diamond Hill.

The timer performance for all Douglas County stations is decreased this month due to the reception outage at Diamond Hill.

## B. Specific Issues Identified this Month

Performance of the following sensors (Table 3) was questionable this month.

**Table 3. Sensors with Poor Performance Characteristics**

Sensor ID	Description	Timer	Event	Comments
2810	Pine Cliff	33%	92%	Site is down....repair scheduled for early July
100150	A2-Sellers Gulch at Haystack	43%	94%	Blown fuse on A2 board to be repaired in early July
2750	Wx-Castle Rock	53%	88%	Lightning strike...new radio installed 6/19
4330	Hanson Rain	53%	83%	Poor timer and event reporting
2330	Morrison	65%	78%	Poor timer and event reporting
5940	Log Jumper	70%	60%	Poor timer and event reporting
310	Guy Hill Ranch	88%	64%	Poor timer and event reporting
2980	Dakan Road	75%	68%	Poor timer and event reporting
1620	Slaughterhouse Gulch	88%	69%	Poor timer and event reporting
919	A total of 271 reports from this unknown ID			
1021, 1022, 1024, 1026, 1027, 1028	A large number of reports from unknown IDs.....likely from Nolte Pond transmitter (1020)			

## C. Performance of New A2 Sites

Currently there are only a handful of remote sites operating on the new A2 protocol. The “event” performance of these sites is tracked throughout the 2014 flood season below (Table 4).

**Table 4. Event Performance of New A2 Sites (percent)**

Description	ID	Install Date	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug*	Sep*	Oct	Nov	Dec
Heritage Regional Park	3090	03/14/2013	n/a	n/a	100	100	100	100						
ETG @ Hampden	100110	05/01/2013	n/a	n/a	83	97	100	100						
Blackstone	100100	05/03/2013	n/a	n/a	100	100	100	100						
Newlin Gulch	3070	05/24/2013	100	83	100	100	100	74						
Carr Street	100	05/31/2013	n/a	n/a	100	100	100	100						
Maple Grove	1000	05/20/2013	100	90	97	100	100	100						
Upper Sellers	100140	05/22/2014	n/a	n/a	n/a	n/a	75	93						
Haystack Road	100150	02/26/2014	n/a	n/a	100	79	79	94						
Sand Cr at Colfax	100160	05/01/2014	n/a	n/a	n/a	n/a	n/a	100						
James Cr at Jamestown (water level only)	100170	05/16/2014	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Lower Left Hand Canyon	100180	06/27/2014	n/a	n/a	n/a	n/a	n/a	n/a						
Murphy Creek	100190	06/30/2014	n/a	n/a	n/a	n/a	n/a	n/a						
New site 2014														

## D. Rain Sensor Timer Reporting Summary

The following analysis assumes that each rain sensor has a 12-hour timer-reporting interval. The worst performing rain sensors for the month are summarized (Table 5).

**Table 5. Monthly Summary of Sensors with Poor Timer Performance (Sensor ID)**

Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*
4470	2710	2790	2810	1700	2810						
2710	4470	2710	2330	4330	100150						
2330	2730	4470	2360	2330	100140						
4870	4550	4870	420	1710	2750						
920	3010	3010	1700	940	4330						
3010	4330	4330	1710	100150	2330						

\*- Only sensors that operate year-round (weather stations and stations in Boulder County) are included for the analysis in these months.

Sensors identified as having poor timer performance in multiple months are shaded with unique colors. A developing trend can thus be identified from the color shading as the year progresses.

## III. Rain Sensor Event Reporting Summary

### A. District-Wide Total Tip/Count Statistics

The incrementing reports from all 1-mm rain sensors were analyzed to quantify the District-wide statistical total monthly tip summary (Table 6). For the months of January, February, March, October, November and December only the stations that operate year-round are included in the rain event analysis. These stations include all weather stations and the stations in Boulder County.

**Table 6. District-Wide Total Tip/Count Statistical Summary**

Statistical Parameter	Value	Comments
Mean	29.16	Only the 1-mm rain sensors were included in the analysis
Median	25	Only the 1-mm rain sensors were included in the analysis
Standard deviation	18.69	Only the 1-mm rain sensors were included in the analysis
Mean plus three standard deviations	85.24	Only the 1-mm rain sensors were included in the analysis
Minimum total count	2	Taylor Mountain (4260)
Maximum total count	103	Powers Park (1500) – irrigation influence
Sensors showing <b>NO</b> rain for the month		None this month

### B. Monthly Average Tip/Count Summary

A monthly summary of the District-wide mean total tip/count is presented (Table 7).

**Table 7. Monthly Summary of District-Wide Mean Total 1-mm Tip/Count**

Year	Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*	Ave
2006	4.62	5.92	18.39	20.47	19.44	13.75	74.03	46.89	24.17	41.13	5.04	16.45	24.19
2007	11.56	5.40	29.75	65.03	68.30	15.87	36.20	46.38	22.13	29.50	6.54	11.29	29.00
2008	4.05	7.38	12.26	20.57	54.82	26.06	16.43	90.20	37.54	19.59	2.82	9.24	25.08
2009	6.33	3.11	11.37	59.26	63.45	68.00	65.00	20.00	27.29	30.24	11.00	5.60	30.89
2010	5.97	11.90	32.54	70.57	39.63	56.04	50.23	31.01	4.18	18.31	8.30	3.31	27.67
2011	6.78	7.45	7.54	33.94	92.68	39.42	90.87	18.25	37.67	25.73	10.41	13.59	32.03
2012	4.89	13.57	2.35	30.17	38.97	19.35	73.03	11.31	48.81	22.32	2.98	4.18	22.66
2013	2.96	14.31	21.86	35.96	45.87	16.39	52.33	50.63	229.74	29.64	5.86	4.00	42.46
2014	6.88	11.86	25.91	29.30	77.30	29.16							

\*- Only sensors that operate year-round (weather stations and stations in Boulder County) are included for the analysis in these months.

### C. Sensors with a Jump of Six or More in the Sequential Count

Several sensors experienced a large jump in the sequential tip count (Table 8).

**Table 8. Sensors with a Jump of 6 or More in Sequential Count**

Sensor Description	Sensor ID	Comment
Flying J	850	Looks to be field maintenance
Castle Rock WX	2750	Bad radio caused missing tips
Newlin Gulch	3070	Large jump on June 11, possibly field maintenance

### D. Sensor-by-Sensor Incrementing Count Summary

The system-wide reception rate of incrementing, 1-mm tip reports for the month was approximately 94 percent. A total of 5,234 incrementing reports were received and a total of 5,570 reports were expected. The total loss of incrementing reports for the month was approximately 6 percent. Those sensors with the worst event transmission performance are summarized (Table 9).

**Table 9. Monthly Summary of Sensors with the Worst Performance**

Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*
4520	2730	2790	2980	4330	5940						
4010	4330	4790	2230	100150	310						
4170	4200	4530	4510	4470	2980						
3030	4240	4510	3050	2980	1620						
1460	4870	4240	2330	2330	2790						
1700	4470	4870	100150	5900	4470						

\*-Only sensors that are operational year-round (weather stations and stations in Boulder County) are included for the analysis in these months.

Sensors identified as having poor event performance in multiple months are shaded with unique colors. A developing trend can thus be identified from the color shading as the year progresses.

## IV. Heavy Radio Traffic Analysis

Periods exceeding 1,000 messages per hour are analyzed independently in an attempt to quantify data loss rates from rain sensors using their sequential tip count series.

### A. The Heaviest Hourly Traffic Periods This Month

The hourly periods of highest radio traffic this month are shown (Table 10). The five heaviest hours of radio traffic are analyzed to quantify the number of missing rain reports for that hour.

**Table 10. Periods of Heavy Radio Traffic (total load includes Concentrator and A2 reports)**

Day	Hour	Expected	Received	Total Load	Loss
8	16	327	320	1604	2.14%
8	18	161	161	1447	0.00%
8	19	169	169	1430	0.00%
8	17	114	114	1378	0.00%
8	13	234	234	1372	0.00%

## V. Unknown Device Analysis – Received Data Log

The ALERT IDs present in the audio signal received by the decoder are compared against a list of “active” device IDs that are defined within NovaStar. Those IDs received by the decoder that are not defined within NovaStar are considered to be “unknown” and may be the result of radio noise or problems with the telemetry system. The reception of “unknown” device reports for the month is summarized (Table 11).

**Table 11. Summary of Unknown IDs**

Description	Conc & A2	Legacy
Total number of unknown IDs (IDs without a device definition)	228	262
Total reports from unknown IDs	1,832	1,781
Unknown IDs with only a single received report (potential noise)	140	194
Total reports from all IDs – RecData Log entire month	539,362	318,434
Unknown reports as a fraction of total reports	0.34%	0.56%

The total number of reports from unknown sensors is very small relative to the total reports received for the month. Shown below (Table 12) are the total reports received from unknown sensor IDs for each month of the year.

**Table 12. Monthly Summary of Total Reports from Unknown IDs (Conc & A2)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	1,220	1,474	1,276	1,174	721	5,707	610	1,738	442	533	2,857	6,396
2011	1,231	2,165	3,065	1,254	2,051	439	489	456	191	683	747	861
2012	692	750	1,575	977	5,469	11,016	453	683	774	2,657	3,854	5,466
2013	4,265	994	1,100	2,589	3,623	6,973	5,230	1,070	4,429	781	13,459	1,213
2014	870	4,284	2,399	2,104	25,746	1,832						

The fraction of reports from unknown sensors relative to the total number of reports is shown below (Table 13).

**Table 13. Monthly Percent of Unknown Sensor Reports (Conc & A2)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2010	0.42%	0.56%	0.38%	0.32%	0.20%	1.61%	0.17%	0.49%	0.13%	0.16%	0.93%	1.88%
2011	0.39%	0.73%	0.90%	0.37%	0.58%	0.12%	0.12%	0.05%	0.12%	0.18%	0.22%	0.26%
2012	0.30%	0.25%	0.43%	0.26%	1.37%	2.74%	0.11%	0.18%	0.20%	0.72%	1.15%	1.62%
2013	1.40%	0.31%	0.29%	0.60%	0.37%	0.61%	0.82%	0.21%	0.96%	0.31%	5.37%	0.23%
2014	0.14%	0.94%	0.40%	0.34%	3.95%	0.34%						

Any month shaded in yellow has an excessive number of reports from unknown sensors.

A number of “unknown” sensors had multiple reports, which may indicate the existence of a transmitter that is sending information on an ID that is not currently defined within NovaStar. The unknown IDs with multiple reports including the number of reports received by each are shown (Table 14).

**Table 14. Reports Received by Unknown IDs**

Conc + A2		Legacy ALERT		Comment
Unknown ID	Reports	Unknown ID	Reports	
919	280	919	271	
1022	222	1022	221	Possibly coming from Nolte Pond (1020)
1024	218	1024	217	Possibly coming from Nolte Pond (1020)
1021	168	1021	168	Possibly coming from Nolte Pond (1020)
1026	155	1026	156	Possibly coming from Nolte Pond (1020)
1027	132	1027	132	Possibly coming from Nolte Pond (1020)
1028	103	1028	104	Possibly coming from Nolte Pond (1020)
1481	44	1481	43	Possible coming from DIA @ Third Street (1480)
918	20	918	20	
951	16	951	16	
1099	15	952	16	

## VI. Sensors with Invalid Reports

The following sensors had a large number of invalid reports (bit flip/contention errors/random decode):

Sensor ID	Description	Invalid Reports	Comments
2810	Pine Cliff Road	7	Problem site will be addressed by WET in early July
4330	Hansen Rain	3	Marginal radio path
1023	Lena Gulch at Nolte Pond	2497	Failed PT.....OneRain trying to move the site
1383	Ferril Lake	346	Bubbler that has failed....OneRain to address with Denver
953	Piney at Liverpool	103	Failed PT on June 13
2883	Happy Canyon at N Surrey Drive	57	Zero stage.....negative reference level
100117	A2-ETG @ Hampden	27	Validation allowable change of 0.20 ft

## VII. Rainfall Alarms and Intensity Analysis

The following rainfall rate alarms from the Urban Drainage and Flood Control District NovaStar 5.0 Web Server were identified this month.

No.	ID	Description	Rain Alarm	Time of Alarm
1	2970	Rampart Range Road Precipitation-DG	2970 Rampart Range Road 0.2" in 30 Minutes Rainfall	6/6/2014 1:30
2	940	Sampson Gulch Precipitation- AR	Plains 10 minute rainfall	6/8/2014 12:57
3	2970	Rampart Range Road Precipitation-DG	2970 Rampart Range Road 0.2" in 30 Minutes Rainfall	6/8/2014 13:00
4	940	Sampson Gulch Precipitation- AR	Plains 1 hour rainfall	6/8/2014 13:09
5	2940	Willow Creek Precipitation- DG	Douglas County 10 minute rainfall	6/8/2014 13:19
6	2940	Willow Creek Precipitation- DG	Douglas County 1 hour-1 Inch rainfall	6/8/2014 13:42
7	4320	Lee Hill Rain Precipitation- BO	FMC-BA 0.25" in 10 Min Rainfall	6/22/2014 15:07
8	5940	Log Jumper Precipitation-DG	Hayman 30 minute rainfall	6/23/2014 17:03
9	940	Sampson Gulch Precipitation- AR	Plains 10 minute rainfall	6/24/2014 20:13



# General System Analysis

**Database Name** P:\A207-UDFCD-Data-Analysis\2014\6-2014\Novastar\_extract\_2014June.mdb

<b>First Date in Database</b>	6/1/14 12:00 AM	<b>Total Days</b>	30.0
<b>Last Date in Database</b>	6/30/14 11:59 PM	<b>Total Hours</b>	720.0

**Total Records Analyzed** 539,362

Records by Group	Conc + A2 Self Reports	Percent	ALERT Legacy Reports	Percent
Wind Data	191,574	36%	112,953	35%
Temperature	77,979	14%	46,162	14%
Relative Humidity	70,956	13%	43,589	14%
Battery Voltage	41,520	8%	18,021	6%
Water Level	38,063	7%	31,688	10%
Barometric Pressure	33,261	6%	22,300	7%
Precipitation	18,410	3%	12,784	4%
Dew Point Temperature	11,262	2%	0	0%
Wind Chill	11,243	2%	0	0%
Peak Wind	11,110	2%	0	0%
Solar Radiation	10,513	2%	10,116	3%
Fuel Moisture	5,761	1%	5,734	2%
Fuel Temperature	5,752	1%	5,727	2%
Wind Direction	4,053	1%	1,158	0%
Soil Moisture	2,870	1%	2,840	1%
Unknown	1,832	0%	1,781	1%
Repeater Status Report	1,785	0%	2,216	1%
12Hr Status Report	401	0%	395	0%
Not Used	340	0%	295	0%
Flasher Status	278	0%	0	0%
Hayman Battery	277	0%	92	0%
Handar 585 ALARM Status	60	0%	60	0%
Repeater Pass List	59	0%	520	0%
ALERT/A2 Testing	2	0%	1	0%
Evapotranspiration	1	0%	2	0%
<b>Total</b>	<b>539,362</b>	<b>100%</b>	<b>318,434</b>	<b>100%</b>

Traffic Loading Summary	Conc + A2 Self Reports		ALERT Legacy Reports	
Alert Reports	539,362		318,434	
Average Daily Traffic	17,979		10,614	
Average Hourly Traffic	749		442	
Median Hourly Traffic	760	hour beginning	413	hour beginning
Peak Hourly Traffic	1,604	Jun 8, 4:00 PM	1,000	Jun 8, 4:00 PM
2nd Max	1,447	Jun 8, 6:00 PM	999	Jun 18, 7:00 PM
3rd Max	1,430	Jun 8, 7:00 PM	941	June 18, 6:00 PM
4th Max	1,378	Jun 8, 5:00 PM	888	Jun 8, 6:00 PM
5th Max	1,372	Jun 8, 1:00 PM	840	Jun 8, 7:00 PM

# Rain Timer Performance

Analyze Rain Sensors

Rain Sensors	Description	Rcv	Timer	Exp	Performance	Comment
2810	Pine Cliff Road	20	11:00	60	33%	
100150	A2-Sellers Gulch at Haystack Precip	26	10:43	60	43%	
100140	A2-Upper Sellers Gulch Precip	28	13:05	60	47%	
2750	Wx-Castle Rock	32	11:56	60	53%	
4330	Hansen Rain	32	17:39	60	53%	
5720	Four Mile Creek	38	17:48	60	63%	
2330	Morrison	39	16:38	60	65%	
2790	Wx-W. Cherry Creek	41	16:56	60	68%	
2950	DC Public Works	42	12:00	60	70%	
5940	Log Jumper	42	13:40	60	70%	
100160	A2-Sand Creek at Colfax Precip	42	12:00	60	70%	
2840	Sulphur Gulch	43	12:22	60	72%	
2920	West Cherry Head-Douglas Cnty	43	15:28	60	72%	
2850	Cherry Cr bl Bayou Glch	44	12:19	60	73%	
3080	Tallman Gulch	44	12:21	60	73%	
1660	SPR at Henderson	45	14:27	60	75%	
1710	Shop Creek	45	13:56	60	75%	
2280	Kinney Peak	45	14:25	60	75%	
2820	Haskins Gulch Conf	45	12:38	60	75%	
2980	Dakan Rd	45	15:53	60	75%	
3030	WX-Bingham Lake Park	45	12:19	60	75%	
3060	Fire Sta 47	45	12:00	60	75%	
2230	Bear Cr below Cub	46	13:34	60	77%	
2730	Wx-Salisbury Park	46	12:00	60	77%	
2880	Happy Canyon at N Surrey Dr	46	12:18	60	77%	
2890	Spruce Mt - Douglas	46	15:41	60	77%	
2940	Willow Creek - DougCnty	46	15:30	60	77%	
3010	WX-EPC at Hwy 105	46	15:34	60	77%	
3050	East/West Trailhead	46	15:53	60	77%	
5810	Stump Bump	46	12:18	60	77%	
5860	Cedar Mountain	46	15:47	60	77%	
2360	Indian Hills	47	14:52	60	78%	
2710	Wx-Highlands Ranch WTP	47	14:50	60	78%	
2860	CC at Stroh Rd	47	12:33	60	78%	
2870	Cottonwood (Apache)	47	12:20	60	78%	
2910	East Cherry Cr-Douglas	47	16:00	60	78%	
2960	Indian Creek	47	15:36	60	78%	
3020	Wx-West Creek WX	47	12:00	60	78%	
3040	CC @ Prairie Canyon Ranch	47	12:00	60	78%	
4470	Little Narrows	47	14:17	60	78%	
5730	West Creek	47	12:00	60	78%	
5880	Hackett Mountain	47	15:30	60	78%	
2800	Columbine Open Space	49	15:04	60	82%	
2900	Russelville Gulch-Douglas	49	14:34	60	82%	
2990	Wx-Tomah Rd-DougCnty	49	14:51	60	82%	
5740	Trail Creek	49	14:27	60	82%	
870	Murphy Creek GC	50	12:00	60	83%	
2320	Choke Cherry Resvr	50	12:55	60	83%	
2930	Wx-Spring Valley Rd-DougCnty	50	14:55	60	83%	
4510	Pinewood Springs	50	13:23	60	83%	
4040	Martin Gulch	51	13:21	60	85%	
4790	Wx-Button Rock	52	13:04	60	87%	
310	Guy Hill Ranch	53	12:59	60	88%	
850	Flying J	53	12:00	60	88%	

1620	Slaughterhouse Glch	53	13:17	60	88%
4490	Apple Valley	53	13:17	60	88%
540	Parker/Mississippi	54	12:44	60	90%
620	Quincy/Highline	54	12:29	60	90%
4010	Crescent	54	12:28	60	90%
840	Fire Station 12	55	13:01	60	92%
1040	Lena @ U.S. Hwy 6	55	12:29	60	92%
2270	Cub Cr below Blue	55	12:14	60	92%
2340	El Rancho	55	13:04	60	92%
4270	Cannon Mountain	55	12:39	60	92%
4290	Red Hill	55	12:28	60	92%
4350	Conifer Hill	55	12:42	60	92%
4850	Porphyry Mtn	55	12:32	60	92%
410	Kelly Dam	56	12:41	60	93%
760	Mission Viejo Park	56	12:29	60	93%
1530	Bear Creek @ Lowell	56	12:44	60	93%
1700	Cherry Cr @ Champa	56	12:28	60	93%
1720	Cherry Cr @ Steele	56	12:12	60	93%
1800	Sand Creek Park	56	12:27	60	93%
2240	Cold Sprg Glch conf	56	12:13	60	93%
2350	Idledale	56	12:29	60	93%
4070	Bear Peak	56	12:41	60	93%
4810	Shanahan Ridge	56	12:12	60	93%
4830	SBC @ San Souci	56	12:27	60	93%
110	Ralston Reservoir	57	12:27	60	95%
430	Utah Park	57	12:18	60	95%
500	Havana Park	57	12:17	60	95%
650	Iiff Pond	57	11:59	60	95%
820	ETG @ Buckley	57	12:27	60	95%
830	Side Creek Park	57	11:58	60	95%
940	Aurora Regional Pond	57	11:58	60	95%
1010	Denver West	57	12:12	60	95%
1060	Heritage Square	57	12:24	60	95%
1440	Wx-Elbert	57	12:28	60	95%
1520	Wx-Marston Lake North	57	12:34	60	95%
1640	SPR at Union Ave.	57	12:12	60	95%
2250	Rosedale	57	12:12	60	95%
2370	Red Rocks Park	57	11:57	60	95%
4020	Rio Grande	57	12:12	60	95%
4050	Walker Ranch	57	12:11	60	95%
4200	Lazy Acres	57	12:14	60	95%
4240	Sunset	57	12:24	60	95%
4310	Johnny Park	57	12:26	60	95%
4320	Lee Hill Rain 2012	57	12:27	60	95%
4530	Winiger Ridge	57	12:27	60	95%
4770	Wx-Cal-Wood Ranch	57	12:07	60	95%
100	A2-Carr Street	58	12:00	60	97%
120	West Woods	58	11:58	60	97%
210	Leyden Confluence	58	12:11	60	97%
300	Van Bibber Park	58	12:11	60	97%
400	Montview Park	58	11:58	60	97%
420	Expo Park	58	11:57	60	97%
520	Jewell Detention	58	12:11	60	97%
530	Fire Station #19	58	11:57	60	97%
700	Toll Gate @ 6th	58	12:14	60	97%
720	Confluence Pond	58	11:58	60	97%
800	Sable Ditch @ 18th	58	12:12	60	97%
950	Piney at Liverpool	58	11:58	60	97%
1000	A2-Maple Grove Resv.	58	12:00	60	97%

1030	NREL/S. Table Mtn.	58	12:12	60	97%
1200	Broomfield 3207	58	12:13	60	97%
1310	LDC at 64th	58	11:58	60	97%
1360	Denver Zoo	58	12:00	60	97%
1370	West Metro FS13	58	12:12	60	97%
1460	Wx-Urban Farm	58	12:00	60	97%
1600	Englewood Dam	58	11:57	60	97%
1900	Niver Detention	58	12:11	60	97%
2310	Genesee Village	58	12:13	60	97%
4030	Red Garden	58	12:14	60	97%
4060	Lakeshore	58	12:11	60	97%
4080	Twin Sisters	58	11:58	60	97%
4090	Magnolia	58	12:12	60	97%
4110	Betasso	58	12:13	60	97%
4150	Gold Hill	58	12:12	60	97%
4160	Sunshine	58	11:58	60	97%
4180	Gold Lake	58	12:24	60	97%
4190	Slaughterhouse	58	12:12	60	97%
4220	Fling's	58	12:11	60	97%
4230	Golden Age	58	12:12	60	97%
4250	Geer Canyon	58	11:56	60	97%
4550	Boulder Jail	58	12:11	60	97%
4570	St. Antons	58	12:13	60	97%
4820	Doudy Draw	58	11:57	60	97%
4860	Fairview Peak	58	12:00	60	97%
100110	A2-ETG @ Hampden Precip	58	12:00	60	97%
140	Wx-Blue Mountain	59	12:00	60	98%
150	Nott Creek	59	11:57	60	98%
220	Upper Leyden	59	12:00	60	98%
320	Sports Complex	59	11:58	60	98%
330	Van Bibber @ Hwy 93	59	11:57	60	98%
440	Fire Station #7	59	11:57	60	98%
510	Virginia Court	59	11:57	60	98%
600	Harvard Gulch Park	59	11:58	60	98%
710	Horseshoe Park Drop	59	11:58	60	98%
730	No Name @ Quincy	59	11:57	60	98%
750	Wx-Quincy Reservoir	59	11:57	60	98%
810	Granby Ditch @ 6th	59	11:57	60	98%
970	Pump Sta 3	59	11:25	60	98%
1050	Jeffco Fairgrounds	59	11:57	60	98%
1350	Chatfield COE	59	11:59	60	98%
1420	Wx-Diamond Hill	59	12:02	60	98%
1480	Third Creek at DIA	59	11:59	60	98%
1550	Lakewood CC	59	11:57	60	98%
1920	Wx-Brighton	59	12:00	60	98%
2210	Wx-Hiwan G.C.	59	12:00	60	98%
2260	Brook Forest	59	11:58	60	98%
3090	A2-Highland Heritage Park	59	12:00	60	98%
4100	Filter Plant	59	11:59	60	98%
4130	Swiss Peaks	59	11:59	60	98%
4140	Logan Mill	59	11:58	60	98%
4170	Pine Brook	59	11:57	60	98%
4260	Taylor Mountain	59	11:58	60	98%
4300	Big Elk Park	59	12:09	60	98%
4340	Riverside	59	12:11	60	98%
4360	Justice Center	59	11:58	60	98%
4520	Eagle Ridge	59	12:00	60	98%
4730	Wx-Sugarloaf	59	12:00	60	98%
4840	SBC@S Boulder Ditch	59	11:44	60	98%

4880	Whispering Pines	59	11:57	60	98%
100100	A2-Blackstone Precip	59	12:00	60	98%
200	Leyden Reservoir	60	11:58	60	100%
630	Temple Pond at DTC	60	11:50	60	100%
1300	Hidden Lake	60	11:58	60	100%
1570	Wx-Brighton Ditch	60	11:32	60	100%
610	Harvard @ Jackson	61	11:45	60	102%
1320	SPR at 3rd Ave	61	11:44	60	102%
4710	Wx-Ward C-1	62	11:33	60	103%
4750	Wx-Louisville Lake	62	11:34	60	103%
900	Wx-Aurora Reservoir	63	11:15	60	105%
1400	Upper Sloan Det.	65	10:59	60	108%
640	Goldsmith @ Eastman	67	9:58	60	112%
1340	Sanderson at Xavier	67	10:28	60	112%
1110	Gunbarrel	69	9:44	60	115%
920	Wx-Aurora Town Hall	70	9:52	60	117%
1100	Louisville Rec Ctr	72	9:59	60	120%
1500	Powers Park	72	8:28	60	120%
4870	SBC @ SB Road	75	8:44	60	125%
3070	A2-Newlin Gulch Precip	119	6:00	120	99%
2970	Rampart Range Rd-Satellite	207		60	
5900	Horse Creek-Satellite	699		60	

Rain Event Performance			Analyze Rain Sensors																	
		Reports Received	5,234																	
	Systemwide Avg	Total Tips	5,570																	
	93.97%	Data Loss	6.03%																	
Description	Sensor	Performance	1-tips	2-tips	3-tips	4-tips	5-tips	6-tips	>6-tips	Rcv	Exp	Miss	Hold	Bucket						
Log Jumper	5940	60%	26	0	0	0	0	0	2	26	43	0	0	0.03937						
Guy Hill Ranch	310	64%	5	0	2	0	0	0	0	7	11	4	0	0.03937	Mean				29.162	
Dakan Rd	2980	68%	12	5	2	0	0	0	0	19	28	9	0	0.03937	Median				25	
Slaughterhouse Glch	1620	69%	18	4	0	1	1	0	0	24	35	11	0	0.03937	St. Dev				18.693	
Wx-W. Cherry Creek	2790	71%	18	5	1	1	0	0	0	25	35	10	0	0.03937	Mean plus 3 SD				85.24	
Little Narrows	4470	73%	12	3	0	1	0	0	0	16	22	6	0	0.03937	Min				2	
A2-Newlin Gulch Precip	3070	74%	47	1	0	0	0	0	1	48	65	1	0	0.03937	Max				103	
Morrison	2330	78%	13	5	0	0	0	0	0	18	23	5	0	0.03937						
Cub Cr below Blue	2270	80%	16	3	1	0	0	0	0	20	25	5	0	0.03937						
SPR at Henderson	1660	80%	13	2	1	0	0	0	0	16	20	4	1	0.03937						
Wx-Highlands Ranch WTP	2710	80%	19	0	0	0	0	1	0	20	25	5	0	0.03937						
Pinewood Springs	4510	81%	14	2	1	0	0	0	0	17	21	4	0	0.03937						
Toll Gate @ 6th	700	81%	20	6	0	0	0	0	0	26	32	6	0	0.03937						
Wx-Spring Valley Rd-DougCnty	2930	81%	35	0	0	0	0	0	1	35	43	0	0	0.03937						
Cottonwood (Apache)	2870	82%	40	5	0	0	0	1	0	46	56	10	0	0.03937						
Hansen Rain	4330	83%	16	2	1	0	0	0	0	19	23	4	0	0.03937						
Rampart Range Rd-Satellite	2970	83%	30	3	2	0	0	0	0	35	42	7	0	0.03937						
Pump Sta 3	970	84%	70	1	0	1	0	2	0	74	88	14	0	0.03937						
Parker/Mississippi	540	85%	14	3	0	0	0	0	0	17	20	3	0	0.03937						
Louisville Rec Ctr	1100	86%	11	0	1	0	0	0	0	12	14	2	1	0.03937						
DC Public Works	2950	86%	28	3	1	0	0	0	0	32	37	5	0	0.03937						
WX-Bingham Lake Park	3030	87%	35	4	1	0	0	0	0	40	46	6	0	0.03937						
Side Creek Park	830	87%	29	5	0	0	0	0	0	34	39	5	0	0.03937						
Cherry Cr bl Bayou Glch	2850	88%	24	4	0	0	0	0	0	28	32	4	0	0.03937						
Haskins Gulch Conf	2820	88%	32	2	0	1	0	0	0	35	40	5	0	0.03937						
West Creek	5730	88%	25	2	1	0	0	0	0	28	32	4	0	0.03937						
Wx-Castle Rock	2750	88%	6	1	0	0	0	0	1	7	8	1	0	0.03937						
Indian Hills	2360	88%	19	3	0	0	0	0	0	22	25	3	0	0.03937						
CC @ Prairie Canyon Ranch	3040	89%	29	4	0	0	0	0	0	33	37	4	0	0.03937						
Quincy/Highline	620	89%	22	3	0	0	0	0	0	25	28	3	0	0.03937						
Four Mile Creek	5720	89%	15	2	0	0	0	0	0	17	19	2	0	0.03937						
Fire Station 12	840	90%	24	1	1	0	0	0	0	26	29	3	0	0.03937						
Chatfield COE	1350	90%	16	2	0	0	0	0	0	18	20	2	0	0.03937						
Stump Bump	5810	90%	16	2	0	0	0	0	0	18	20	2	0	0.03937						
Montview Park	400	90%	25	3	0	0	0	0	0	28	31	3	0	0.03937						
Denver Zoo	1360	90%	17	2	0	0	0	0	0	19	21	2	0	0.03937						
Gunbarrel	1110	90%	18	0	1	0	0	0	0	19	21	2	0	0.03937						
Confluence Pond	720	91%	26	3	0	0	0	0	0	29	32	3	0	0.03937						
Indian Creek	2960	91%	26	3	0	0	0	0	0	29	32	3	0	0.03937						
Aurora Regional Pond	940	91%	80	9	0	0	0	0	0	89	98	9	0	0.03937						
Idledale	2350	91%	18	2	0	0	0	0	0	20	22	2	0	0.03937						
Wx-Button Rock	4790	91%	9	1	0	0	0	0	0	10	11	1	0	0.03937						
Shop Creek	1710	91%	29	3	0	0	0	0	0	32	35	3	0	0.03937						
Martin Gulch	4040	92%	21	0	1	0	0	0	0	22	24	2	0	0.03937						
Ralston Reservoir	110	92%	10	1	0	0	0	0	0	11	12	1	0	0.03937						
West Metro FS13	1370	92%	20	2	0	0	0	0	0	22	24	2	0	0.03937						
Wx-Louisville Lake	4750	92%	10	1	0	0	0	0	0	11	12	1	0	0.03937						
Pine Cliff Road	2810	92%	42	2	1	0	0	0	0	45	49	4	0	0.03937						
Virginia Court	510	92%	31	3	0	0	0	0	0	34	37	3	0	0.03937						
Iliff Pond	650	92%	21	2	0	0	0	0	0	23	25	2	0	0.03937						
Upper Sloan Det.	1400	92%	22	0	1	0	0	0	0	23	25	2	0	0.03937						
Fire Sta 47	3060	92%	55	2	0	1	0	0	0	58	63	5	0	0.03937						

Powers Park	1500	92%	90	3	1	1	0	0	0	95	103	8	0	0.03937
Niver Detention	1900	92%	11	1	0	0	0	0	0	12	13	1	0	0.03937
Wx-Diamond Hill	1420	92%	22	2	0	0	0	0	0	24	26	2	1	0.03937
Flying J	850	93%	35	3	0	0	0	0	1	38	41	3	0	0.03937
A2-Upper Sellers Gulch Precip	100140	93%	37	1	1	0	0	0	0	39	42	3	0	0.03937
Doudy Draw	4820	93%	12	1	0	0	0	0	0	13	14	1	0	0.03937
Kinney Peak	2280	93%	24	2	0	0	0	0	0	26	28	2	0	0.03937
SBC @ San Souci	4830	93%	12	1	0	0	0	0	0	13	14	1	0	0.03937
Sulphur Gulch	2840	93%	61	3	1	0	0	0	0	65	70	5	0	0.03937
ETG @ Buckley	820	93%	26	2	0	0	0	0	0	28	30	2	0	0.03937
Slaughterhouse	4190	93%	13	1	0	0	0	0	0	14	15	1	0	0.03937
Fire Station #19	530	94%	27	2	0	0	0	0	0	29	31	2	0	0.03937
Tallman Gulch	3080	94%	55	4	0	0	0	0	0	59	63	4	1	0.03937
SBC @ SB Road	4870	94%	14	1	0	0	0	0	0	15	16	1	0	0.03937
Van Bibber @ Hwy 93	330	94%	14	1	0	0	0	0	0	15	16	1	0	0.03937
CC at Stroh Rd	2860	94%	31	0	1	0	0	0	0	32	34	2	0	0.03937
Lakeshore	4060	94%	15	1	0	0	0	0	0	16	17	1	0	0.03937
A2-Sellers Gulch at Haystack Precip	100150	94%	47	1	1	0	0	0	0	49	52	3	0	0.03937
Filter Plant	4100	94%	16	1	0	0	0	0	0	17	18	1	0	0.03937
Bear Cr below Cub	2230	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Boulder Jail	4550	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Choke Cherry Resvr	2320	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Eagle Ridge	4520	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Hackett Mountain	5880	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Wx-Cal-Wood Ranch	4770	95%	17	1	0	0	0	0	0	18	19	1	0	0.03937
Lena @ U.S. Hwy 6	1040	95%	18	1	0	0	0	0	0	19	20	1	0	0.03937
West Woods	120	95%	18	1	0	0	0	0	0	19	20	1	0	0.03937
Granby Ditch @ 6th	810	95%	38	2	0	0	0	0	0	40	42	2	0	0.03937
Sunshine	4160	96%	21	1	0	0	0	0	0	22	23	1	0	0.03937
Red Rocks Park	2370	96%	22	1	0	0	0	0	0	23	24	1	0	0.03937
Rio Grande	4020	96%	24	1	0	0	0	0	0	25	26	1	0	0.03937
Fire Station #7	440	96%	25	1	0	0	0	0	0	26	27	1	0	0.03937
Geer Canyon	4250	96%	25	1	0	0	0	0	0	26	27	1	0	0.03937
Wx-Salisbury Park	2730	96%	25	1	0	0	0	0	0	26	27	1	0	0.03937
Horseshoe Park Drop	710	96%	26	1	0	0	0	0	0	27	28	1	0	0.03937
Third Creek at DIA	1480	96%	26	1	0	0	0	0	0	27	28	1	0	0.03937
SPR at 3rd Ave	1320	97%	27	1	0	0	0	0	0	28	29	1	0	0.03937
Murphy Creek GC	870	97%	56	2	0	0	0	0	0	58	60	2	0	0.03937
Betasso	4110	97%	29	1	0	0	0	0	0	30	31	1	0	0.03937
East Cherry Cr-Douglas	2910	97%	29	1	0	0	0	0	0	30	31	1	0	0.03937
Horse Creek-Satellite	5900	97%	29	1	0	0	0	0	0	30	31	1	0	0.03937
Wx-Marston Lake North	1520	97%	30	1	0	0	0	0	0	31	32	1	1	0.03937
Bear Creek @ Lowell	1530	97%	31	1	0	0	0	0	0	32	33	1	0	0.03937
Mission Viejo Park	760	97%	31	1	0	0	0	0	0	32	33	1	0	0.03937
Wx-West Creek WX	3020	97%	31	1	0	0	0	0	0	32	33	1	0	0.03937
Rosedale	2250	97%	33	1	0	0	0	0	0	34	35	1	0	0.03937
Wx-Urban Farm	1460	97%	34	1	0	0	0	0	0	35	36	1	1	0.03937
SPR at Union Ave.	1640	98%	39	1	0	0	0	0	0	40	41	1	0	0.03937
Temple Pond at DTC	630	98%	78	2	0	0	0	0	0	80	82	2	1	0.03937
Wx-Tomah Rd-DougCnty	2990	98%	41	1	0	0	0	0	0	42	43	1	0	0.03937
Wx-Quincy Reservoir	750	98%	44	1	0	0	0	0	0	45	46	1	0	0.03937
Columbine Open Space	2800	98%	49	1	0	0	0	0	0	50	51	1	0	0.03937
Harvard Gulch Park	600	98%	58	1	0	0	0	0	0	59	60	1	1	0.03937
Wx-Brighton Ditch	1570	98%	59	1	0	0	0	0	0	60	61	1	0	0.03937
Willow Creek - DougCnty	2940	98%	63	1	0	0	0	0	0	64	65	1	0	0.03937
Expo Park	420	99%	67	1	0	0	0	0	0	68	69	1	0	0.03937
Wx-Aurora Reservoir	900	99%	83	1	0	0	0	0	0	84	85	1	1	0.03937

Utah Park	430	99%	84	1	0	0	0	0	0	0	85	86	1	0	0.03937
A2-Blackstone Precip	100100	100%	61	0	0	0	0	0	0	0	61	61	0	0	0.03937
A2-Carr Street	100	100%	27	0	0	0	0	0	0	0	27	27	0	0	0.03937
A2-ETG @ Hampden Precip	100110	100%	63	0	0	0	0	0	0	0	63	63	0	0	0.03937
A2-Highland Heritage Park	3090	100%	21	0	0	0	0	0	0	0	21	21	0	0	0.03937
A2-Maple Grove Resv.	1000	100%	19	0	0	0	0	0	0	0	19	19	0	0	0.03937
A2-Sand Creek at Colfax Precip	100160	100%	13	0	0	0	0	0	0	0	13	13	0	0	0.03937
Apple Valley	4490	100%	18	0	0	0	0	0	0	0	18	18	0	0	0.03937
Bear Peak	4070	100%	17	0	0	0	0	0	0	0	17	17	0	0	0.03937
Big Elk Park	4300	100%	2	0	0	0	0	0	0	0	2	2	0	0	0.03937
Brook Forest	2260	100%	27	0	0	0	0	0	0	0	27	27	0	0	0.03937
Broomfield 3207	1200	100%	16	0	0	0	0	0	0	0	16	16	0	0	0.03937
Cannon Mountain	4270	100%	3	0	0	0	0	0	0	0	3	3	0	0	0.03937
Cedar Mountain	5860	100%	23	0	0	0	0	0	0	0	23	23	0	0	0.03937
Cherry Cr @ Champa	1700	100%	20	0	0	0	0	0	0	0	20	20	0	0	0.03937
Cherry Cr @ Steele	1720	100%	22	0	0	0	0	0	0	0	22	22	0	0	0.03937
Cold Sprg Glch conf	2240	100%	26	0	0	0	0	0	0	0	26	26	0	0	0.03937
Conifer Hill	4350	100%	6	0	0	0	0	0	0	0	6	6	0	0	0.03937
Crescent	4010	100%	21	0	0	0	0	0	0	0	21	21	0	0	0.03937
Denver West	1010	100%	23	0	0	0	0	0	0	0	23	23	0	0	0.03937
East/West Trailhead	3050	100%	26	0	0	0	0	0	0	0	26	26	0	0	0.03937
EI Rancho	2340	100%	15	0	0	0	0	0	0	0	15	15	0	0	0.03937
Englewood Dam	1600	100%	41	0	0	0	0	0	0	0	41	41	0	0	0.03937
Fling's	4220	100%	4	0	0	0	0	0	0	0	4	4	0	0	0.03937
Genesee Village	2310	100%	17	0	0	0	0	0	0	0	17	17	0	0	0.03937
Gold Hill	4150	100%	14	0	0	0	0	0	0	0	14	14	0	0	0.03937
Gold Lake	4180	100%	4	0	0	0	0	0	0	0	4	4	0	0	0.03937
Golden Age	4230	100%	19	0	0	0	0	0	0	0	19	19	0	0	0.03937
Goldsmith @ Eastman	640	100%	31	0	0	0	0	0	0	0	31	31	0	0	0.03937
Happy Canyon at N Surrey Dr	2880	100%	23	0	0	0	0	0	0	0	23	23	0	0	0.03937
Harvard @ Jackson	610	100%	29	0	0	0	0	0	0	0	29	29	0	1	0.03937
Havana Park	500	100%	52	0	0	0	0	0	0	0	52	52	0	1	0.03937
Heritage Square	1060	100%	6	0	0	0	0	0	0	0	6	6	0	0	0.03937
Hidden Lake	1300	100%	24	0	0	0	0	0	0	0	24	24	0	0	0.03937
Jeffco Fairgrounds	1050	100%	16	0	0	0	0	0	0	0	16	16	0	0	0.03937
Jewell Detention	520	100%	20	0	0	0	0	0	0	0	20	20	0	0	0.03937
Johnny Park	4310	100%	14	0	0	0	0	0	0	0	14	14	0	0	0.03937
Justice Center	4360	100%	22	0	0	0	0	0	0	0	22	22	0	0	0.03937
Kelly Dam	410	100%	33	0	0	0	0	0	0	0	33	33	0	0	0.03937
Lakewood CC	1550	100%	21	0	0	0	0	0	0	0	21	21	0	0	0.03937
Lazy Acres	4200	100%	22	0	0	0	0	0	0	0	22	22	0	0	0.03937
LDC at 64th	1310	100%	13	0	0	0	0	0	0	0	13	13	0	0	0.03937
Lee Hill Rain 2012	4320	100%	32	0	0	0	0	0	0	0	32	32	0	0	0.03937
Leyden Confluence	210	100%	16	0	0	0	0	0	0	0	16	16	0	0	0.03937
Leyden Reservoir	200	100%	14	0	0	0	0	0	0	0	14	14	0	0	0.03937
Logan Mill	4140	100%	17	0	0	0	0	0	0	0	17	17	0	0	0.03937
Magnolia	4090	100%	18	0	0	0	0	0	0	0	18	18	0	0	0.03937
No Name @ Quincy	730	100%	70	0	0	0	0	0	0	0	70	70	0	0	0.03937
Nott Creek	150	100%	15	0	0	0	0	0	0	0	15	15	0	0	0.03937
NREL/S. Table Mtn.	1030	100%	17	0	0	0	0	0	0	0	17	17	0	0	0.03937
Pine Brook	4170	100%	14	0	0	0	0	0	0	0	14	14	0	0	0.03937
Piney at Liverpool	950	100%	87	0	0	0	0	0	0	0	87	87	0	0	0.03937
Red Garden	4030	100%	19	0	0	0	0	0	0	0	19	19	0	0	0.03937
Red Hill	4290	100%	31	0	0	0	0	0	0	0	31	31	0	0	0.03937
Riverside	4340	100%	4	0	0	0	0	0	0	0	4	4	0	0	0.03937
Russelville Gulch-Douglas	2900	100%	38	0	0	0	0	0	0	0	38	38	0	0	0.03937
Sable Ditch @ 18th	800	100%	37	0	0	0	0	0	0	0	37	37	0	0	0.03937



Sand Creek Park	1800	100%	26	0	0	0	0	0	0	26	26	0	0	0.03937
Sanderson at Xavier	1340	100%	39	0	0	0	0	0	0	39	39	0	0	0.03937
SBC@S Boulder Ditch	4840	100%	12	0	0	0	0	0	0	12	12	0	0	0.03937
Shanahan Ridge	4810	100%	16	0	0	0	0	0	0	16	16	0	0	0.03937
Sports Complex	320	100%	22	0	0	0	0	0	0	22	22	0	1	0.03937
Spruce Mt - Douglas	2890	100%	26	0	0	0	0	0	0	26	26	0	0	0.03937
St. Antons	4570	100%	9	0	0	0	0	0	0	9	9	0	0	0.03937
Sunset	4240	100%	4	0	0	0	0	0	0	4	4	0	0	0.03937
Swiss Peaks	4130	100%	6	0	0	0	0	0	0	6	6	0	0	0.03937
Taylor Mountain	4260	100%	2	0	0	0	0	0	0	2	2	0	0	0.03937
Trail Creek	5740	100%	30	0	0	0	0	0	0	30	30	0	0	0.03937
Twin Sisters	4080	100%	8	0	0	0	0	0	0	8	8	0	0	0.03937
Upper Leyden	220	100%	15	0	0	0	0	0	0	15	15	0	1	0.03937
Van Bibber Park	300	100%	13	0	0	0	0	0	0	13	13	0	0	0.03937
Walker Ranch	4050	100%	17	0	0	0	0	0	0	17	17	0	0	0.03937
West Cherry Head-Douglas Cnty	2920	100%	17	0	0	0	0	0	0	17	17	0	0	0.03937
Whispering Pines	4880	100%	25	0	0	0	0	0	0	25	25	0	0	0.03937
Winiger Ridge	4530	100%	14	0	0	0	0	0	0	14	14	0	0	0.03937
Wx-Aurora Town Hall	920	100%	50	0	0	0	0	0	0	50	50	0	0	0.03937
Wx-Blue Mountain	140	100%	15	0	0	0	0	0	0	15	15	0	0	0.03937
Wx-Brighton	1920	100%	34	0	0	0	0	0	0	34	34	0	0	0.03937
Wx-Elbert	1440	100%	30	0	0	0	0	0	0	30	30	0	0	0.03937
Wx-Hiwan G.C.	2210	100%	16	0	0	0	0	0	0	16	16	0	0	0.03937
Wx-Sugarloaf	4730	100%	9	0	0	0	0	0	0	9	9	0	0	0.03937
Wx-Ward C-1	4710	100%	13	0	0	0	0	0	0	13	13	0	0	0.03937
<b>TOTAL</b>			<b>4997</b>	<b>200</b>	<b>25</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>5234</b>	<b>5570</b>	<b>295</b>	<b>13</b>	
Fairview Peak	4860	97%	112	4	0	0	0	0	0	116	120	4	5	0.01
WX-EPC at Hwy 105	3010	98%	88	2	0	0	0	0	0	90	92	2	0	0.01
Porphory Mtn	4850	82%	30	5	0	1	0	0	2	36	44	8	0	0.01

### 2014 Monthly Peak Hour ALERT Radio Traffic Summary

