

Memo

Date: September 6, 2013
To: Kevin Stewart
From: Markus Ritsch
Subject: August 2013 ALERT Data Analysis

I. ALERT Data Source

Raw ALERT data records extracted from the Urban Drainage and Flood Control District's NovaStar 5.0 base station were analyzed for the period August 1 through August 31, 2013.

II. General System Analysis Summary

In 2013 the District will upgrade the telemetry backbone from legacy ALERT (A1) to the new A2 protocol. As the season progresses, the A1 feed from outlying repeaters to the District base station at Diamond Hill will terminate and all data will be received as A2. The following table quantifies the data reception throughout the conversion of the telemetry system as the season progresses. As of January 29, 2013, 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.

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

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Legacy	321,136	218,368	264,984	243,044	318,423	342,585	269,475	294,652				
Concentrator	304,067	319,089	379,891	381,523	571,616	686,278	538,090	430,404				
ALERT2	--	--	16,450	47,415	88,786	113,822	97,216	88,860				
TOTAL	625,203	537,457	661,325	671,982	978,825	1,142,685	904,781	813,916	0	0	0	0
Conc+A2	--	--	396,341	428,938	660,402	800,100	635,306	519,264				
Conc/Leg			1.43	1.57	1.80	2.00	2.00	1.46				

In 2013, WET will analyze only the concentrator and A2 data each month going forward since only the concentrator and A2 data received at Diamond Hill represents a complete dataset.

In May, June, July and early August the District base received many duplicate reports which accounts for the large number of total reports. For example:

08/06/2013 22:03:35 Device: 1640 Data: 76 Line: 2 (ALERT 2 Concentrator)
08/06/2013 22:03:35 Device: 1640 Data: 76 Line: 2 (ALERT 2 Concentrator)
08/06/2013 22:03:36 Device: 1640 Data: 76 Line: 1 (Legacy)
08/06/2013 22:03:36 Device: 1640 Data: 76 Line: 1 (Legacy)

On August 19 the total number of duplicate reports decreased as shown by the following example where data is received only once via Legacy and a second time via the A2 Concentrator. This contributes to the decrease in total reports received at the base.

08/31/2013 20:18:46 Device: 1640 Data: 84 Line: 2 (ALERT 2 Concentrator)
08/31/2013 20:18:46 Device: 1640 Data: 84 Line: 1 (Legacy)

A. 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 will be tracked throughout the 2013 flood season.

Table 2. Event Performance of New A2 Sites

Description	ID	Install Date	Apr	May	Jun	Jul	Aug	Sep	Oct	
Heritage Regional Park	3090	03/14/2013	100%	93%	100%	91%	81%			
ETG @ Hampden	100110	05/01/2013	--	100%	100%	100%	100%			
Blackstone	100100	05/03/2013	--	100%	100%	100%	100%			
Newlin Gulch	3070	05/24/2013	--	--	51%	50%	45%			
Carr Street	100	05/31/2013	--	--	36%	85%	92%			
Maple Grove	1000	05/20/2013	--	--	67%	95%	100%			

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
2790	W. Cherry Creek	55%	70%	Poor timer/event performance
840	Aurora FS 12	44%	41%	Poor timer/event performance
500	Havana Park	98%	100%	Monthly rain total too low
2310	Genesee Village	100%	100%	Monthly rain total too low
2350	Idledale	97%	95%	Monthly rain total too low
2925	Unknown sensor ID with 51 reports this month			
1479	Unknown sensor ID with 42 reports this month			
5104	Unknown sensor ID with 29 reports this month			

Newlin Gulch is using a CR850 logger and the General Sensor Report (GSR) format but is not able to package multiple GSR reports into a single data packet. It seems the transmitter is sending only one GSR rain report per frame causing missed tips when multiple tips occur within the same frame. An updated OS for the CR850 will be installed by WET this month.

Highland Heritage Regional Park (ID 3090) is using a HydroLynx 5096 with the A2 upgrade kit. Tips are missed at the base from this site. A new EPROM was installed on August 13 and the data from then on looks good.

Carr Street (ID 100) missed several incrementing and timer reports this month. The tips were missed on both the NS5 base as well as the Contrail base. We are currently looking into this issue.

C. Continuous Operation of Base Receiver/Decoder

The NS5 base station was in continuous operation for the entire month.

III. 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 4).

Table 4. Monthly Summary of Sensors with Poor Timer Performance (Sensor ID)

Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*
4470	4470	2790	1200	3070	2710	1480	840				
3070	4550	4550	840	2800	840	2190	2790				
1660	4870	2710	800	840	4350	840	2730				
2790	2790	4870	4330	1700	2790	1660	2910				
4870	4490	4270	2360	2790	5940	3010	2230				
2320	4510	4190	620	100100	1660	3090	2860				

*- 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.

IV. 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 5). 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 5. District-Wide Total Tip/Count Statistical Summary

Statistical Parameter	Value	Comments
Mean	50.63	Only the 1-mm rain sensors were included in the analysis
Median	48	Only the 1-mm rain sensors were included in the analysis
Standard deviation	23.04	Only the 1-mm rain sensors were included in the analysis
Mean plus three standard deviations	120	Only the 1-mm rain sensors were included in the analysis
Minimum total count	6	Genesee Village (2310) and Havana Park (500)
Maximum total count	160	Utah Park (430)

B. Monthly Average Tip/Count Summary

A monthly summary of the District-wide mean total tip/count is presented (Table 6).

Table 6. 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					

*- 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 7).

Table 7. Sensors with a Jump of 6 or More in Sequential Count

Sensor Description	Sensor ID	Comment
Fire Station 12	840	Two jumps occurred during heavy rain periods
Haskins Gulch	2820	One jump during heavy rain period

D. Sensor-by-Sensor Incrementing Count Summary

The system-wide reception rate of incrementing, 1-mm tip reports for the month was approximately 92 percent. A total of 8,472 incrementing reports were received and a total of 9,164 reports were expected. The total loss of incrementing reports for the month was approximately 8 percent. Those sensors with the worst event transmission performance are summarized (Table 8).

Table 8. Monthly Summary of Sensors with the Most Missed Tips

Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct*	Nov*	Dec*
4470	4510	4270	1200	4470	100	840	840				
2330	2930	4490	840	5900	4470	3070	4470				
2980	4470	4790	4330	2980	1000	2980	4330				
1660	2980	4510	4100	2790	500	1700	2820				
--	2730	4320	4270	840	1660	2790	1660				
--	4790	4870	2980	4060	3070	2730	2790				

*-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.

V. 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 9). The five heaviest hours of radio traffic are analyzed to quantify the number of missing rain reports for that hour.

Table 9. Periods of Heavy Radio Traffic

Day	Hour	Expected	Received	Total Load	Loss
3	19	765	697	2,629	8.89%
3	20	342	316	2,140	7.60%
8	19	458	433	1,715	5.46%
8	20	140	138	1,557	1.43%
9	16	209	206	1,451	1.44%

VI. 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 10).

Table 10. Summary of Unknown IDs

Description	Quantity
Total number of unknown IDs (IDs without a device definition)	581
Total reports from unknown IDs	1,070
Unknown IDs with only a single received report (potential noise)	425
Total reports from all IDs – RecData Log entire month	519,264
Unknown reports as a fraction of total reports	0.21%

The total number of reports from unknown sensors is very small relative to the total reports received for the month. Shown below (Table 11) are the total reports received from unknown sensor IDs for each month of the year.

Table 11. Monthly Summary of Total Reports from Unknown IDs

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				

The fraction of reports from unknown sensors relative to the total number of reports is shown below (Table 12).

Table 12. Monthly Percent of Unknown Sensor Reports

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%				

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 13).

Table 13. Reports Received by Unknown IDs

Unknown ID	Reports	Comment
2925	51	
1479	42	
5104	29	
2239	20	
129	18	
2215	17	
2222	10	
5461	8	
1109	7	
2221	7	
2229	7	
2277	7	

VII. Sensors with Invalid Reports

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

Sensor ID	Description	Bad Reports	Comments
100117	ETG @ Hampden	48	Maintenance occurred on 8/20...issued seems to be fixed now
413	Kelly Dam	34	A number of questionable data received during heavy rain/high flow periods of Aug 3 and Aug 8
3083	Tallman Gulch	33	Changed validation criteria to a change of 0.22 ft
3050	East/West Trailhead	3	Sequential months showing numerous invalid reports
2210	Wx-Hiwan G.C.	8	Sequential months showing numerous invalid reports
750	Wx-Quincy Reservoir	4	

VIII. 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.

ID	Description	Type	Date
4110	Betasso Precipitation-BO	Boulder County 10 minute rainfall	8/1/2013 15:21
4110	Betasso Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/1/2013 15:21
5900	Horse Creek Precipitation-DG	Hayman 30 minute rainfall	8/3/2013 14:45
5900	Horse Creek Precipitation-DG	Hayman 1 hour rainfall	8/3/2013 14:45
5900	Horse Creek Precipitation-DG	Hayman 30 minute rainfall	8/3/2013 15:00
5900	Horse Creek Precipitation-DG	Hayman 90 minute rainfall	8/3/2013 15:00
5900	Horse Creek Precipitation-DG	Hayman 30 minute rainfall	8/3/2013 15:15
4290	Red Hill Precipitation-BO	Boulder County 10 minute rainfall	8/3/2013 17:05
4250	Geer Canyon Precipitation-BO	Boulder County 10 minute rainfall	8/3/2013 17:07
4220	Fling's Precipitation-BO	Boulder County 10 minute rainfall	8/3/2013 17:22
1110	Gunbarrel Precipitation-BO	Boulder County 10 minute rainfall	8/3/2013 17:28
1110	Gunbarrel Precipitation-BO	Boulder County 1 hour rainfall	8/3/2013 17:34
860	Sand Creek at Colfax Precipitation-AD	Plains 10 minute rainfall	8/3/2013 19:13
840	Aurora Fire Station 12 Precipitation-AD	Plains 10 minute rainfall	8/3/2013 19:13
860	Sand Creek at Colfax Precipitation-AD	Plains 1 hour rainfall	8/3/2013 19:15
1320	SPR at 3rd Avenue Precipitation-DN	Plains 10 minute rainfall	8/3/2013 19:15
830	Side Creek Park Precipitation-AR	Plains 10 minute rainfall	8/3/2013 19:26
1320	SPR at 3rd Avenue Precipitation-DN	Plains 1 hour rainfall	8/3/2013 19:29
870	Murphy Creek Golf Course Precipitation-AR	Plains 10 minute rainfall	8/3/2013 19:35
850	Flying J Truck Plaza Precipitation-AD	Plains 1 hour rainfall	8/3/2013 19:38
600	Harvard Gulch Park Precipitation-DN	Plains 1 hour rainfall	8/3/2013 19:41
970	Pump Station 3 Precipitation-AR	Plains 10 minute rainfall	8/3/2013 19:45
870	Murphy Creek Golf Course Precipitation-AR	Plains 1 hour rainfall	8/3/2013 19:45
830	Side Creek Park Precipitation-AR	Plains 1 hour rainfall	8/3/2013 19:48
800	Sable Ditch @ Colfax Precipitation-AD	Plains 1 hour rainfall	8/3/2013 19:51
970	Pump Station 3 Precipitation-AR	Plains 1 hour rainfall	8/3/2013 19:57

810	Granby Ditch @ 6th Precipitation-AR	Plains 1 hour rainfall	8/3/2013 19:57
2870	Cherry Creek at Cottonwood Park Precipitation-DG	Douglas County 10 minute rainfall	8/3/2013 20:00
900	Aurora Reservoir Precipitation	Plains 10 minute rainfall	8/3/2013 20:05
2840	Sulphur Gulch Precipitation-DG	Douglas County 10 minute rainfall	8/3/2013 20:07
3080	Tallman Gulch at Tallman Park Precipitation-DG	Douglas County 10 minute rainfall	8/3/2013 20:14
2840	Sulphur Gulch Precipitation-DG	Douglas County 1 hour rainfall	8/3/2013 20:15
900	Aurora Reservoir Precipitation	Plains 1 hour rainfall	8/3/2013 20:19
3030	Bingham Lake Park Precipitation-DG	Douglas County 10 minute rainfall	8/3/2013 20:21
2870	Cherry Creek at Cottonwood Park Precipitation-DG	Douglas County 1 hour rainfall	8/3/2013 20:27
3080	Tallman Gulch at Tallman Park Precipitation-DG	Douglas County 1 hour rainfall	8/3/2013 20:31
4200	Lazy Acres Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/5/2013 16:24
2820	East Plum Creek at Haskins Gulch Precipitation-DG	Douglas County 10 minute rainfall	8/8/2013 18:52
420	Expo Park Precipitation-AR	Plains 1 hour rainfall	8/8/2013 19:21
1570	Brighton ETO Precipitation-WE	Plains 1 hour rainfall	8/8/2013 19:21
430	Utah Park Precipitation-AR	Plains 10 minute rainfall	8/8/2013 19:21
430	Utah Park Precipitation-AR	Plains 1 hour rainfall	8/8/2013 19:23
420	Expo Park Precipitation-AR	Plains 10 minute rainfall	8/8/2013 19:23
510	Virginia Court Precipitation-AR	Plains 1 hour rainfall	8/8/2013 19:34
510	Virginia Court Precipitation-AR	Plains 10 minute rainfall	8/8/2013 19:34
2880	Happy Canyon at North Surrey Drive Precip-DG	Douglas County 1 hour rainfall	8/8/2013 19:40
650	Iliff Pond Precipitation-DN	Plains 10 minute rainfall	8/8/2013 19:40
920	Aurora Town Hall Precipitation-AR	Plains 1 hour rainfall	8/8/2013 19:43
610	Harvard Gulch @ Jackson Precipitation-DN	Plains 10 minute rainfall	8/8/2013 19:45
520	Jewell Detention Precipitation-AR	Plains 1 hour rainfall	8/8/2013 19:49
650	Iliff Pond Precipitation-DN	Plains 1 hour rainfall	8/8/2013 19:53
5720	Four Mile Creek Precipitation-DG	Hayman 30 minute rainfall	8/9/2013 16:07
720	Confluence Pond Precipitation-AR	Plains 10 minute rainfall	8/9/2013 16:21
870	Murphy Creek Golf Course Precipitation-AR	Plains 10 minute rainfall	8/9/2013 16:45
4520	Eagle Ridge Precipitation-BO	Boulder County 10 minute rainfall	8/12/2013 13:57
4140	Logan Mill Precipitation-BO	FMC-BA 0.25" in 10 Min Rainfall	8/12/2013 14:19
4520	Eagle Ridge Precipitation-BO	Boulder County 1 hour rainfall	8/12/2013 14:21
4140	Logan Mill Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/12/2013 14:27
2820	East Plum Creek at Haskins Gulch Precipitation-DG	Douglas County 1 hour rainfall	8/12/2013 14:33
5720	Four Mile Creek Precipitation-DG	Hayman 30 minute rainfall	8/12/2013 14:49
5720	Four Mile Creek Precipitation-DG	Hayman 1 hour rainfall	8/12/2013 14:56
5720	Four Mile Creek Precipitation-DG	Hayman 90 minute rainfall	8/12/2013 15:00
2250	Rosedale Precipitation-JF	Jefferson County 10 minute rainfall	8/12/2013 18:46
2240	Cold Spring Gulch C Precipitation-JF	Jefferson County 10 minute rainfall	8/12/2013 18:55
2240	Cold Spring Gulch C Precipitation-JF	Jefferson County 1 hour rainfall	8/12/2013 19:21
2240	Cold Spring Gulch C Precipitation-JF	Jefferson County 10 minute rainfall	8/12/2013 19:21
4240	Sunset Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/13/2013 13:07
2920	West Cherry Head Precipitation-DG	Douglas County 10 minute rainfall	8/13/2013 14:14
2210	Hiwan Golf Club Precipitation	Jefferson County 2 hour rainfall	8/17/2013 18:30
2210	Hiwan Golf Club Precipitation	Jefferson County 1 hour rainfall	8/17/2013 18:30
2210	Hiwan Golf Club Precipitation	Jefferson County 10 minute rainfall	8/17/2013 18:30
220	Upper Leyden Precipitation-JF	Jefferson County 10 minute rainfall	8/21/2013 18:03

2800	East Plum Creek at Columbine Open Space Precip-DG	Douglas County 10 minute rainfall	8/22/2013 16:05
1370	West Metro Fire Station 13 Precipitation-JF	Jefferson County 10 minute rainfall	8/22/2013 17:47
1370	West Metro Fire Station 13 Precipitation-JF	Jefferson County 1 hour rainfall	8/22/2013 17:54
5730	West Creek Precipitation-TL	Hayman 30 minute rainfall	8/22/2013 21:04
2970	Rampart Range Road Precipitation-DG	2970 Rampart Range Road 0.2" in 30 Minutes Rainfall	8/24/2013 19:00
4080	Twin Sisters Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/26/2013 16:36
4130	Swiss Peaks Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/26/2013 16:41
4080	Twin Sisters Precipitation-BO	FMC-BA 0.75" in 1 Hour Rainfall	8/26/2013 16:57
4160	Sunshine Precipitation-BO	FMC-BA 0.25" in 10 Min Rainfall	8/26/2013 22:20
4880	Whispering Pines Precipitation-BO	FMC-BA 0.25" in 10 Min Rainfall	8/26/2013 22:21
4880	Whispering Pines Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/26/2013 22:25
4160	Sunshine Precipitation-BO	FMC-BA 0.50" in 30 Min Rainfall	8/26/2013 22:26
4320	Lee Hill Rain Precipitation-BO	FMC-BA 0.25" in 10 Min Rainfall	8/26/2013 22:29

General System Analysis

Database Name

P:\A207-UDFCD-Data-Analysis\2013\08-2013\Novastar_extract_2013Aug.mdb

First Date in Database

8/1/13 12:00 AM

Total Days

31.0

Last Date in Database

8/31/13 11:59 PM

Total Hours

744.0

Total Records Analyzed

519,264

Records by Group

Wind Data	161,579	31%
Temperature	82,151	16%
Relative Humidity	75,175	14%
Water Level	42,822	8%
Barometric Pressure	33,396	6%
Battery Voltage	32,691	6%
Precipitation	26,577	5%
Solar Radiation	14,531	3%
Dew Point Temperature	9,210	2%
Wind Chill	9,210	2%
Peak Wind	9,209	2%
Fuel Moisture	7,414	1%
Fuel Temperature	7,354	1%
Soil Moisture	3,853	1%
Repeater Status Report	1,551	0%
Unknown	1,070	0%
12Hr Status Report	648	0%
Hayman Battery	350	0%
Flasher Status	328	0%
Handar 585 ALARM Status	84	0%
Repeater Pass List	56	0%
ALERT/A2 Testing	3	0%
Dewpoint Temperature	1	0%
Solar Power	1	0%
Total	519,264	

Records by Major Group

Meteorologic Sensors	205,253	40%
Water Level Sensors	42,822	8%
Rain Sensors	26,577	5%
Soil and Fuel Sensors	18,621	4%
Sensor Status Transmissions	2,340	0%
Total	295,613	

Traffic Loading Summary

Alert Reports	519,264	
Average Daily Traffic	16,750	
Average Hourly Traffic	698	
Median Hourly Traffic	725	hour beginning
Peak Hourly Traffic	2,629	Aug 3, 7:00 PM
2nd Max	2,140	Aug 3, 8:00 PM
3rd Max	1,721	Aug 8, 7:00 PM
4th Max	1,563	Aug 8, 8:00 PM
5th Max	1,452	Aug 9, 4:00 PM

Rain Timer Performance

Analyze Rain Sensors

12:12

Rain Sensors	Description	Rcv	Timer	Exp	Performance
840	Fire Station 12	27	0:34	62	44%
2790	Wx-W. Cherry Creek	34	18:29	62	55%
2730	Wx-Salisbury Park	38	17:41	62	61%
2910	East Cherry Cr-Douglas	39	14:48	62	63%
2230	Bear Cr below Cub	41	11:31	62	66%
2860	CC at Stroh Rd	43	13:30	62	69%
2280	Kinney Peak	44	14:06	62	71%
3080	Tallman Gulch	44	16:21	62	71%
4330	Hansen Rain	44	13:16	62	71%
2980	Dakan Rd	45	14:32	62	73%
2270	Cub Cr below Blue	46	12:42	62	74%
2820	Haskins Gulch Conf	46	14:10	62	74%
2870	Cottonwood (Apache)	46	14:28	62	74%
2900	Russelville Gulch-Douglas	46	14:55	62	74%
2930	Wx-Spring Valley Rd-DougCnty	46	16:00	62	74%
2950	DC Public Works	46	14:28	62	74%
3010	EPC at Hwy 105	46	13:52	62	74%
3050	East/West Trailhead	46	14:55	62	74%
2850	Cherry Cr bl Bayou Glch	47	14:23	62	76%
2890	Spruce Mt - Douglas	47	15:28	62	76%
2990	Wx-Tomah Rd-DougCnty	47	14:45	62	76%
1660	SPR at Henderson	49	13:54	62	79%
2810	Pine Cliff Road	49	13:50	62	79%
2880	Happy Canyon at N Surrey Dr	49	14:13	62	79%
3040	CC @ Prairie Canyon Ranch	49	13:12	62	79%
3060	Fire Sta 47	49	14:24	62	79%
4270	Cannon Mountain	49	12:40	62	79%
4870	SBC @ SB Road	49	14:02	62	79%
2750	Wx-Castle Rock	50	12:53	62	81%
2920	West Cherry Head-Douglas Cnty	50	13:13	62	81%
2940	Willow Creek - DougCnty	50	13:30	62	81%
2960	Indian Creek	50	14:27	62	81%
3030	WX-Bingham Lake Park	50	11:04	62	81%
2840	Sulphur Gulch	51	13:31	62	82%
4790	Wx-Button Rock	51	12:36	62	82%
1920	Wx-Brighton	52	12:32	62	84%
310	Guy Hill Ranch	53	12:33	62	85%
2320	Choke Cherry Resvr	53	12:12	62	85%
2360	Indian Hills	53	13:38	62	85%
2340	El Rancho	54	12:16	62	87%
2710	Wx-Highlands Ranch WTP	54	12:25	62	87%
3020	Wx-West Creek WX	54	12:42	62	87%
210	Leyden Confluence	55	11:58	62	89%
700	Toll Gate @ 6th	55	12:46	62	89%
2800	Columbine Open Space	55	12:38	62	89%
4180	Gold Lake	55	12:52	62	89%
4220	Fling's	55	12:56	62	89%
4470	Little Narrows	55	12:43	62	89%
100	A2-Carr Street	56	12:46	62	90%
220	Upper Leyden	56	12:31	62	90%
1620	Slaughterhouse Glch	56	12:42	62	90%
4230	Golden Age	56	12:28	62	90%
110	Ralston Reservoir	57	12:28	62	92%
1010	Denver West	57	12:26	62	92%

1720	Cherry Cr @ Steele	57	12:12	62	92%
4490	Apple Valley	57	12:40	62	92%
330	Van Bibber @ Hwy 93	58	12:27	62	94%
400	Montview Park	58	12:13	62	94%
620	Quincy/Highline	58	12:44	62	94%
650	Iliff Pond	58	12:12	62	94%
940	Aurora Regional Pond	58	12:12	62	94%
1700	Cherry Cr @ Champa	58	12:27	62	94%
2240	Cold Sprg Glch conf	58	11:57	62	94%
2330	Morrison	58	12:27	62	94%
4060	Lakeshore	58	12:13	62	94%
4080	Twin Sisters	58	12:15	62	94%
4100	Filter Plant	58	11:59	62	94%
4200	Lazy Acres	58	12:28	62	94%
4290	Red Hill	58	12:10	62	94%
4310	Johnny Park	58	12:13	62	94%
4510	Pinewood Springs	58	12:26	62	94%
4570	St. Antons	58	12:16	62	94%
4830	SBC @ San Souci	58	12:12	62	94%
4850	Porphory Mtn	58	12:34	62	94%
120	West Woods	59	12:12	62	95%
420	Expo Park	59	11:57	62	95%
430	Utah Park	59	12:20	62	95%
540	Parker/Mississippi	59	12:39	62	95%
760	Mission Viejo Park	59	12:27	62	95%
830	Side Creek Park	59	12:26	62	95%
1000	A2-Maple Grove Resv.	59	12:13	62	95%
1030	NREL/S. Table Mtn.	59	12:25	62	95%
1200	Broomfield 3207	59	12:25	62	95%
1300	Hidden Lake	59	11:58	62	95%
1320	SPR at 3rd Ave	59	12:11	62	95%
1350	Chatfield COE	59	11:59	62	95%
1400	Upper Sloan Det.	59	12:12	62	95%
1440	Wx-Elbert	59	12:28	62	95%
1640	SPR at Union Ave.	59	12:26	62	95%
2250	Rosedale	59	11:57	62	95%
4040	Martin Gulch	59	12:12	62	95%
4050	Walker Ranch	59	12:29	62	95%
4090	Magnolia	59	12:14	62	95%
4170	Pine Brook	59	12:13	62	95%
4190	Slaughterhouse	59	12:27	62	95%
4250	Geer Canyon	59	12:24	62	95%
4530	Winiger Ridge	59	11:57	62	95%
4750	Wx-Louisville Lake	59	12:00	62	95%
4770	Wx-Cal-Wood Ranch	59	12:16	62	95%
4820	Doudy Draw	59	12:12	62	95%
4880	Whispering Pines	59	12:12	62	95%
610	Harvard @ Jackson	60	11:57	62	97%
720	Confluence Pond	60	11:58	62	97%
730	No Name @ Quincy	60	12:11	62	97%
810	Granby Ditch @ 6th	60	12:07	62	97%
900	Wx-Aurora Reservoir	60	12:00	62	97%
970	Pump Sta 3	60	12:14	62	97%
1050	Jeffco Fairgrounds	60	11:57	62	97%
1060	Heritage Square	60	12:11	62	97%
1100	Louisville Rec Ctr	60	12:12	62	97%
1310	LDC at 64th	60	11:58	62	97%
1340	Sanderson at Xavier	60	12:13	62	97%
1360	Denver Zoo	60	12:13	62	97%

1500	Powers Park	60	11:56	62	97%
1520	Wx-Marston Lake North	60	12:00	62	97%
1530	Bear Creek @ Lowell	60	12:11	62	97%
1710	Shop Creek	60	12:00	62	97%
1900	Niver Detention	60	11:57	62	97%
2210	Wx-Hiwan G.C.	60	12:00	62	97%
2260	Brook Forest	60	11:56	62	97%
2350	Idledale	60	12:12	62	97%
2370	Red Rocks Park	60	11:57	62	97%
4010	Crescent	60	12:13	62	97%
4020	Rio Grande	60	12:12	62	97%
4030	Red Garden	60	11:59	62	97%
4070	Bear Peak	60	11:57	62	97%
4130	Swiss Peaks	60	12:14	62	97%
4160	Sunshine	60	12:13	62	97%
4240	Sunset	60	12:14	62	97%
4260	Taylor Mountain	60	11:57	62	97%
4340	Riverside	60	12:13	62	97%
4360	Justice Center	60	11:57	62	97%
4520	Eagle Ridge	60	12:00	62	97%
4810	Shanahan Ridge	60	12:27	62	97%
4840	SBC@S Boulder Ditch	60	11:57	62	97%
140	Wx-Blue Mountain	61	12:00	62	98%
150	Nott Creek	61	12:13	62	98%
200	Leyden Reservoir	61	11:57	62	98%
300	Van Bibber Park	61	12:11	62	98%
320	Sports Complex	61	11:58	62	98%
440	Fire Station #7	61	12:12	62	98%
500	Havana Park	61	12:11	62	98%
510	Virginia Court	61	11:57	62	98%
520	Jewell Detention	61	11:57	62	98%
530	Fire Station #19	61	11:57	62	98%
600	Harvard Gulch Park	61	11:58	62	98%
630	Temple Pond at DTC	61	12:18	62	98%
640	Goldsmith @ Eastman	61	11:58	62	98%
750	Wx-Quincy Reservoir	61	11:57	62	98%
800	Sable Ditch @ 18th	61	11:57	62	98%
820	ETG @ Buckley	61	11:57	62	98%
850	Flying J	61	12:00	62	98%
860	Sand Cr at Colfax	61	12:00	62	98%
870	Murphy Creek GC	61	12:00	62	98%
950	Piney at Liverpool	61	11:57	62	98%
1040	Lena @ U.S. Hwy 6	61	11:59	62	98%
1370	West Metro FS13	61	11:57	62	98%
1460	Wx-Urban Farm	61	12:00	62	98%
1550	Lakewood CC	61	11:57	62	98%
1570	Wx-Brighton Ditch	61	12:00	62	98%
1800	Sand Creek Park	61	11:58	62	98%
1810	Sand Creek at mouth	61	11:58	62	98%
3090	Highland Heritage Park-A2	61	10:28	62	98%
4110	Betasso	61	11:59	62	98%
4140	Logan Mill	61	11:57	62	98%
4150	Gold Hill	61	11:57	62	98%
4300	Big Elk Park	61	11:57	62	98%
4320	Lee Hill Rain 2012	61	11:58	62	98%
4350	Conifer Hill	61	11:55	62	98%
4550	Boulder Jail	61	11:57	62	98%
4710	Wx-Ward C-1	61	11:54	62	98%
4730	Wx-Sugarloaf	61	12:00	62	98%

4860	Fairview Peak	61	12:00	62	98%
410	Kelly Dam	62	11:57	62	100%
710	Horseshoe Park Drop	62	11:58	62	100%
920	Wx-Aurora Town Hall	62	12:00	62	100%
1600	Englewood Dam	62	11:57	62	100%
2310	Genesee Village	62	11:58	62	100%
1420	Wx-Diamond Hill	63	11:37	62	102%
1110	Gunbarrel	68	10:45	62	110%
1480	Third Creek at DIA	69	8:00	62	111%
3070	Newlin Gulch-A2	110	6:29	62	177%
2970	Rampart Range Rd-Satellite	193		62	
5720	Four Mile Creek	37	17:46	62	60%
5730	West Creek	45	15:25	62	73%
5740	Trail Creek	46	13:42	62	74%
5810	Stump Bump	53	11:23	62	85%
5860	Cedar Mountain	51	13:57	62	82%
5880	Hackett Mountain	52	13:38	62	84%
5900	Horse Creek-Satellite	1046		62	100%
5940	Log Jumper	46	14:07	62	74%
100100	A2-Blackstone Precip	61	12:00	62	98%
100110	A2-ETG @ Hampden Precip	60	12:00	62	97%

Rain Event Performance		Reports Received	8,472	Analyze Rain Sensors											
	Systemwide Avg	Total Tips	9,164												
	92.45%	Data Loss	7.55%												
Description	Sensor	Performance	1-tips	2-tips	3-tips	4-tips	5-tips	6-tips	>6-tips	Rcv	Exp	Miss	Hold	Bucket	
Fire Station 12	840	41%	24	3	0	0	1	1	2	29	70	12	1	0.0393701	
Little Narrows	4470	60%	15	3	1	0	1	1	0	21	35	14	0	0.0393701	
Hansen Rain	4330	62%	19	1	3	3	0	0	0	26	42	16	0	0.0393701	
Haskins Gulch Conf	2820	67%	45	17	1	0	0	1	1	64	96	24	0	0.0393701	
SPR at Henderson	1660	68%	10	4	0	1	0	0	0	15	22	7	0	0.0393701	
Wx-W. Cherry Creek	2790	70%	22	6	4	0	0	0	0	32	46	14	0	0.0393701	
Dakan Rd	2980	71%	19	5	3	0	0	0	0	27	38	11	0	0.0393701	
Willow Creek - DougCnty	2940	71%	26	8	2	1	0	0	0	37	52	15	0	0.0393701	
Wx-Castle Rock	2750	74%	31	9	1	0	1	0	0	42	57	15	0	0.0393701	
East/West Trailhead	3050	74%	49	11	6	0	0	0	0	66	89	23	0	0.0393701	
DC Public Works	2950	76%	42	9	2	0	1	0	0	54	71	17	0	0.0393701	
CC @ Prairie Canyon Ranch	3040	76%	22	6	0	1	0	0	0	29	38	9	0	0.0393701	
Wx-Tomah Rd-DougCnty	2990	77%	26	6	2	0	0	0	1	34	44	10	0	0.0393701	
Indian Creek	2960	78%	30	8	0	1	0	0	0	39	50	11	0	0.0393701	
Spruce Mt - Douglas	2890	80%	34	7	2	0	0	0	0	43	54	11	0	0.0393701	
East Cherry Cr-Douglas	2910	80%	34	7	2	0	0	0	0	43	54	11	0	0.0393701	
Highland Heritage Park-A2	3090	81%	28	4	2	0	0	0	0	34	42	8	0	0.0393701	
Ruselville Gulch-Douglas	2900	81%	30	9	0	0	0	0	0	39	48	9	0	0.0393701	
Cherry Cr bl Bayou Glch	2850	82%	28	8	0	0	0	0	0	36	44	8	0	0.0393701	
West Cherry Head-Douglas Cnty	2920	82%	63	11	3	0	0	0	0	77	94	17	0	0.0393701	
WX-Bingham Lake Park	3030	82%	48	3	3	1	0	0	0	55	67	12	0	0.0393701	
Kinney Peak	2280	83%	42	11	0	0	0	0	0	53	64	11	0	0.0393701	
Happy Canyon at N Surrey Dr	2880	84%	53	6	1	0	1	0	0	61	73	12	0	0.0393701	
CC at Stroh Rd	2860	84%	44	5	1	1	0	0	0	51	61	10	0	0.0393701	
Wx-West Creek WX	3020	84%	61	12	1	0	0	0	0	74	88	14	0	0.0393701	
Wx-Salisbury Park	2730	85%	24	3	1	0	0	0	0	28	33	5	0	0.0393701	
Slaughterhouse Glch	1620	85%	25	3	1	0	0	0	0	29	34	5	0	0.0393701	
Parker/Mississippi	540	85%	31	2	2	0	0	0	0	35	41	6	0	0.0393701	
Wx-Spring Valley Rd-DougCnty	2930	85%	46	5	2	0	0	0	0	53	62	9	0	0.0393701	
St. Antons	4570	86%	62	4	1	0	0	1	0	68	79	11	0	0.0393701	
Columbine Open Space	2800	86%	43	6	1	0	0	0	0	50	58	8	0	0.0393701	
Pine Cliff Road	2810	86%	27	5	0	0	0	0	0	32	37	5	0	0.0393701	
Bear Cr below Cub	2230	87%	62	8	0	1	0	0	0	71	82	11	0	0.0393701	
Wx-Marston Lake North	1520	87%	17	3	0	0	0	0	0	20	23	3	0	0.0393701	
Tallman Gulch	3080	87%	41	7	0	0	0	0	0	48	55	7	0	0.0393701	
Toll Gate @ 6th	700	87%	55	5	2	0	0	0	0	62	71	9	0	0.0393701	
Rampart Range Rd-Satellite	2970	88%	27	1	0	1	0	0	1	29	33	4	0	0.0393701	
Cold Sprg Glch conf	2240	88%	58	7	1	0	0	0	0	66	75	9	0	0.0393701	
Apple Valley	4490	88%	19	3	0	0	0	0	0	22	25	3	0	0.0393701	
Jewell Detention	520	89%	50	5	1	0	0	0	0	56	63	7	0	0.0393701	
Eagle Ridge	4520	89%	35	5	0	0	0	0	0	40	45	5	0	0.0393701	
Iliff Pond	650	89%	52	5	1	0	0	0	0	58	65	7	0	0.0393701	
Sulphur Gulch	2840	89%	52	7	0	0	0	0	0	59	66	7	0	0.0393701	
Fire Sta 47	3060	90%	40	3	1	0	0	0	0	44	49	5	0	0.0393701	
Fling's	4220	90%	73	7	1	0	0	0	0	81	90	9	0	0.0393701	
Guy Hill Ranch	310	91%	52	6	0	0	0	0	0	58	64	6	0	0.0393701	
Golden Age	4230	91%	27	1	1	0	0	0	0	29	32	3	0	0.0393701	
Harvard @ Jackson	610	91%	45	3	1	0	0	0	0	49	54	5	0	0.0393701	
Denver Zoo	1360	91%	30	1	1	0	0	0	0	32	35	3	0	0.0393701	
Wx-Highlands Ranch WTP	2710	92%	41	2	1	0	0	0	0	44	48	4	0	0.0393701	
Betasso	4110	92%	54	0	1	1	0	0	0	56	61	5	1	0.0393701	
Quincy/Highline	620	92%	42	4	0	0	0	0	0	46	50	4	0	0.0393701	
A2-Carr Street	100	92%	45	2	1	0	0	0	0	48	52	4	0	0.0393701	
Louisville Rec Ctr	1100	92%	11	1	0	0	0	0	0	12	13	1	0	0.0393701	
Sand Cr at Colfax	860	92%	67	6	0	0	0	0	0	73	79	6	7	0.0393701	
Murphy Creek GC	870	93%	86	5	1	0	0	0	0	92	99	7	7	0.0393701	
Cub Cr below Blue	2270	93%	64	5	0	0	0	0	0	69	74	5	0	0.0393701	
Indian Hills	2360	94%	41	3	0	0	0	0	0	44	47	3	0	0.0393701	
Bear Peak	4070	94%	43	1	1	0	0	0	0	45	48	3	0	0.0393701	
Geer Canyon	4250	94%	28	2	0	0	0	0	0	30	32	2	0	0.0393701	
Cherry Cr @ Steele	1720	94%	14	1	0	0	0	0	0	15	16	1	0	0.0393701	
Winiger Ridge	4530	94%	73	3	1	0	0	0	0	77	82	5	0	0.0393701	
ETG @ Buckley	820	94%	44	3	0	0	0	0	0	47	50	3	0	0.0393701	
Magnolia	4090	94%	62	0	0	0	1	0	0	63	67	4	0	0.0393701	
Wx-Cal-Wood Ranch	4770	94%	30	2	0	0	0	0	0	32	34	2	0	0.0393701	
Temple Pond at DTC	630	94%	93	2	2	0	0	0	0	97	103	6	0	0.0393701	
Red Rocks Park	2370	94%	31	2	0	0	0	0	0	33	35	2	0	0.0393701	
Slaughterhouse	4190	94%	31	2	0	0	0	0	0	33	35	2	0	0.0393701	
Gold Lake	4180	94%	48	1	1	0	0	0	0	50	53	3	0	0.0393701	
Sports Complex	320	94%	16	1	0	0	0	0	0	17	18	1	0	0.0393701	
Kelly Dam	410	94%	16	1	0	0	0	0	0	17	18	1	0	0.0393701	
Cannon Mountain	4270	95%	33	2	0	0	0	0	0	35	37	2	0	0.0393701	
Wx-Button Rock	4790	95%	34	2	0	0	0	0	0	36	38	2	0	0.0393701	
Bear Creek @ Lowell	1530	95%	17	1	0	0	0	0	0	18	19	1	0	0.0393701	
Cottonwood (Apache)	2870	95%	49	16	3	1	0	5	10	74	78	50	6	0.0393701	
Jeffco Fairgrounds	1050	95%	18	1	0	0	0	0	0	19	20	1	0	0.0393701	

Third Creek at DIA	1480	95%	18	1	0	0	0	0	0	0	19	20	1	0	0.0393701
Fire Station #7	440	95%	37	2	0	0	0	0	0	0	39	41	2	0	0.0393701
Piney at Liverpool	950	95%	37	2	0	0	0	0	0	0	39	41	2	0	0.0393701
Morrison	2330	95%	37	2	0	0	0	0	0	0	39	41	2	0	0.0393701
Lakeshore	4060	95%	37	2	0	0	0	0	0	0	39	41	2	0	0.0393701
Leyden Confluence	210	95%	19	1	0	0	0	0	0	0	20	21	1	0	0.0393701
Lena @ U.S. Hwy 6	1040	95%	19	1	0	0	0	0	0	0	20	21	1	0	0.0393701
Sanderson at Xavier	1340	95%	19	1	0	0	0	0	0	0	20	21	1	0	0.0393701
Goldsmith @ Eastman	640	95%	39	2	0	0	0	0	0	0	41	43	2	0	0.0393701
Idledale	2350	95%	20	1	0	0	0	0	0	0	21	22	1	0	0.0393701
Wx-Ward C-1	4710	96%	83	2	1	0	0	0	0	0	86	90	4	0	0.0393701
Choke Cherry Resvr	2320	96%	42	2	0	0	0	0	0	0	44	46	2	0	0.0393701
Lakewood CC	1550	96%	21	1	0	0	0	0	0	0	22	23	1	0	0.0393701
SBC @ SB Road	4870	96%	21	1	0	0	0	0	0	0	22	23	1	0	0.0393701
Conifer Hill	4350	96%	44	2	0	0	0	0	0	0	46	48	2	0	0.0393701
Shanahan Ridge	4810	96%	45	0	1	0	0	0	0	0	46	48	2	0	0.0393701
No Name @ Quincy	730	96%	22	1	0	0	0	0	0	0	23	24	1	0	0.0393701
Englewood Dam	1600	96%	47	0	1	0	0	0	0	0	48	50	2	0	0.0393701
Leyden Reservoir	200	96%	47	2	0	0	0	0	0	0	49	51	2	0	0.0393701
Denver West	1010	96%	48	2	0	0	0	0	0	0	50	52	2	0	0.0393701
Wx-Hiwan G.C.	2210	96%	49	2	0	0	0	0	0	1	51	53	2	0	0.0393701
Nott Creek	150	96%	76	3	0	0	0	0	0	0	79	82	3	0	0.0393701
Swiss Peaks	4130	97%	54	2	0	0	0	0	0	0	56	58	2	0	0.0393701
Lazy Acres	4200	97%	27	1	0	0	0	0	0	0	28	29	1	0	0.0393701
Justice Center	4360	97%	27	1	0	0	0	0	0	0	28	29	1	0	0.0393701
Gunbarrel	1110	97%	55	2	0	0	0	0	0	0	57	59	2	0	0.0393701
Sand Creek Park	1800	97%	56	2	0	0	0	0	0	0	58	60	2	0	0.0393701
NREL/S. Table Mtn.	1030	97%	29	1	0	0	0	0	0	0	30	31	1	0	0.0393701
Cherry Cr @ Champa	1700	97%	29	1	0	0	0	0	0	0	30	31	1	0	0.0393701
Walker Ranch	4050	97%	29	1	0	0	0	0	0	0	30	31	1	0	0.0393701
Martin Gulch	4040	97%	60	2	0	0	0	0	0	0	62	64	2	0	0.0393701
Van Bibber Park	300	97%	30	1	0	0	0	0	0	0	31	32	1	0	0.0393701
Van Bibber @ Hwy 93	330	97%	30	1	0	0	0	0	0	0	31	32	1	0	0.0393701
Sable Ditch @ 18th	800	97%	62	2	0	0	0	0	0	0	64	66	2	0	0.0393701
Granby Ditch @ 6th	810	97%	62	2	0	0	0	0	0	0	64	66	2	0	0.0393701
Heritage Square	1060	97%	31	1	0	0	0	0	0	0	32	33	1	0	0.0393701
Upper Leyden	220	97%	64	2	0	0	0	0	0	0	66	68	2	2	0.0393701
Rio Grande	4020	97%	64	2	0	0	0	0	0	0	66	68	2	0	0.0393701
Side Creek Park	830	97%	65	2	0	0	0	0	0	0	67	69	2	0	0.0393701
Upper Sloan Det.	1400	97%	33	1	0	0	0	0	0	0	34	35	1	0	0.0393701
Brook Forest	2260	97%	67	2	0	0	0	0	0	0	69	71	2	0	0.0393701
Johnny Park	4310	97%	34	1	0	0	0	0	0	0	35	36	1	0	0.0393701
El Rancho	2340	97%	35	1	0	0	0	0	0	0	36	37	1	0	0.0393701
Aurora Regional Pond	940	97%	37	1	0	0	0	0	0	0	38	39	1	0	0.0393699
Horseshoe Park Drop	710	98%	38	1	0	0	0	0	0	0	39	40	1	0	0.0393701
Taylor Mountain	4260	98%	80	2	0	0	0	0	0	0	82	84	2	0	0.0393701
Wx-Urban Farm	1460	98%	40	1	0	0	0	0	0	0	41	42	1	0	0.0393701
Wx-Elbert	1440	98%	41	1	0	0	0	0	0	0	42	43	1	2	0.0393701
SBC @ San Souci	4830	98%	42	1	0	0	0	0	0	0	43	44	1	0	0.0393701
Pump Sta 3	970	98%	90	2	0	0	0	0	0	0	92	94	2	0	0.0393701
Red Garden	4030	98%	46	1	0	0	0	0	0	0	47	48	1	0	0.0393701
Whispering Pines	4880	98%	47	1	0	0	0	0	0	0	48	49	1	0	0.0393701
Hidden Lake	1300	98%	49	1	0	0	0	0	0	0	50	51	1	0	0.0393701
Utah Park	430	98%	154	3	0	0	0	0	0	0	157	160	3	0	0.0393701
Crescent	4010	98%	56	1	0	0	0	0	0	0	57	58	1	0	0.0393701
Riverside	4340	98%	56	1	0	0	0	0	0	0	57	58	1	0	0.0393701
Gold Hill	4150	98%	58	1	0	0	0	0	0	0	59	60	1	0	0.0393701
Doudy Draw	4820	98%	59	1	0	0	0	0	0	0	60	61	1	0	0.0393701
Montview Park	400	98%	60	1	0	0	0	0	0	0	61	62	1	0	0.0393701
Wx-Aurora Reservoir	900	98%	63	1	0	0	0	0	0	0	64	65	1	1	0.0393699
Wx-Blue Mountain	140	98%	64	1	0	0	0	0	0	0	65	66	1	0	0.0393701
West Metro FS13	1370	99%	65	1	0	0	0	0	0	0	66	67	1	0	0.0393701
Flying J	850	99%	68	1	0	0	0	0	0	0	69	70	1	1	0.0393701
Rosedale	2250	99%	84	1	0	0	0	0	0	0	85	86	1	0	0.0393701
Powers Park	1500	99%	92	1	0	0	0	0	0	0	93	94	1	0	0.0393701
Wx-Aurora Town Hall	920	99%	96	1	0	0	0	0	0	0	97	98	1	0	0.0393701
Expo Park	420	99%	107	1	0	0	0	0	0	0	108	109	1	0	0.0393701
Virginia Court	510	100%	91	0	0	0	0	0	0	0	91	91	0	0	0.0393701
Twin Sisters	4080	100%	83	0	0	0	0	0	0	0	83	83	0	0	0.0393701
Sunset	4240	100%	75	0	0	0	0	0	0	0	75	75	0	0	0.0393701
Wx-Brighton Ditch	1570	100%	71	0	0	0	0	0	0	0	71	71	0	0	0.0393701
A2-Blackstone Precip	100100	100%	71	0	0	0	0	0	0	0	71	71	0	0	0.0393701
Big Elk Park	4300	100%	68	0	0	0	0	0	0	0	68	68	0	0	0.0393701
Logan Mill	4140	100%	64	0	0	0	0	0	0	0	64	64	0	0	0.0393701
Chatfield COE	1350	100%	61	0	0	0	0	0	0	0	61	61	0	0	0.0393701
Wx-Sugarloaf	4730	100%	58	0	0	0	0	0	0	0	58	58	0	0	0.0393701
LDC at 64th	1310	100%	55	0	0	0	0	0	0	0	55	55	0	0	0.0393701
Sunshine	4160	100%	53	0	0	0	0	0	0	0	53	53	0	0	0.0393701
Harvard Gulch Park	600	100%	47	0	0	0	0	0	0	0	47	47	0	0	0.0393701
Ralston Reservoir	110	100%	45	0	0	0	0	0	0	0	45	45	0	0	0.0393701
Niver Detention	1900	100%	45	0	0	0	0	0	0	0	45	45	0	0	0.0393701

A2-ETG @ Hampden Precip	100110	100%	44	0	0	0	0	0	0	0	44	44	0	0	0.0393701
West Woods	120	100%	42	0	0	0	0	0	0	0	42	42	0	0	0.0393701
Lee Hill Rain 2012	4320	100%	42	0	0	0	0	0	0	0	42	42	0	0	0.0393701
A2-Maple Grove Resv.	1000	100%	40	0	0	0	0	0	0	0	40	40	0	0	0.0393701
SPR at 3rd Ave	1320	100%	40	0	0	0	0	0	0	0	40	40	0	0	0.0393701
Wx-Quincy Reservoir	750	100%	39	0	0	0	0	0	0	0	39	39	0	0	0.0393701
Shop Creek	1710	100%	39	0	0	0	0	0	0	0	39	39	0	0	0.0393701
Filter Plant	4100	100%	38	0	0	0	0	0	0	0	38	38	0	1	0.0393701
Confluence Pond	720	100%	36	0	0	0	0	0	0	0	36	36	0	0	0.0393701
SBC@S Boulder Ditch	4840	100%	34	0	0	0	0	0	0	0	34	34	0	0	0.0393701
Fire Station #19	530	100%	32	0	0	0	0	0	0	0	32	32	0	0	0.0393701
Sand Creek at mouth	1810	100%	31	0	0	0	0	0	0	0	31	31	0	0	0.0393701
Red Hill	4290	100%	31	0	0	0	0	0	0	0	31	31	0	0	0.0393701
Wx-Diamond Hill	1420	100%	30	0	0	0	0	0	0	0	30	30	0	0	0.0393701
Broomfield 3207	1200	100%	29	0	0	0	0	0	0	0	29	29	0	0	0.0393701
Boulder Jail	4550	100%	29	0	0	0	0	0	0	0	29	29	0	0	0.0393701
Mission Viejo Park	760	100%	27	0	0	0	0	0	0	0	27	27	0	0	0.0393701
Wx-Brighton	1920	100%	27	0	0	0	0	0	0	0	27	27	0	0	0.0393701
Pinewood Springs	4510	100%	21	0	0	0	0	0	0	0	21	21	0	0	0.0393701
Pine Brook	4170	100%	18	0	0	0	0	0	0	0	18	18	0	0	0.0393701
SPR at Union Ave.	1640	100%	13	0	0	0	0	0	0	0	13	13	0	0	0.0393701
Wx-Louisville Lake	4750	100%	10	0	0	0	0	0	0	0	10	10	0	0	0.0393701
Havana Park	500	100%	8	0	0	0	0	0	0	0	8	8	0	0	0.0393701
Genesee Village	2310	100%	6	0	0	0	0	0	0	0	6	6	0	0	0.0393701
		Total Tips	7924	447	73	13	6	9	16	8472	9164	701	29		
Newlin Gulch-A2	3070	45%	4	30	3	3	0	1	0	41	91	50	0	0.019685	
EPC at Hwy 105	3010	74%	98	21	6	4	0	0	1	129	174	45	0	0.01	
Porphyry Mtn	4850	81%	139	31	5	0	0	0	1	175	223	41	38	0.01	
Fairview Peak	4860	98%	141	3	0	0	0	0	0	144	147	3	7	0.01	
Four Mile Creek	5720	73%	47	13	4	1	0	0	0	65	89	24	0	0.0393701	
West Creek	5730	95%	52	3	0	0	0	0	0	55	58	3	0	0.0393701	
Trail Creek	5740	85%	29	2	2	0	0	0	0	33	39	6	0	0.0393701	
Stump Bump	5810	88%	44	7	0	0	0	0	0	51	58	7	0	0.0393701	
Cedar Mountain	5860	78%	16	4	1	0	0	0	0	21	27	6	0	0.0393701	
Hackett Mountain	5880	90%	24	3	0	0	0	0	0	27	30	3	0	0.0393701	
Horse Creek-Satellite	5900	91%	62	7	0	0	0	0	0	69	76	7	0	0.0393701	
Log Jumper	5940	70%	20	6	0	2	0	0	0	28	40	12	0	0.0393701	

2013 Monthly ALERT Radio Traffic Summary

