

Memo



Date: August 5, 2009
To: Kevin Stewart and Chad Kudym
From: Markus Ritsch
Subject: July 2009 ALERT Data Analysis

I. ALERT Data Source

Raw ALERT data records extracted from the Urban Drainage and Flood Control District's Nova Star 4.0 base station (ALERT 2) were analyzed for the period July 1 through July 31, 2009.

II. General System Analysis Summary

A total of 334,639 ALERT data reports were analyzed from the ALERT 2 base station. Meteorological sensors account for 72 percent, water level sensors 12 percent, and rain sensors 6 percent of the total monthly records.

The system-wide radio traffic loading was 10,795 reports per day with an average hourly loading of 450 reports. The peak hourly traffic loading was 1,474 reports, which occurred on July 20, between 11:00 PM and midnight. A plot of monthly average and peak hourly traffic loading is provided.

A. Specific Issues Identified this Month

The performance of the following sensors was unacceptable due to either poor timer performance, poor event performance, or due to the large number of invalid reports received.

Table 1. Rain Sensors with Unacceptable Performance Characteristics

ID	Description	Timer	Event	Invalid	Comments
2900	Russelville Gulch-Douglas	53.2	17.9	2	Install power amp in August
2970	Rampart Range Rd	61.3	77.6	2	Installed on June 19, marginal path to West Creek
2860	CC at Stroh Rd	71.0	67.4	3	Marginal path to Blue Mt.-modify radio for West Creek
2850	Cherry Cr bl Bayou Gulch	27.4	95.6	0	Installed new antenna system on July 24
2840	Sulphur Gulch	79.0	77.4	1	Marginal path to Blue Mt.-modify radio for West Creek
2820	Haskins Gulch Conf	38.7	53.8	5	Poor path to Blue Mt.-modify radio for West Creek
2810	Pine Cliff Road	16.1	72.2	6	Installed new antenna system on July 31
2270	Cub Cr below Blue	11.2	n/a	3	Only reported 5 days during the month
2350	Idledale	38.7	63.4	0	
1530	Bear Creek @ Lowell	30.6	69.7	2	
110	Ralston Reservoir	33.8	54.1	0	
2370	Red Rocks Park	37.0	56.0	0	
1640	SPR at union Ave.	17.0	61.7	0	
920	Aurora Town Hall Wx	56.4	76.8	3	
700	Toll Gate @ 6 th	45.1	79.0	0	
330	Van Bibber @ Hwy 93	66.1	78.2	4	
540	Parker/Mississippi	64.5	64.6	1	
1460	Urban Farm	43.5	75.0	1	
1350	Chatfield COE	25.8	56.0	1	
1810	Sand Creek at mouth	83.8	77.3	2	
2320	Choke Cherry Resvr	90.3	51.4	8	
2210	Hiwan G.C.	100.0	97.3	12	Performance seems good, why so many invalid reports????
2230	Bear Cr below Cub	72.6	93.1	6	Performance seems good, why so many invalid reports????

The sensors highlighted in yellow have shown poor timer/event performance over the past three (3) months.

III. Rain Sensor Timer Reporting Summary

The following analysis assumes that each rain sensor has a 12-hour timer-reporting interval. System-wide, the ALERT 2 base station received approximately 84 percent of the non-incrementing timer reports. The worst performing rain sensors for the month are summarized (Table 1).

Table 2. Monthly Summary of Sensors with Poor Timer Performance (Sensor ID)

Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2850	4030	2840	1360	1350	2900	2270					
1650	4200	1020	1640	2850	2270	2370					
1810	4490	1040	2270	2270	2850	2850					
4250	4520	1720	1600	410	410	1350					
4790	4790	1030	2850	540	540	1530					
4300	4020	1550	1350	2320	1350	110					

*-Timer statistics are skewed in these months because system start-up occurs and the Blue Mountain repeater was down. The network is operational by April 1.

Sensor ID 1460 and 700 have a 24-hour timer-reporting interval and Sensor ID 1810 and 1640 have an 18-hour timer-reporting interval.

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 3).

Table 3. District-Wide Total Tip/Count Statistical Summary

Statistical Parameter	Value	Comments
Mean	65	Only the 1-mm rain sensors were included in the analysis
Median	63	Only the 1-mm rain sensors were included in the analysis
Standard deviation	28.98	Only the 1-mm rain sensors were included in the analysis
Mean plus three standard deviations	151.60	Only the 1-mm rain sensors were included in the analysis
Minimum total count	18	Justice Center (ID 4360)
Maximum total count	186	Expo Park (ID 420) – Influenced by Lawn Irrigation

B. Monthly Average Tip/Count Summary

A monthly summary of the District-wide mean total tip/count is presented (Table 4).

Table 4. 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						

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 5).

Table 5. Sensors with a Jump of More than 6 in Sequential Count

Sensor Description	Sensor ID	Comment
Russelville Gulch	2900	Multiple jumps in tip count were observed throughout the month
Choke Cherry Reservoir	2320	Two jumps in tip count were observed throughout the month
Chatfield COE	1350	One jump in tip count exceeding 6 was observed during the month
Red Rocks Park	2370	One jump in tip count exceeding 6 was observed during the month
Indian Hills	2360	One jump in tip count exceeding 6 was observed during the month
Cold Spring Gulch Conf	2240	One jump in tip count exceeding 6 was observed during the month
Brighton Ditch Wx	1570	One jump in tip count exceeding 6 was observed during the month
CC at Stroh Road	2860	One jump in tip count exceeding 6 was observed during the month
Haskins Gulch	2820	One jump in tip count exceeding 6 was observed during the month
Shop Creek	1710	One jump in tip count exceeding 6 was observed during the month
Sand Creek at Colfax	860	One jump in tip count exceeding 6 was observed during the month
Marston Lake North	1520	One jump in tip count exceeding 6 was observed during the month

D. Sensor-by-Sensor Incrementing Count Summary

The system-wide reception rate of incrementing, 1-mm tip reports for the month was approximately 84.8 percent. A total of 9,048 incrementing reports were received and a total of 10,671 were expected. The total loss of incrementing reports for the month was approximately 15.21 percent. Those sensors with the worst event transmission performance are summarized (Table 6).

Table 6. Monthly Summary of Sensors with the Most Missed Tips

Jan	Feb*	Mar*	Apr**	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
140	4030	860	860	110	2900	2900					
4490	4470	840	840	1350	540	2320					
1420	4490	700	1640	2320	2320	2820					
4040	4110	2840	2850	2850	110	110					
4160	4510	1340	700	540	1350	1350					
4470	4790	920	1350	1810	2350	2370					

* - Event statistics are poor in February and March due to system start-up.

** - Poor event performance is evident at every station because the ALERT2 base station was unable to receive data for part of this month.

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

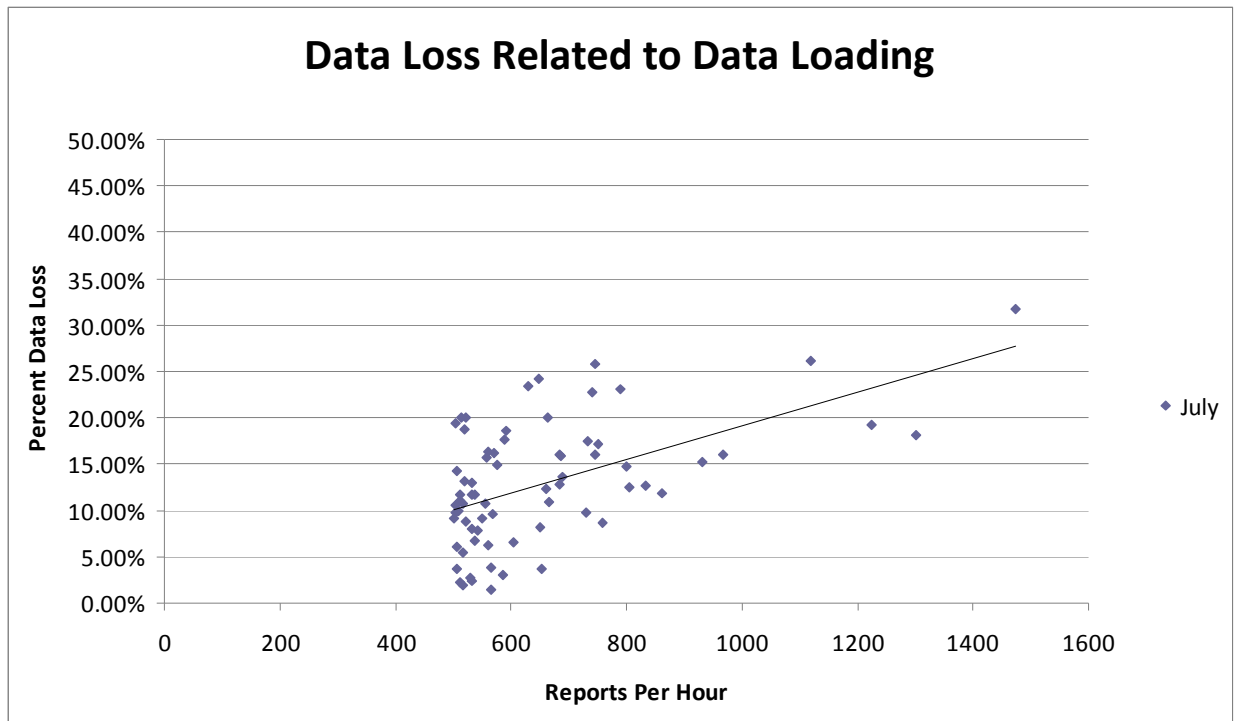
Periods exceeding 500 messages per hour are analyzed independently in an attempt to quantify data loss rates from rain sensors using the sequential tip count series.

A. The Heaviest Hourly Traffic Periods This Month

The hours of highest radio traffic this month include:

Peak Traffic Periods	Reports/hour	Hour Beginning
Peak Hourly Traffic	1,474	7/20/2009 11:00 PM
2nd Max	1,302	7/3/2009 5:00 PM
3rd Max	1,224	7/10/2009 9:00 PM
4th Max	1,118	7/20/2009 10:00 PM
5th Max	968	7/4/2009 5:00 PM

Each hour exceeding 500 reports was analyzed to quantify the number of missing rain reports for that hour. The following plot shows the data loss as a function of data loading.



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 7).

Table 7. Summary of Unknown IDs

Description	Quantity
Total number of unknown IDs (IDs without a device definition)	323
Total reports from unknown IDs	649
Unknown IDs with only a single received report (potential noise)	251
Total reports from all IDs – RecData Log entire month	334,639
Unknown reports as a fraction of total reports	0.19%

The total number of reports from unknown sensors is very small relative to the total reports received for the month.

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 8. Reports Received by Unknown IDs

Unknown Sensor ID	Reports
1815	55
1705	45
2275	17
2239	16
1811	13
1812	13
1639	13
2224	12
2215	11
1814	10
2216	10
4740	10
2272	8
2269	8
1657	7
2228	7
2219	6
2232	5
2238	5
2849	5
2222	5
2278	4
601	4
2217	3
4031	3
1478	3
910	3
2277	3
609	3
2229	3
2227	3
2237	3
119	3
4828	3
5017	3

2879	2
5711	2
1631	2
675	2
676	2
2828	2
767	2
4259	2
789	2
822	2
4087	2
4643	2
1319	2
759	2
1457	2
913	2
915	2
4037	2
959	2
1946	2
3007	2
1353	2
4091	2
611	2
2221	2
4742	2
4861	2
367	2
1927	2
1925	2
4768	2
7217	2
2202	2
4644	2
4766	2
621	2

The “unknown” device reports are analyzed temporally to understand when they are received during the day (Table 9). The goal of this analysis is to determine a pattern of occurrence that may correspond to a source of noise in the system, such as the use of a wireless microphone nearby.

Table 9. Temporal Distribution of Unknown Reports

Hour (AM)	Reports	Hour (PM)	Reports
0:00-00:59	18	12:00-12:59	27
1:00-1:59	30	1:00-1:59	30
2:00-2:59	31	2:00-2:59	42
3:00-3:59	14	3:00-3:59	32
4:00-4:59	18	4:00-4:59	49
5:00-5:59	9	5:00-5:59	30
6:00-6:59	10	6:00-6:59	29
7:00-7:59	15	7:00-7:59	30
8:00-8:59	19	8:00-8:59	21
9:00-9:59	46	9:00-9:59	53
10:00-10:59	24	10:00-10:59	22
11:00-11:59	26	11:00-11:59	24

VII. Reporting Issues Identified this Month

Precipitation sensors with a large number of invalid reports (bit flip/contention errors/random decode):

Sensor ID	Description	Reports
2210	Hiwan G.C.	12
2320	Choke Cherry Resvr	8
2230	Bear Cr below Cub	6
2810	Pine Cliff Road	6
2820	Haskins Gulch Conf	5
2240	Cold Sprg Glch conf	4
330	Van Bibber @ Hwy 93	4
5770	Lazy Gulch	4
4260	Taylor Mountain	4
2270	Cub Cr below Blue	3
920	Aurora Town Hall Wx	3
2860	CC at Stroh Rd	3
4770	Cal-Wood Ranch	3

Sensors reporting frequently (over reporting):

Description	Group	Sensor ID	Reports
Quincy Reservoir	Wind Gust	749	5269
Boulder Creek @ Broadway	Water Level PT-HSE	4583	2910
Green Ditch	Water Level PT-HSE	4593	2867

VIII. Rainfall Alarms and Intensity Analysis

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

Rainfall rate alarm	500	Havana Park	07/10/2009	21:21:04
Rainfall rate alarm	400	Montview Park	07/10/2009	21:20:34
Rainfall rate alarm	800	Sable Ditch @ 1	07/10/2009	21:20:04
Rainfall rate alarm	420	Expo Park	07/10/2009	21:19:34
Rainfall rate alarm	1800	Sand Creek Park	07/10/2009	21:18:26
Rainfall rate alarm	500	Havana Park	07/10/2009	21:15:36
Rainfall rate alarm	410	Kelly Dam	07/10/2009	21:15:16
Rainfall rate alarm	400	Montview Park	07/10/2009	21:14:40
Rainfall rate alarm	410	Kelly Dam	07/10/2009	21:14:40
Rainfall rate alarm	400	Montview Park	07/10/2009	21:09:15
Rainfall rate alarm	540	Parker/Mississi	07/10/2009	21:07:53
Rainfall rate alarm	530	Fire Station #1	07/10/2009	21:07:34
Rainfall rate alarm	410	Kelly Dam	07/10/2009	21:06:23
Rainfall rate alarm	1350	Chatfield COE	07/10/2009	21:05:12
Rainfall rate alarm	1530	Bear Creek @ Lo	07/10/2009	20:55:44
Rainfall rate alarm	1520	Marston Lake No	07/10/2009	20:50:53
Rainfall rate alarm	840	Fire Station 12	07/06/2009	17:43:31
Rainfall rate alarm	860	Sand Cr at Colf	07/06/2009	17:42:03
Rainfall rate alarm	840	Fire Station 12	07/06/2009	17:40:28
Rainfall rate alarm	860	Sand Cr at Colf	07/06/2009	17:36:24
Rainfall rate alarm	1460	Urban Farm	07/06/2009	17:29:38
Rainfall rate alarm	2810	Pine Cliff Road	07/04/2009	19:21:52
Rainfall rate alarm	2820	Haskins Gulch C	07/04/2009	17:54:12
Rainfall rate alarm	1110	Gunbarrel	07/04/2009	16:23:07
Rainfall rate alarm	4250	Geer Canyon	07/04/2009	15:59:57
Rainfall rate alarm	4860	Fairview Peak	07/04/2009	15:53:27
Rainfall rate alarm	4770	Cal-Wood Ranch	07/04/2009	15:49:41
Rainfall rate alarm	940	Sampson Gulch	07/03/2009	17:42:33
Rainfall rate alarm	1710	Shop Creek	07/03/2009	17:40:35
Rainfall rate alarm	950	Piney at Liverp	07/03/2009	17:38:38
Rainfall rate alarm	1710	Shop Creek	07/03/2009	17:29:35
Rainfall rate alarm	1360	Denver Zoo	07/03/2009	17:26:10
Rainfall rate alarm	640	Goldsmith @ Eas	07/03/2009	17:24:07
Rainfall rate alarm	650	Iliff Pond	07/03/2009	17:23:47
Rainfall rate alarm	630	Temple Pond at	07/03/2009	17:21:09
Rainfall rate alarm	610	Harvard @ Jacks	07/03/2009	17:19:35
Rainfall rate alarm	650	Iliff Pond	07/03/2009	17:17:35
Rainfall rate alarm	650	Iliff Pond	07/03/2009	17:15:44
Rainfall rate alarm	610	Harvard @ Jacks	07/03/2009	17:13:46
Rainfall rate alarm	1360	Denver Zoo	07/03/2009	17:07:59
Rainfall rate alarm	2370	Red Rocks Park	07/03/2009	16:55:46
Rainfall rate alarm	2370	Red Rocks Park	07/03/2009	16:50:21
Rainfall rate alarm	2350	Idledale	07/03/2009	16:49:52
Rainfall rate alarm	1060	Heritage Square	07/03/2009	16:48:40
Rainfall rate alarm	2240	Cold Sprg Glch	07/03/2009	16:46:51
Rainfall rate alarm	2350	Idledale	07/03/2009	16:43:51
Rainfall rate alarm	2240	Cold Sprg Glch	07/03/2009	16:42:11
Rainfall rate alarm	2310	Genesee Village	07/03/2009	16:37:55
Rainfall rate alarm	2320	Choke Cherry Re	07/03/2009	16:33:46
Rainfall rate alarm	2340	El Rancho	07/03/2009	16:27:41
Rainfall rate alarm	330	Van Bibber @ Hw	07/02/2009	16:27:36

The following rainfall intensity summary is presented to corroborate the rainfall rate alarms.

10 Minute Peak Intensities				
Station	Date	Tips	Inches	in/hr
1920	7/20/2009 10:33:33 PM	36	1.417	8.504
2820	7/20/2009 11:24:59 PM	30	1.181	7.087
840	7/6/2009 5:46:38 PM	29	1.142	6.850
860	7/6/2009 5:42:49 PM	25	0.984	5.906
2350	7/3/2009 4:50:38 PM	25	0.984	5.906
610	7/3/2009 5:18:37 PM	24	0.945	5.669
2370	7/3/2009 4:54:07 PM	23	0.906	5.433
2240	7/3/2009 4:46:49 PM	22	0.866	5.197
840	7/20/2009 11:07:20 PM	21	0.827	4.961
2710	7/20/2009 10:58:24 PM	21	0.827	4.961
400	7/20/2009 10:58:28 PM	20	0.787	4.724
2840	7/13/2009 2:30:22 PM	20	0.787	4.724
630	7/3/2009 5:26:08 PM	19	0.748	4.488
410	7/10/2009 9:09:17 PM	18	0.709	4.252
530	7/10/2009 9:09:59 PM	18	0.709	4.252
540	7/10/2009 9:11:25 PM	18	0.709	4.252
860	7/20/2009 11:10:34 PM	18	0.709	4.252
1810	7/20/2009 10:48:53 PM	18	0.709	4.252
2320	7/3/2009 4:35:09 PM	18	0.709	4.252
210	7/20/2009 10:21:31 PM	17	0.669	4.016
650	7/3/2009 5:23:02 PM	17	0.669	4.016
1000	7/20/2009 10:29:49 PM	17	0.669	4.016
1330	7/20/2009 10:53:25 PM	17	0.669	4.016
1360	7/20/2009 10:52:02 PM	17	0.669	4.016
1520	7/20/2009 10:43:54 PM	17	0.669	4.016
1710	7/20/2009 11:10:46 PM	17	0.669	4.016
4330	7/28/2009 8:50:29 PM	17	0.669	4.016
320	7/20/2009 10:22:01 PM	16	0.630	3.780
400	7/10/2009 9:11:14 PM	16	0.630	3.780
500	7/10/2009 9:13:50 PM	16	0.630	3.780
540	7/20/2009 10:56:46 PM	16	0.630	3.780
850	7/10/2009 9:25:03 PM	16	0.630	3.780
860	7/10/2009 9:24:16 PM	16	0.630	3.780
1420	7/20/2009 10:37:40 PM	16	0.630	3.780
1520	7/10/2009 8:52:01 PM	16	0.630	3.780
1550	7/20/2009 10:34:18 PM	16	0.630	3.780
1710	7/3/2009 5:33:22 PM	16	0.630	3.780
1800	7/10/2009 9:22:25 PM	16	0.630	3.780
2750	7/20/2009 11:36:27 PM	16	0.630	3.780
2930	7/21/2009 12:02:33 AM	16	0.630	3.780
4860	7/4/2009 3:55:51 PM	62	0.620	3.720
410	7/20/2009 10:57:40 PM	15	0.591	3.543
640	7/3/2009 5:26:31 PM	15	0.591	3.543
830	7/20/2009 11:19:18 PM	15	0.591	3.543
840	7/10/2009 9:30:09 PM	15	0.591	3.543
1440	7/11/2009 4:14:45 PM	15	0.591	3.543
1460	7/6/2009 5:31:33 PM	15	0.591	3.543

2340	7/3/2009 4:28:23 PM	15	0.591	3.543
5740	7/2/2009 5:06:03 PM	15	0.591	3.543
5810	7/4/2009 4:23:50 PM	15	0.591	3.543
420	7/10/2009 9:17:59 PM	14	0.551	3.307
720	7/20/2009 11:16:15 PM	14	0.551	3.307
730	7/20/2009 11:23:52 PM	14	0.551	3.307
800	7/10/2009 9:20:59 PM	14	0.551	3.307
850	7/20/2009 11:09:12 PM	14	0.551	3.307
1480	7/28/2009 10:02:00 PM	14	0.551	3.307
1530	7/10/2009 8:57:26 PM	14	0.551	3.307
2310	7/3/2009 4:38:39 PM	14	0.551	3.307
2940	7/11/2009 3:37:30 PM	14	0.551	3.307
4250	7/28/2009 8:54:32 PM	14	0.551	3.307
4770	7/4/2009 3:49:01 PM	14	0.551	3.307
5800	7/21/2009 3:20:45 PM	14	0.551	3.307
100	7/20/2009 10:24:42 PM	13	0.512	3.071
430	7/20/2009 11:04:45 PM	13	0.512	3.071
810	7/10/2009 9:19:33 PM	13	0.512	3.071
900	7/20/2009 11:26:15 PM	13	0.512	3.071
1060	7/3/2009 4:48:38 PM	13	0.512	3.071
1110	7/4/2009 4:23:06 PM	13	0.512	3.071
1350	7/10/2009 9:05:10 PM	13	0.512	3.071
1360	7/3/2009 5:07:57 PM	13	0.512	3.071
2920	7/21/2009 12:03:20 AM	13	0.512	3.071
2920	7/27/2009 4:49:19 PM	13	0.512	3.071
4250	7/4/2009 3:59:56 PM	13	0.512	3.071
4750	7/20/2009 10:01:24 PM	13	0.512	3.071

1 Hour Peak Intensities

Station	Date	Tips	Inches	
840	7/6/2009 6:29:59 PM	46	1.811	Possible 10-year, 1-hour event
1920	7/20/2009 10:41:25 PM	40	1.575	Possible 5-year, 1-hour event
2330	7/25/2009 9:09:56 PM	39	1.535	Possible 5-year, 1-hour event
2820	7/20/2009 11:37:39 PM	35	1.378	Possible 5-year, 1-hour event
410	7/10/2009 9:27:44 PM	33	1.299	Possible 2-year, 1-hour event
650	7/3/2009 5:35:06 PM	31	1.220	Possible 2-year, 1-hour event
860	7/6/2009 5:54:13 PM	31	1.220	Possible 2-year, 1-hour event
400	7/10/2009 9:29:31 PM	30	1.181	Possible 2-year, 1-hour event
500	7/10/2009 9:28:42 PM	30	1.181	Possible 2-year, 1-hour event
840	7/20/2009 11:15:44 PM	30	1.181	Possible 2-year, 1-hour event
610	7/3/2009 5:28:44 PM	29	1.142	Possible 2-year, 1-hour event
2350	7/3/2009 4:51:47 PM	29	1.142	Possible 2-year, 1-hour event
400	7/20/2009 11:07:56 PM	28	1.102	Possible 2-year, 1-hour event
860	7/20/2009 11:22:28 PM	28	1.102	Possible 2-year, 1-hour event
1360	7/3/2009 5:26:08 PM	28	1.102	Possible 2-year, 1-hour event
1520	7/25/2009 9:28:03 PM	28	1.102	Possible 2-year, 1-hour event
5770	7/21/2009 9:08:54 PM	28	1.102	Possible 2-year, 1-hour event
850	7/10/2009 9:43:03 PM	27	1.063	Possible 2-year, 1-hour event
1710	7/3/2009 5:42:02 PM	27	1.063	Possible 2-year, 1-hour event
2240	7/3/2009 4:47:25 PM	27	1.063	Possible 2-year, 1-hour event
2370	7/3/2009 4:58:56 PM	27	1.063	Possible 2-year, 1-hour event
2820	7/4/2009 6:19:21 PM	27	1.063	Possible 2-year, 1-hour event
2940	7/11/2009 3:59:25 PM	27	1.063	Possible 2-year, 1-hour event
530	7/10/2009 9:32:01 PM	26	1.024	Possible 2-year, 1-hour event
830	7/20/2009 11:35:15 PM	26	1.024	Possible 2-year, 1-hour event

General System Analysis

P:\A207-UDFCD-Data-Analysis\2009\07-2009\Novastar_extract_2009Jul.mdb

Database Name

First Date in Database

7/1/09 12:00 AM

Total Days

31.0

Last Date in Database

7/31/09 11:59 PM

Total Hours

744.0

Total Records Analyzed

334639

Records by Group

Wind Gust	54144	16%
Relative Humidity	51599	15%
Temperature	51309	15%
Water Level PT-HSE	29722	9%
Barometric Pressure	23267	7%
Precipitation	20883	6%
Wind Direction	20629	6%
Wind Speed Average	16625	5%
Wind Speed Average & Azimuth	15212	5%
Solar Radiation	9304	3%
Battery Voltage HSE	7616	2%
Water Level Float	5717	2%
Battery Voltage Digital	3843	1%
Battery Voltage Analog	3794	1%
Fuel Temperature	3685	1%
Fuel Moisture	3676	1%
Water Level PT	3259	1%
Soil Moisture	2851	1%
Battery	2172	1%
Repeater Status Report	1561	0%
Wing Gust	732	0%
Hayman Battery	643	0%
12Hr Status Report	635	0%
Repeater Pass List	612	0%
Battery Voltage	227	0%
Hayman Stage	118	0%
Handar 585 ALARM Status	78	0%
Water Level	72	0%
Solar Power	4	0%
Longmont Flow Gage	1	0%
Total	333990	

Records by Major Group

Meteorologic Sensors	242089	72%
Water Level Sensors	38699	12%
Rain Sensors	20883	6%
Sensor Status Transmissions	18143	5%
Soil and Fuel Sensors	10212	3%
Total	330026	

Traffic Loading Summary

Alert Reports	334639	
Average Daily Traffic	10795	
Average Hourly Traffic	450	
Median Hourly Traffic	434	hour beginning
Peak Hourly Traffic	1474	7/20/2009 11:00:00 PM
2nd Max	1302	7/3/2009 5:00:00 PM
3rd Max	1224	7/10/2009 9:00:00 PM
4th Max	1118	7/20/2009 10:00:00 PM
5th Max	968	7/4/2009 5:00:00 PM

Rain Timer Performance

Analyze Rain Sensors

n Timer Performance

Rain ID	Description	Rcv	Timer	Ave Exp	0.836645987 Performance
2270	Cub Cr below Blue	7	0:24	62.00	11%
2810	Pine Cliff Road	10	2:23	62.00	16%
1640	SPR at Union Ave.	7	18:00	41.00	17%
1350	Chatfield COE	16	15:33	62.00	26%
2850	Cherry Cr bl Bayou Glch	17	9:22	62.00	27%
1530	Bear Creek @ Lowell	19	12:52	62.00	31%
110	Ralston Reservoir	21	20:44	62.00	34%
2370	Red Rocks Park	23	11:56	62.00	37%
2350	Idledale	24	11:57	62.00	39%
2820	Haskins Gulch Conf	24	13:19	62.00	39%
1460	Urban Farm	27	1:29	62.00	44%
700	Toll Gate @ 6th	28	0:00	62.00	45%
2900	Russelville Gulch-Douglas	33	12:30	62.00	53%
2360	Indian Hills	33	17:24	62.00	53%
920	Aurora Town Hall Wx	35	16:54	62.00	56%
2970	Rampart Range Rd	38	16:19	62.00	61%
2250	Rosedale	39	15:45	62.00	63%
540	Parker/Mississippi	40	15:32	62.00	65%
330	Van Bibber @ Hwy 93	41	13:49	62.00	66%
310	Guy Hill Ranch	42	15:30	62.00	68%
1500	Powers Park	43	12:37	62.00	69%
2860	CC at Stroh Rd	44	15:03	62.00	71%
2230	Bear Cr below Cub	45	15:12	62.00	73%
4750	Louisville Lake	47	12:56	62.00	76%
1040	Lena @ U.S. Hwy 6	47	13:56	62.00	76%
1000	Maple Grove Resv.	47	13:59	62.00	76%
4240	Sunset	47	14:48	62.00	76%
1060	Heritage Square	48	13:29	62.00	77%
4850	Porphyry Mtn	48	13:52	62.00	77%
4570	St. Antons	48	16:06	62.00	77%
2840	Sulphur Gulch	49	12:18	62.00	79%
1440	Elbert	50	12:21	62.00	81%
210	Leyden Confluence	50	13:26	62.00	81%
1010	Denver West	50	13:41	62.00	81%
4140	Logan Mill	50	14:02	62.00	81%
4200	Lazy Acres	50	14:27	62.00	81%
4510	Pinewood Springs	51	12:51	62.00	82%
4330	Indian Ruins	51	12:54	62.00	82%
4530	Winiger Ridge	51	13:30	62.00	82%
4010	Crescent	51	13:32	62.00	82%
320	Sports Complex	51	13:37	62.00	82%
2710	Highlands Ranch WTP	52	12:17	62.00	84%
870	Murphy Creek GC	52	12:19	62.00	84%
1810	Sand Creek at mouth	52	12:46	62.00	84%
2240	Cold Sprg Glch conf	52	12:58	62.00	84%
100	Carr Street	52	13:02	62.00	84%
4060	Lakeshore	52	13:08	62.00	84%
4170	Pine Brook	52	13:34	62.00	84%
2990	Tomah Rd-Douglas Cnty	53	12:00	62.00	85%
2280	Kinney Peak	53	12:18	62.00	85%
600	Harvard Gulch Park	53	12:31	62.00	85%
1360	Denver Zoo	53	12:34	62.00	85%
4130	Swiss Peaks	53	12:35	62.00	85%
1550	Lakewood CC	53	12:44	62.00	85%

150	Nott Creek	53	12:53	62.00	85%
1340	Sanderson at Xavier	53	12:53	62.00	85%
2310	Genesee Village	53	13:10	62.00	85%
4180	Gold Lake	53	13:21	62.00	85%
4150	Gold Hill	53	13:27	62.00	85%
1520	Marston Lake North	54	12:00	62.00	87%
1400	Upper Sloan Det.	54	12:13	62.00	87%
630	Temple Pond at DTC	54	12:19	62.00	87%
4470	Little Narrows	54	12:29	62.00	87%
1600	Englewood Dam	54	12:33	62.00	87%
1480	Third Creek at DIA	54	12:46	62.00	87%
4860	Fairview Peak	54	12:58	62.00	87%
4790	Button Rock	54	13:04	62.00	87%
2930	Spring Valley Rd - DougCnty	54	13:15	62.00	87%
4090	Magnolia	54	13:19	62.00	87%
2340	El Rancho	55	11:57	62.00	89%
1570	Brighton Ditch Wx	55	12:00	62.00	89%
1370	West Metro FS13	55	12:16	62.00	89%
2940	Willow Creek - DougCnty	55	12:18	62.00	89%
1420	Diamond Hill	55	12:23	62.00	89%
1310	LDC at 64th	55	12:27	62.00	89%
300	Van Bibber Park	55	12:30	62.00	89%
4710	Ward C-1	55	12:34	62.00	89%
2960	Indian Creek	55	12:35	62.00	89%
4030	Red Garden	55	12:35	62.00	89%
1300	Hidden Lake	55	12:43	62.00	89%
1700	Cherry Cr @ Champa	55	12:50	62.00	89%
4360	Justice Center	55	13:08	62.00	89%
2320	Choke Cherry Resvr	112	5:29	124.00	90%
400	Montview Park	56	11:57	62.00	90%
4290	Red Hill	56	11:58	62.00	90%
2920	West Cherry Head-Douglas Cnty	56	12:00	62.00	90%
2910	East Cherry Cr-Douglas	56	12:00	62.00	90%
810	Granby Ditch @ 6th	56	12:12	62.00	90%
4830	SBC @ San Souci	56	12:13	62.00	90%
4840	SBC@S Boulder Ditch	56	12:13	62.00	90%
2750	Castle Rock	56	12:17	62.00	90%
830	Side Creek Park	56	12:30	62.00	90%
650	Iliff Pond	56	12:30	62.00	90%
4080	Twin Sisters	56	12:43	62.00	90%
200	Leyden Reservoir	56	12:46	62.00	90%
1710	Shop Creek	56	12:50	62.00	90%
4100	Filter Plant	56	13:02	62.00	90%
4810	Shanahan Ridge	56	13:03	62.00	90%
900	Aurora Reservoir	57	11:46	62.00	92%
2330	Morrison	57	11:57	62.00	92%
500	Havana Park	57	11:57	62.00	92%
2730	Salisbury Park	57	12:00	62.00	92%
840	Fire Station 12	57	12:00	62.00	92%
1320	SPR at 3rd Ave	57	12:06	62.00	92%
1050	Jeffco Fairgrounds	57	12:12	62.00	92%
1800	Sand Creek Park	57	12:12	62.00	92%
710	Horseshoe Park Drop	57	12:13	62.00	92%
1620	Slaughterhouse Glch	57	12:14	62.00	92%
4770	Cal-Wood Ranch	57	12:15	62.00	92%
2260	Brook Forest	57	12:15	62.00	92%
510	Virginia Court	57	12:16	62.00	92%
2980	Dakan Rd	57	12:17	62.00	92%
1660	SPR at Henderson	57	12:27	62.00	92%

1030	NREL/S. Table Mtn.	57	12:29	62.00	92%
640	Goldsmith @ Eastman	57	12:30	62.00	92%
1920	Brighton	57	12:30	62.00	92%
750	Quincy Reservoir	57	12:33	62.00	92%
4050	Walker Ranch	57	12:47	62.00	92%
4220	Fling's	57	13:00	62.00	92%
860	Sand Cr at Colfax	116	6:13	124.00	94%
940	Sampson Gulch	58	11:56	62.00	94%
1720	Cherry Cr @ Steele	58	11:57	62.00	94%
440	Fire Station #7	58	11:57	62.00	94%
4230	Golden Age	58	11:57	62.00	94%
970	Pump Sta 3	58	12:00	62.00	94%
1330	Roslyn	58	12:00	62.00	94%
2950	DC Public Works	58	12:00	62.00	94%
140	Blue Mountain	58	12:00	62.00	94%
220	Upper Leyden	58	12:00	62.00	94%
4250	Geer Canyon	58	12:12	62.00	94%
1110	Gunbarrel	58	12:12	62.00	94%
820	ETG @ Buckley	58	12:13	62.00	94%
730	No Name @ Quincy	58	12:14	62.00	94%
4190	Slaughterhouse	58	12:28	62.00	94%
4110	Betasso	58	12:29	62.00	94%
520	Jewell Detention	58	12:30	62.00	94%
610	Harvard @ Jackson	58	12:30	62.00	94%
4310	Johnny Park	58	12:32	62.00	94%
4490	Apple Valley	58	12:36	62.00	94%
4020	Rio Grande	58	12:45	62.00	94%
4350	Conifer Hill	58	12:48	62.00	94%
4040	Martin Gulch	59	11:58	62.00	95%
4300	Big Elk Park	59	11:58	62.00	95%
4520	Eagle Ridge	59	12:00	62.00	95%
620	Quincy/Highline	59	12:12	62.00	95%
4270	Cannon Mountain	59	12:12	62.00	95%
4340	Riverside	59	12:13	62.00	95%
410	Kelly Dam	59	12:13	62.00	95%
2190	Squaw Mountain	59	12:19	62.00	95%
4260	Taylor Mountain	59	12:27	62.00	95%
120	West Woods	60	11:57	62.00	97%
800	Sable Ditch @ 18th	60	11:57	62.00	97%
760	Mission Viejo Park	60	11:57	62.00	97%
1900	Niver Detention	60	11:58	62.00	97%
430	Utah Park	60	11:58	62.00	97%
720	Confluence Pond	60	11:58	62.00	97%
850	Flying J	60	12:00	62.00	97%
3020	West Creek WX	60	12:00	62.00	97%
530	Fire Station #19	60	12:11	62.00	97%
1100	Louisville Rec Ctr	60	12:12	62.00	97%
4550	Boulder Jail	60	12:12	62.00	97%
4160	Sunshine	60	12:13	62.00	97%
4070	Bear Peak	61	11:58	62.00	98%
1200	Broomfield 3207	61	11:58	62.00	98%
4820	Doudy Draw	61	12:11	62.00	98%
2210	Hiwan G.C.	62	11:26	62.00	100%
420	Expo Park	62	11:57	62.00	100%
4730	Sugarloaf	64	11:06	62.00	103%

Rain Event Performance				Analyze Rain Sensors										
		Reports Received	9,048											
	Systemwide Avg	Total Tips	10,671											
	84.8%	Data Loss	15.21%											
Rain ID	Performance	1-tips	2-tips	3-tips	4-tips	5-tips	6-tips	>6-tips	Rcv	Exp	Miss	Hold	Bucket	
2900	18%	6	3	2	0	0	2	6	19	106	87	0	0.0393701	
2320	51%	25	5	1	1	2	1	2	37	72	35	0	0.0393701	
2820	54%	36	9	4	2	1	3	1	56	104	48	0	0.0393701	
110	54%	8	1	3	0	1	0	0	13	24	11	0	0.0393701	
1350	56%	10	1	2	0	0	0	1	14	25	11	0	0.0393701	
2370	56%	14	6	1	0	1	0	1	23	41	18	0	0.0393701	
1570	62%	33	10	2	0	0	2	1	48	78	30	0	0.0393701	
1640	62%	13	5	2	0	1	0	0	21	34	13	0	0.0393701	
860	63%	44	13	7	2	0	0	1	67	106	39	0	0.0393701	
2350	63%	17	6	1	1	1	0	0	26	41	15	0	0.0393701	
2360	63%	26	3	1	0	2	0	1	33	52	19	0	0.0393701	
540	65%	35	11	3	4	0	0	0	53	82	29	0	0.0393701	
2860	67%	42	9	5	1	0	0	1	58	86	28	0	0.0393701	
1530	70%	22	4	3	1	0	0	0	30	43	13	0	0.0393701	
1520	70%	53	18	4	0	0	0	1	76	108	32	3	0.0393701	
1400	71%	33	8	3	0	1	0	0	45	63	18	0	0.0393701	
1340	72%	45	8	5	0	0	1	0	59	82	23	0	0.0393701	
1700	72%	31	4	2	1	1	0	0	39	54	15	0	0.0393701	
2810	72%	36	14	1	0	1	0	0	52	72	20	0	0.0393701	
840	73%	66	16	2	2	0	0	1	87	119	32	9	0.0393701	
1370	74%	32	6	3	1	0	0	0	42	57	15	0	0.0393701	
4750	74%	33	6	1	1	1	0	0	42	57	15	0	0.0393701	
640	74%	48	13	2	0	0	1	0	64	86	22	0	0.0393701	
1320	75%	36	13	2	0	0	0	0	51	68	17	0	0.0393701	
1460	75%	49	8	5	1	0	0	0	63	84	21	0	0.0393701	
1000	76%	36	8	2	1	0	0	0	47	62	15	2	0.0393701	
1480	76%	35	6	2	0	1	0	0	44	58	14	0	0.0393701	
320	76%	23	8	1	0	0	0	0	32	42	10	1	0.0393701	
920	77%	66	12	2	3	0	0	0	83	108	25	0	0.0393701	
2280	77%	46	7	2	2	0	0	0	57	74	17	0	0.0393701	
610	77%	60	8	5	0	1	0	0	74	96	22	0	0.0393701	
1920	77%	52	17	2	0	0	0	0	71	92	21	1	0.0393701	
1810	77%	26	7	0	1	0	0	0	34	44	10	0	0.0393701	
2840	77%	55	13	4	0	0	0	0	72	93	21	2	0.0393701	
2970	78%	53	8	4	1	0	0	0	66	85	19	0	0.0393701	
1030	78%	30	7	2	0	0	0	0	39	50	11	0	0.0393701	
2960	78%	46	8	1	2	0	0	0	57	73	16	0	0.0393701	
1360	78%	57	15	3	0	0	0	0	75	96	21	0	0.0393701	
330	78%	30	3	2	1	0	0	0	36	46	10	0	0.0393701	
700	79%	39	8	1	1	0	0	0	49	62	13	0	0.0393701	
1010	80%	34	7	2	0	0	0	0	43	54	11	0	0.0393701	
4330	80%	48	8	2	1	0	0	0	59	74	15	0	0.0393701	
4470	80%	23	3	2	0	0	0	0	28	35	7	0	0.0393701	
100	80%	29	5	2	0	0	0	0	36	45	9	0	0.0393701	
1420	80%	44	4	3	1	0	0	0	52	65	13	0	0.0393701	
1310	81%	29	3	1	1	0	0	0	34	42	8	0	0.0393701	
4270	81%	27	6	1	0	0	0	0	34	42	8	0	0.0393701	
2310	81%	41	8	2	0	0	0	0	51	63	12	0	0.0393701	
4530	82%	33	5	2	0	0	0	0	40	49	9	0	0.0393701	
800	82%	39	9	1	0	0	0	0	49	60	11	0	0.0393701	
1330	82%	41	5	3	0	0	0	0	49	60	11	0	0.0393701	
600	82%	50	6	2	1	0	0	0	59	72	13	0	0.0393701	
1040	82%	26	5	1	0	0	0	0	32	39	7	0	0.0393701	
1500	83%	89	10	3	2	0	0	0	104	126	22	0	0.0393701	
4520	83%	24	6	0	0	0	0	0	30	36	6	0	0.0393701	
1550	83%	54	10	0	1	0	0	0	65	78	13	0	0.0393701	
2710	83%	57	6	0	1	1	0	0	65	78	13	0	0.0393701	
2750	84%	54	3	3	1	0	0	0	61	73	12	0	0.0393701	
1060	84%	40	3	3	0	0	0	0	46	55	9	0	0.0393701	
210	84%	33	8	0	0	0	0	0	41	49	8	1	0.0393701	
1050	84%	25	6	0	0	0	0	0	31	37	6	0	0.0393701	
720	84%	49	7	2	0	0	0	0	58	69	11	0	0.0393701	
1900	84%	32	3	2	0	0	0	0	37	44	7	0	0.0393701	
1710	85%	72	14	1	0	0	0	1	88	104	16	1	0.0393701	
810	85%	61	9	2	0	0	0	0	72	85	13	0	0.0393701	
4090	85%	25	2	0	1	0	0	0	28	33	5	0	0.0393701	
730	86%	58	7	0	0	1	0	0	66	77	11	0	0.0393701	
2950	86%	64	5	2	1	0	0	0	72	84	12	0	0.0393701	
650	86%	72	10	2	0	0	0	0	84	98	14	0	0.0393701	
4510	86%	46	9	0	0	0	0	0	55	64	9	0	0.0393701	
4830	86%	27	3	1	0	0	0	0	31	36	5	0	0.0393701	
2250	86%	68	4	2	0	1	0	0	75	87	12	0	0.0393701	
830	86%	63	4	2	1	0	0	0	70	81	11	0	0.0393701	

2730	87%	63	6	1	1	0	0	0	71	82	11	0	0.0393701
1440	87%	90	12	2	0	0	0	0	104	120	16	0	0.0393701
400	87%	64	7	2	0	0	0	0	73	84	11	0	0.0393701
4130	87%	23	4	0	0	0	0	0	27	31	4	0	0.0393701
4310	87%	70	10	1	0	0	0	0	81	93	12	0	0.0393701
1600	88%	31	3	1	0	0	0	0	35	40	5	0	0.0393701
4790	88%	19	3	0	0	0	0	0	22	25	3	0	0.0393701
4710	88%	39	4	1	0	0	0	0	44	50	6	0	0.0393701
1300	88%	26	4	0	0	0	0	0	30	34	4	0	0.0393701
410	88%	66	8	1	0	0	0	0	75	85	10	0	0.0393701
900	88%	76	6	1	1	0	0	0	84	95	11	0	0.0393699
1800	89%	55	8	0	0	0	0	0	63	71	8	0	0.0393701
150	89%	49	7	0	0	0	0	0	56	63	7	0	0.0393701
850	89%	78	11	0	0	0	0	0	89	100	11	1	0.0393701
4730	89%	22	3	0	0	0	0	0	25	28	3	0	0.0393701
1660	90%	39	3	1	0	0	0	0	43	48	5	0	0.0393701
620	90%	56	5	1	0	0	0	0	62	69	7	0	0.0393701
4140	90%	24	3	0	0	0	0	0	27	30	3	0	0.0393701
510	90%	66	4	2	0	0	0	0	72	80	8	0	0.0393701
520	90%	59	4	0	1	0	0	0	64	71	7	0	0.0393701
140	90%	42	5	0	0	0	0	0	47	52	5	0	0.0393701
2240	91%	59	8	0	0	0	0	1	68	75	7	1	0.0393701
4290	91%	35	4	0	0	0	0	0	39	43	4	0	0.0393701
630	91%	115	13	0	0	0	0	0	128	141	13	0	0.0393701
870	91%	67	2	1	1	0	0	0	71	78	7	1	0.0393701
4160	91%	46	5	0	0	0	0	0	51	56	5	0	0.0393701
2920	91%	94	6	2	0	0	0	0	102	112	10	0	0.0393701
4220	91%	28	3	0	0	0	0	0	31	34	3	0	0.0393701
750	91%	56	6	0	0	0	0	0	62	68	6	0	0.0393701
4350	91%	47	5	0	0	0	0	0	52	57	5	0	0.0393701
2990	91%	106	7	2	0	0	0	0	115	126	11	0	0.0393701
4060	92%	30	3	0	0	0	0	0	33	36	3	0	0.0393701
4180	92%	30	3	0	0	0	0	0	33	36	3	0	0.0393701
500	92%	81	6	1	0	0	0	0	88	96	8	0	0.0393701
820	92%	61	6	0	0	0	0	0	67	73	6	0	0.0393701
4570	92%	31	3	0	0	0	0	0	34	37	3	0	0.0393701
310	92%	64	2	2	0	0	0	0	68	74	6	0	0.0393701
440	93%	57	5	0	0	0	0	0	62	67	5	0	0.0393701
710	93%	58	3	1	0	0	0	0	62	67	5	0	0.0393701
220	93%	35	3	0	0	0	0	0	38	41	3	0	0.0393701
4340	93%	35	3	0	0	0	0	0	38	41	3	0	0.0393701
530	93%	82	7	0	0	0	0	0	89	96	7	0	0.0393701
2230	93%	62	5	0	0	0	0	0	67	72	5	0	0.0393701
4240	93%	25	2	0	0	0	0	0	27	29	2	0	0.0393701
4010	93%	51	2	1	0	0	0	0	54	58	4	0	0.0393701
4150	93%	40	1	1	0	0	0	0	42	45	3	0	0.0393701
940	93%	106	6	1	0	0	0	0	113	121	8	0	0.0393699
2940	94%	121	9	0	0	0	0	0	130	139	9	0	0.0393701
2330	94%	68	5	0	0	0	0	0	73	78	5	0	0.0393701
760	94%	70	3	1	0	0	0	0	74	79	5	0	0.0393701
4100	94%	29	0	1	0	0	0	0	30	32	2	0	0.0393701
300	94%	42	3	0	0	0	0	0	45	48	3	0	0.0393701
3020	94%	88	6	0	0	0	0	0	94	100	6	0	0.0393701
420	95%	166	10	0	0	0	0	0	176	186	10	0	0.0393701
4020	95%	51	1	1	0	0	0	0	53	56	3	0	0.0393701
4820	95%	17	1	0	0	0	0	0	18	19	1	0	0.0393701
120	95%	34	2	0	0	0	0	0	36	38	2	0	0.0393701
430	95%	103	4	1	0	0	0	0	108	114	6	0	0.0393701
4840	95%	35	2	0	0	0	0	0	37	39	2	0	0.0393701
2340	95%	60	3	0	0	0	0	0	63	66	3	0	0.0393701
2910	95%	100	5	0	0	0	0	0	105	110	5	0	0.0393701
2850	96%	21	1	0	0	0	0	0	22	23	1	0	0.0393701
1720	96%	45	0	1	0	0	0	0	46	48	2	0	0.0393701
4250	96%	69	1	1	0	0	0	0	71	74	3	0	0.0393701
4030	96%	46	2	0	0	0	0	0	48	50	2	0	0.0393701
4040	96%	47	2	0	0	0	0	0	49	51	2	0	0.0393701
4170	96%	47	2	0	0	0	0	0	49	51	2	0	0.0393701
2930	96%	118	5	0	0	0	0	0	123	128	5	0	0.0393701
4050	97%	28	1	0	0	0	0	0	29	30	1	0	0.0393701
4080	97%	29	1	0	0	0	0	0	30	31	1	0	0.0393701
1620	97%	59	2	0	0	0	0	0	61	63	2	0	0.0393701
2260	97%	59	2	0	0	0	0	0	61	63	2	0	0.0393701
4110	97%	31	1	0	0	0	0	0	32	33	1	0	0.0393701
4190	97%	31	1	0	0	0	0	0	32	33	1	0	0.0393701
4230	97%	31	1	0	0	0	0	0	32	33	1	0	0.0393701
4550	97%	64	2	0	0	0	0	0	66	68	2	0	0.0393701
4200	97%	33	1	0	0	0	0	0	34	35	1	0	0.0393701

4810	97%	34	1	0	0	0	0	0	35	36	1	0	0.0393701
2210	97%	72	2	0	0	0	0	0	74	76	2	1	0.0393701
200	98%	40	1	0	0	0	0	0	41	42	1	0	0.0393701
4770	98%	40	1	0	0	0	0	0	41	42	1	0	0.0393701
970	98%	85	2	0	0	0	0	0	87	89	2	1	0.0393701
4300	98%	47	1	0	0	0	0	0	48	49	1	0	0.0393701
1100	98%	60	1	0	0	0	0	0	61	62	1	0	0.0393701
2190	99%	68	1	0	0	0	0	0	69	70	1	0	0.0393701
4490	100%	1	0	0	0	0	0	0	1	1	0	0	0.0393701
4360	100%	18	0	0	0	0	0	0	18	18	0	0	0.0393701
4260	100%	28	0	0	0	0	0	0	28	28	0	0	0.0393701
4070	100%	33	0	0	0	0	0	0	33	33	0	0	0.0393701
1200	100%	34	0	0	0	0	0	0	34	34	0	0	0.0393701
1110	100%	57	0	0	0	0	0	0	57	57	0	0	0.0393701
2980	100%	67	0	0	0	0	0	0	67	67	0	0	0.0393701
	Total Tips	7,908	866	181	46	18	10	19	9,048	10,671	1,623	25	

Monthly Traffic Loading

