Radar Rainfall Analysis
Toronto and Region Conservation Authority
Historical Rainfall Event
July 2013



Prepared for Toronto and Region Conservation Authority

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CERTIFICATION

Vieux and Associates, Inc. ensures that the Gauge Adjusted Radar Rainfall (GARR) values contained in this report are calculated based on the methodology described herein and are the result of a thorough analysis of meteorological data collected from both private and public sources. Our professionally trained hydrometeorologists employ a thorough quality-control and evaluation process, producing the most accurate and representative GARR over the defined study area. Vieux and Associates, Inc. reserves the right to amend reports at any time upon further review and/or discovery of additional data.



James Logan
Water Sector Leader

10/13/2026
Date

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Glossary

Average Difference (AD) – Average of the absolute percentage differences between the rain gauge data and uncalibrated radar data sampled over the gauges.

Bias Correction Factor – Bias is a systematic error that can be corrected through calibration. The correction factor is the sum of the gauges divided by the sum of the sampled radar values over the gauges.

Calibrated Average Difference (CAD) – Average of the absolute percentage differences between the rain gauges and local bias calibrated radar data sampled over the gauges.

Cumulative Distribution Plot (CDP) – A graph depicting the accumulation of a rain gauge and the unadjusted/adjusted radar over that gauge.

Decibels of Reflectance (dBZ) – The logarithmic scale for measuring radar reflectivity factor or a measure of reflectivity of a radar signal off a remote object.

Gauge Adjusted Radar Rainfall (GARR) – Bias corrected radar rainfall through comparison with rain gauges.

KBUF – Federal Communications Commission (FCC) call sign for the NEXRAD near Buffalo, NY.

Level II – The Level II radar products are the highest resolution, and consist of the base data that includes reflectivity measured in decibels of reflectance (dBZ) among Doppler velocity and spectrum width.

Level III – The Level III radar products are derivative products from Level II, and consist of horizontal and vertical reflectivity among other products.

Local Bias (LB) – An approach to adjusting radar rainfall that uses the ratio of gauge to radar accumulations from surrounding gauges, with the closest gauge having the most weight.

Minimum Storm Total Threshold (MSTT) – A check used to remove radar/gauge pairs whose cumulative radar and/or gauge values for a given event period were below 0.05 inches.

Next Generation RADAR (NEXRAD) – A network of S-band (10.5-cm wavelength) radars operated by the National Weather Service.

Radio Detection and Ranging (RADAR) – An electronic instrument used for the detection and ranging of distant objects of such composition that they scatter or reflect radio energy.

Radar-Gauge (RG) – A pair of rainfall accumulations measured by the rain gauge and the radar rainfall accumulation sampled above the gauge.

Z-R relationship – An empirical relationship between radar reflectivity factor Z ($mm^6\ m^{-3}$) and rain rate R ($mm\ hr^{-1}$). Radar reflectivity factor is dependent on the rain drop size distribution. [$Z = aR^b$, where a and b are empirically derived constants]

- **Convective** – generally used for convective (i.e. thunderstorms) rainfall [$Z = 300R^{1.4}$]

Overview

Vieux processed radar and rain gauge data for Toronto and Region Conservation Authority (TRCA). Radar and rain gauge data are quality controlled (QC) to produce QC gauge-adjusted radar rainfall (GARR) for a historical rainfall event that occurred on July 5 – 8, 2013. To produce QC GARR, both radar and rain gauge data are reviewed manually to remove inconsistent data. QC is performed to remove anomalous radar data and inconsistent rain gauges.

Radar data used in production of GARR is produced by the National Weather Service (NWS) Next Generation Radar (NEXRAD) system. NEXRAD Level II radar data are often referred to as Base Data and contain the full spatial/temporal/data resolution data from the radar. Level II radar data measures reflectivity in decibels of reflectance (dBZ), and at a spatial resolution of 0.5-degree by 0.25-km every 4 – 10 minutes with a data resolution of 0.5 dBZ amounting to 256 data levels of data. Level III Q0 radar data have the same data and temporal resolution, but a reduced spatial resolution of 1-degree by 1-km.

The primary radar data source used to process this period was Level II NEXRAD data from KBUF located near Buffalo, NY. The succession of data used gives priority to Level II followed by Level III products. If KBUF Level II NEXRAD data are unavailable, then KBUF Level III Q0 is substituted. In the event that all radar sources are unavailable or if the radar provides insufficient rainfall information, then a gauge-only product that spatially distributes point rainfall estimates is used. All radar data were processed into 5-minute increments.

Because the radar measures reflectivity in polar coordinates centered on the radar installation, the 1-degree azimuth increases in width as range increases from the radar. Range resolution of both Level II and III is 1-km and is measured out to 230-km from the radar. Due to the locations of KBUF in relation to the target area, the polar coordinates defining resolution range in width from 1.5 to 2.7-km. The radar data represented in these polar coordinates are sampled through spatial averaging into a Cartesian grid of uniform resolution, i.e. 1x1 km. An advantage of the Cartesian grid is that one radar can be substituted for the other without changing the grid resolution, as would be necessary if polar coordinates were used for output of rainfall information at 1x1 km spatial resolution. The Cartesian grid used is defined by a 1-km^2 grid domain shapefile produced by Vieux, Inc., resulting in 2961 1-km^2 pixels encompassing the watersheds provided by TRCA.

Rainfall data from as many as 114 gauges were used to adjust the radar: 35 City of Toronto, 32 TRCA, 7 York, 19 Region of Peel, 12 Markam, and 9 Mississauga. Figure 1 depicts the spatial distribution of the rain gauge network and the 1-km^2 pixels. For the gauges shown in Figure 1, the ID, name and source of each gauge is listed in Table 1. Radar data review, preparation and sampling the radar over the gauges and 1-km^2 pixels were achieved using software developed at Vieux, Inc.



Figure 1. Spatial Distribution of the Rain Gauge Network and the 1-km^2 Pixels.

Table 1. Rain Gauge ID, Name and Source

Gauge ID	Gauge Name	Source
HY002	Albion Hills	TRCA
HY003	Alex Duff Memorial Pool	TRCA
HY004	Bayly and Church	TRCA
HY008	Brickworks	TRCA
HY009	Brock West Landfill	TRCA
HY011	Bruces Mill CA	TRCA
HY012	Caledon Pumping Station	TRCA
HY015	Claremont Shop	TRCA
HY016	Danforth and Coxwell	TRCA
HY021	Dufferin Reservoir	TRCA
HY025	Etobicoke at QEW	TRCA
HY027	G Ross Dam	TRCA
HY030	Glen Haffy	TRCA
HY031	Goodwood Pumping Station	TRCA
HY033	Heart Lake CA	TRCA
HY036	Kennedy Pump Station	TRCA
HY037	King and Albion-Vaughan	TRCA

Gauge ID	Gauge Name	Source
HY038	East Humber at Mill Road	TRCA
HY039	Kortright	TRCA
HY041	Tullamore	TRCA
HY043	Little Rouge at 16th	TRCA
HY044	Milne Dam	TRCA
HY046	Mississauga Works Yard	TRCA
HY050	Morningside Works Yard	TRCA
HY055	Restoration Services	TRCA
HY060	Stouffville Dam	TRCA
HY061	Sue Grange Farm	TRCA
HY063	Transport Canada	TRCA
HY064	TRCA Head Office	TRCA
HY069	York Pumping Station	TRCA
HY070	York Region Works Yard	TRCA
HY102	Petticoat Works Yard	TRCA
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	Region of Peel
Caledon East RG	Caledon East	Region of Peel
Copper Road RG	Copper Road	Region of Peel
Mississauga RG	Mississauga	Region of Peel
RG 16	Hanlan	Region of Peel
RG 20	PEEL YORK ODOUR CONTROL	Region of Peel
RG 22	Bramalea	Region of Peel
RG 23	BRITANNIA LEACHATE PUMPING	Region of Peel
RG 25	RESERVOIR - BECKETT SPROULE	Region of Peel
RG 26	McLaughlin	Region of Peel
RG 27	RESERVOIR - WEST BRAMPTON	Region of Peel
RG 28	TANK - SNELGROVE	Region of Peel
RG 29	RESERVOIR - NORTH BRAMPTON	Region of Peel
RG 31	East Brampton Res	Region of Peel
RG 32	RESERVOIR - AIRPORT	Region of Peel
RG 33	CASTLEMORE SEWAGE PUMPING	Region of Peel
RG 34	MCVEAN SEWAGE PUMPING	Region of Peel
RG 39	Inglewood Pumping Stn	Region of Peel
RG 42	Caledon Reservoir	Region of Peel
STN 01	Fire Station #102	Mississauga
STN 03	Wolfdale Works Yard	Mississauga
STN 05	Winding Trail	Mississauga
STN 06	Mississauga Valley Community Centre	Mississauga
STN 08	Fire Station #116	Mississauga
STN 10	Fire Station #114	Mississauga

Gauge ID	Gauge Name	Source
STN 12	CVC Facility	Mississauga
STN 13	Fire Station #105	Mississauga
STN 14	Fire Station #104	Mississauga
TOR_RG-001	Swansea	City of Toronto
TOR_RG-002	Howard	City of Toronto
TOR_RG-003	Central	City of Toronto
TOR_RG-004	Brown	City of Toronto
TOR_RG-006	Church	City of Toronto
TOR_RG-007	Greenwood	City of Toronto
TOR_RG-012	Albion	City of Toronto
TOR_RG-013	Martin Grove	City of Toronto
TOR_RG-014	Richview	City of Toronto
TOR_RG-015	Bering	City of Toronto
TOR_RG-016	Kipling	City of Toronto
TOR_RG-017	Castlefield	City of Toronto
TOR_RG-018	Thorncliffe	City of Toronto
TOR_RG-019	Jane	City of Toronto
TOR_RG-020	Finch Yard	City of Toronto
TOR_RG-021	Emery Yard	City of Toronto
TOR_RG-022	Fire Station 116	City of Toronto
TOR_RG-023	Bermondsey Yard	City of Toronto
TOR_RG-024	Wilson	City of Toronto
TOR_RG-025	Ancaster	City of Toronto
TOR_RG-027	Mitchell Field	City of Toronto
TOR_RG-028	Cummer	City of Toronto
TOR_RG-030	Pharmacy/401	City of Toronto
TOR_RG-031	Liamoreaux	City of Toronto
TOR_RG-033	Nashdene Yard	City of Toronto
TOR_RG-034	Ellesmere Yard	City of Toronto
TOR_RG-035	Morningsidede Yard	City of Toronto
TOR_RG-036	Ashbridges Bay	City of Toronto
TOR_RG-037	Edwards Gardens	City of Toronto
TOR_RG-038	Fire Station 215	City of Toronto
TOR_RG-039	Mount Pleasant	City of Toronto
TOR_RG-040	Denton	City of Toronto
TOR_RG-041	Poplar	City of Toronto
TOR_RG-042	Seminole	City of Toronto
TOR_RG-044	Fire Station 121	City of Toronto
R_ET_MA03	2401 Denison St.	York
R_ET_NO01	65 Janet Ave.	York

Gauge ID	Gauge Name	Source
R_ET_VA01	4630 Langstaff Rd.	York
R_YR_AU02	242 St John's Sideroad	York
R_YR_MA03	7021 Leslie Street	York
R_YR_VA03	4738 Steeles Ave. W.	York
R_YR_VA04	2850 Rutherford Rd.	York
R-MUN-MA-05	Thornhill C.C.	Markham
R-MUN-MA-07	Stornoway P.S.	Markham
R-MUN-MA-09	Lincoln Alexander P.S.	Markham
R-MUN-MA-11	Milliken Mills C.C.	Markham
R-MUN-MA-12	Markham Museum	Markham
R-MUN-MA-13	Roy H Crosby P.S.	Markham
R-MUN-MA-14	8100 Warden Ave	Markham
R-MUN-MA-15	Rouge River C.C.	Markham
R-MUN-MA-16	Fire Hall #94	Markham
R-MUN-MA-18	Angus Glen C.C.	Markham
R-MUN-MA-21	Parkland P.S.	Markham
R-MUN-MA-22	11091 Warden Ave	Markham

The 114 rain gauges and the one NWS NEXRAD radars are used to produce gauge-adjusted radar rainfall (GARR). The methodology used in the production of GARR is described below followed by a metadata section.

Methodology

Statistical control of the data makes radar rainfall measurements more accurate. By statistical comparison between the radar and rain gauge accumulations during a GARR period, certain gauges may be identified as statistical outliers and excluded for all or part of an event. Radar data is enhanced by correcting it for systematic errors called bias, which helps improve the accuracy of the rainfall product. The bias correction factors are multiplicative factors applied to the radar that enhances the accuracy of the radar rainfall for any accumulation period. By adjusting the radar data with rain gauge data, better maps of rainfall are produced than either sensor system could produce alone.

In the production of GARR, radar rainfall is bias corrected through comparison with rain gauge accumulations. To the extent possible, individual gauges are combined to cover the target area for use in bias adjustment. The method of adjustment depends on the hydrologic application and the spatial extent of the area of interest. The local bias (LB) approach to adjusting the radar rainfall uses the ratio of gauge to radar accumulations from surrounding gauges with the closest gauge having the most weight. The LB approach distributes the variation of bias over the region, and is computed and applied within each event period.

The LB uses the ratio between the sum of each gauge divided by the sum of the sampled radar values over each gauge. Gauge and radar accumulations were computed for each event period. A minimum storm total threshold (MSTT) check was used to remove radar/gauge (RG) pairs whose

R or G cumulative values for a given event period were below a chosen threshold (i.e. 0.05 inches for this study). The remaining RG pairs were then checked for statistical outliers. Those RG pairs with individual bias (G/R) or average difference ((G-R)/G)) values greater than three standard deviations from the mean were then excluded from being used to adjust the radar.

After RG pairs have been removed on an event basis by either the MSTT, outlier check or gauge performance review, there must be at least three remaining RG pairs to proceed with gauge-adjustment of the radar. The individual biases of the remaining RG pairs are then distributed spatially over the analysis area using the LB weighted distance method. The resulting LB value over each radar bin is the multiplicative factor that adjusts the radar. For example, a bias of 1.5 can be interpreted as a 33% underestimation by the radar. The statistical measures reported are 1) average difference (AD) and 2) calibrated average difference (CAD). Both of these statistical measures are expressed as an absolute percentage about the mean of G/R accumulations for each event period. GARR is then spatially aggregated from the final adjusted radar bins to the 1-km^2 pixels using an area-averaged technique.

After bias correction, differences between rain gauge and radar rainfall accumulations can still exist due to sampling differences or local meteorological conditions among other reasons. A major reason for departures is that radar collects data by averaging reflectivity over a 1-degree by 1-km sample volume, while rain gauges measure at a point. Another source of difference is that radar measures above the ground, while rain gauges measure close to the ground. Further, updrafts and downdrafts during storms can decrease or increase rain rates, respectively. However, radar cannot detect local wind effects, while rain gauges can be affected. Differences between the radar data and the rain gauge data are also affected by precipitation processes associated with the type of storm, which also are affected by the season of the year.

Relatively large calibrated average differences should not necessarily be interpreted as evidence that the GARR results are unreliable, particularly when gauge accumulations are small. Because radar precipitation is spatially averaged while rain gauges provide rainfall information at a point location, differences between the two are expected and can be substantial at times even when the GARR still provides a reasonable representation of precipitation across an area.

In addition, the local bias calibration approach limits the influence of localized radar–gauge differences on the results by accounting for spatially varying differences rather than allowing individual poor matches to affect the overall calibration. Therefore, large differences at individual locations can coexist with satisfactory overall performance of the GARR product.

Any additional details regarding the methodology are considered proprietary and will not be included in this report.

Metadata

Data accompanying this document provides a continuous rainfall record of the 2961 1-km^2 pixels for the following periods:

2013/07/05 03:05 EST - 2013/07/09 05:00 EST

The data is provided Excel format. A shapefile of the 1-km^2 pixels is located in the Shapefiles subfolder. The data file documentation follows:

Excel metadata:

- Excel file with IDs across the columns and time down the rows.
- Time stamps are in EST.
- Data values represent 5-min accumulation (mm) at end of interval.
- The pixel ID uses the "ID" field from the 1-km pixel shapefile.

Shapefile metadata:

- UTM 1983, Zone 17 (meters)

Gauge-Adjusted Radar Rainfall (GARR)

GARR was processed continuously at five-minute increments and covers the period from 2013-07-05 03:00 EST to 2013-07-09 05:00 EST. The GARR statistics for the event are listed in Table 2. The event was split into multiple sub-event periods to improve gauge-adjustment of the radar, resulting in a total of thirteen event and sub-event periods. The events that were split into multiple periods are shown in the **Event#** column with the letter "a", "b", "c", etc. appended to the event number (e.g., E1a, E1b, E1c). The **Source** column shows what rainfall source was used to produce GARR for each event or sub-event period. The listed **Event Date** shown in Table 2 corresponds to the day or portion of the day when most of the rainfall occurred for that GARR event period. Rainfall events are discussed in more detail in the following Events section.

The **Bias** value shown in Table 2 is the sum of the gauges divided by the sum of the sampled radar values over the gauges. Those rain events with the lowest CAD values shown in Table 2 represent the best agreement between GARR and gauge values for all radar/gauge pairs used to adjust the radar. On average, lower values of CAD imply higher statistical confidence in the reliability of the dataset. Typically, stratiform rainfall events (i.e., low spatial variability) have lower CAD values than convective rainfall events (i.e., high spatial variability).

Table 2. Storm Events and GARR Statistics

Event #	Source	Event Date	Start Time (EST)	End Time (EST)	Gauges Used (114)	Avg. Depth (mm)	Bias	AD (%)	CAD (%)
E1a	KBUF LII	2013-07-08	2013-07-05 03:05	2013-07-05 10:15	76	2.382	1.292	21.6	7.3
E1b	KBUF LII	2013-07-08	2013-07-05 10:20	2013-07-05 12:45	74	6.875	1.514	33.5	7.6
E1c	KBUF LII	2013-07-08	2013-07-05 12:50	2013-07-06 00:00	67	3.580	1.698	40.2	8.0
E1d	KBUF LII	2013-07-08	2013-07-06 00:05	2013-07-07 03:30	85	2.305	0.968	20.1	6.6
E1e	KBUF LII	2013-07-08	2013-07-07 03:35	2013-07-07 13:00	25	2.140	1.696	42.9	1.9
E1f	KBUF LII	2013-07-08	2013-07-07 13:05	2013-07-07 16:00	47	5.158	1.283	31.4	11.0
E1g	KBUF LII	2013-07-08	2013-07-07 16:05	2013-07-07 17:15	42	2.879	1.619	35.8	11.6
E1h	KBUF LII	2013-07-08	2013-07-07 17:20	2013-07-07 19:45	51	2.745	1.469	31.8	10.7
E1i	KBUF LII	2013-07-08	2013-07-07 19:50	2013-07-08 09:00	21	0.930	1.258	20.8	6.1
E1j	KBUF LII	2013-07-08	2013-07-08 09:05	2013-07-08 16:45	88	21.320	1.032	28.2	9.7

Event #	Source	Event Date	Start Time (EST)	End Time (EST)	Gauges Used (114)	Avg. Depth (mm)	Bias	AD (%)	CAD (%)
E1k	KBUF LII	2013-07-08	2013-07-08 16:50	2013-07-08 17:30	74	8.230	1.076	16.9	8.3
E1l	KBUF LII	2013-07-08	2013-07-08 17:35	2013-07-08 19:45	99	10.198	0.895	39.1	6.7
E1m	KBUF LII	2013-07-08	2013-07-08 19:50	2013-07-09 05:00	101	3.573	0.569	81.9	6.0

Statistical review of the data can provide an indication of data quality. Depending on the quality of the radar and gauge data, CAD values for individual events less than 10% are considered excellent, 10 - 20% are considered good, and 20 - 30% are considered fair. However, CAD may not serve as a reliable indicator of data quality when abrupt changes in bias occur within the analysis period, particularly when compensating over- and under-estimation results due to using an assumed Z-R relationship throughout the period while atmospheric conditions merit different Z-R coefficients. The effects from abrupt changes in Z-R are mitigated by splitting the event periods.

Rain gauges were analyzed to identify those that were not consistent with the radar or surrounding gauges. Cumulative Distribution Plots (CDPs) at each gauge location showing gauge, unadjusted radar and GARR values were produced for each rainfall event and are presented in Appendix C. CDPs are useful for visualizing rain gauge performance. Figure 2 shows the rainfall accumulation at the Richview (TOR_RG-014) gauge during the 2013-07-08 event as measured by the gauge (green), unadjusted radar (blue), and gauge-adjusted radar (red). Rain gauges that are not performing consistently with the radar or surrounding gauges have characteristics such as clogs, synchronization or other mechanical/transmission malfunctions that can be visually identified in the CDP graph.

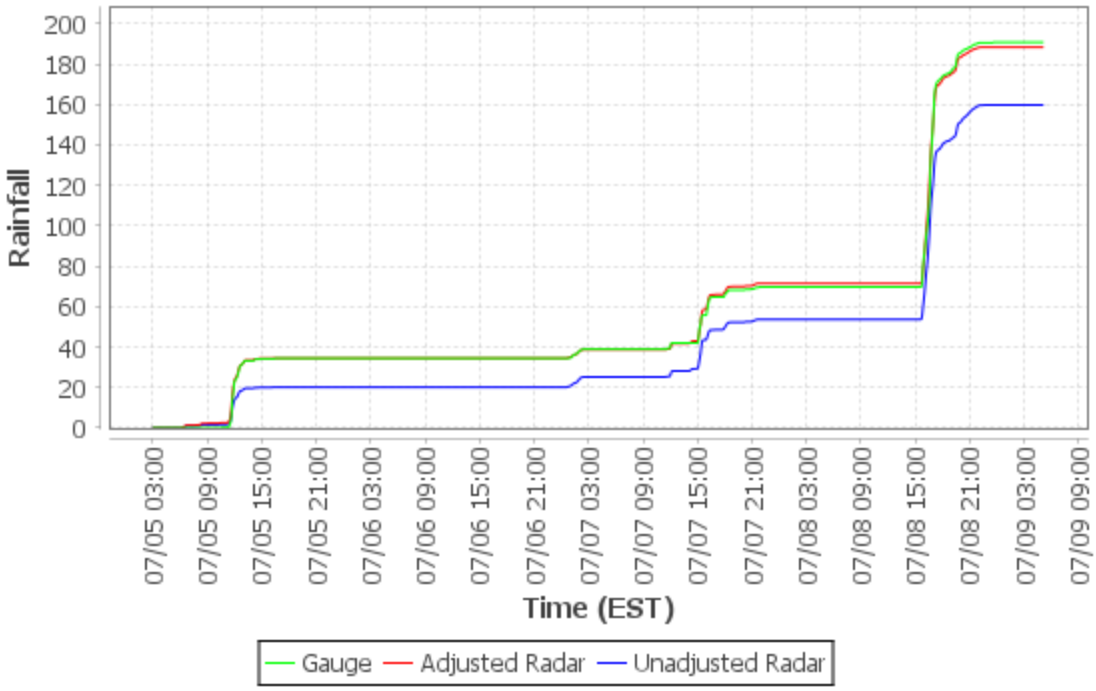


Figure 2. CDP Showing Rain Gauge Versus Unadjusted Radar Versus GARR

Reasons for not using gauges in rainfall analysis include clogs, significant under- or over-reporting of rainfall, gauges that stop reporting during rainfall, or a combination of these reasons. A list of possible reasons for not using a gauge based on CDP analysis is shown in Table 3. Those gauges that were excluded from analysis based on gauge performance are shown in Appendix A. Additional gauges were not used to adjust the radar for a given event or sub-event period if they did not meet the statistical criteria outlined in the Methodology section. A list of reasons for not using a gauge based on statistical criteria is shown in Table 4. The gauges listed in Appendix B did not meet statistical criteria for gauge-adjustment of the radar and were not used to adjust the radar.

Table 3. Reasons for Gauge Exclusion Based on Performance

Reason	Explanation
Clog (C)	Gauge appeared to be clogged
Zero (Z)	Gauge did not report any rainfall while radar rainfall estimates reported significant rainfall
Stop (S)	Gauge appeared to stop reporting rainfall while radar rainfall estimates reported significant rainfall
Over (O)	Gauge appeared to significantly over-report rainfall as compared to radar rainfall estimates and surrounding gauges (e.g. anomalously high rainfall values caused by field calibration, data transmission error, or switch malfunctions)
Under (U)	Gauge appeared to significantly under-report as compared to radar rainfall estimates and surrounding Gauges (e.g. half-tipper)
Sync (SY)	Gauge appeared to be reporting out-of-sync with the radar rainfall estimates
Frozen/Melt (F/M)	Gauge not reporting properly due to frozen or melting precipitation
Other (T)	Combination of multiple reasons
No Data (ND)	Gauge reported "no data" for a significant amount of time

Table 4. Reasons for Gauge Exclusion Based on Statistical Criteria

Reason	Explanation
Minimum Storm Total Threshold (MSTT)	The radar or gauge cumulative sum during the event or sub-event period was less than MSTT
Outlier Based on Mean Field Bias (OMFB)	The RG pair bias (G/R) was greater than three standard deviations from the mean bias (e.g. G>>R)
Outlier Based on Average Difference (OAD)	The RG pair average difference ((G-R)/G)) was greater than three standard deviations from the mean average difference (e.g. G<<R)

A synopsis for each event is described below in terms of the specific processing protocol applied to each event period as well as specific GARR information.

Events

Event 1: 2013-07-08

The analysis period was from 2013-07-05 03:00 EST to 2013-07-09 05:00 EST. The event was then split into thirteen sub-event periods at 2013-07-05 10:15 EST, 2013-07-05 12:45 EST, 2013-07-06 00:00 EST, 2013-07-07 03:30 EST, 2013-07-07 13:00 EST, 2013-07-07 16:00 EST, 2013-07-07 17:15 EST, 2013-07-07 19:45 EST, 2013-07-08 09:00 EST, 2013-07-08 16:45 EST, 2013-07-08 17:30 EST and 2013-07-08 19:45 EST to improve gauge adjustment of the radar.

The gauges listed in Appendix A were not used to adjust the radar due to inconsistencies between the gauge and the radar or surrounding gauges, or they did not have data available for this event. The gauges listed in Appendix B were not used to adjust the radar since they did not meet statistical criteria for gauge-adjustment.

A convective Z-R relationship was used to convert radar reflectivity to rainfall rates. Table 5 shows the mean bias and average depth of the event along with the AD and CAD, respectively. Tables 6 - 18 summarize the results for each RG pair used for final radar adjustment, where G_i is the gauge estimate, R_i is the non-adjusted radar estimate, R_i* is the GARR estimate, and Diff* (%) is the percent difference between the gauge and GARR estimate. Those gauges not used to adjust the radar are shown at the bottom of the table and are highlighted in red. The specific reason for gauge exclusion is displayed in the Flag column. Figures 3 - 15 show the scatter plots of the gauge-adjusted RG pairs. Those gauges not used to adjust the radar are shown in red. Figure 16 depicts the GARR storm total over the 1-km^2 pixels. The GARR amounts for the 2961 1-km^2 pixels range from 11.8 - 202.3 millimeters with a mean of 72.3 millimeters.

Table 5. GARR Statistics for Event 1

Event #	Radar	Event Date	Start Time (EST)	End Time (EST)	Gauges Used (114)	Avg. Depth (mm)	Bias	AD (%)	CAD (%)
E1a	KBUF LII	2013-07-08	2013-07-05 03:05	2013-07-05 10:15	76	2.382	1.292	21.6	7.3
E1b	KBUF LII	2013-07-08	2013-07-05 10:20	2013-07-05 12:45	74	6.875	1.514	33.5	7.6
E1c	KBUF LII	2013-07-08	2013-07-05 12:50	2013-07-06 00:00	67	3.580	1.698	40.2	8.0
E1d	KBUF LII	2013-07-08	2013-07-06 00:05	2013-07-07 03:30	85	2.305	0.968	20.1	6.6
E1e	KBUF LII	2013-07-08	2013-07-07 03:35	2013-07-07 13:00	25	2.140	1.696	42.9	1.9
E1f	KBUF LII	2013-07-08	2013-07-07 13:05	2013-07-07 16:00	47	5.158	1.283	31.4	11.0
E1g	KBUF LII	2013-07-08	2013-07-07 16:05	2013-07-07 17:15	42	2.879	1.619	35.8	11.6
E1h	KBUF LII	2013-07-08	2013-07-07 17:20	2013-07-07 19:45	51	2.745	1.469	31.8	10.7
E1i	KBUF LII	2013-07-08	2013-07-07 19:50	2013-07-08 09:00	21	0.930	1.258	20.8	6.1
E1j	KBUF LII	2013-07-08	2013-07-08 09:05	2013-07-08 16:45	88	21.320	1.032	28.2	9.7
E1k	KBUF LII	2013-07-08	2013-07-08 16:50	2013-07-08 17:30	74	8.230	1.076	16.9	8.3
E1l	KBUF LII	2013-07-08	2013-07-08 17:35	2013-07-08 19:45	99	10.198	0.895	39.1	6.7
E1m	KBUF LII	2013-07-08	2013-07-08 19:50	2013-07-09 05:00	101	3.573	0.569	81.9	6.0

Table 6. Summary of Individual RG Pairs for Event 1a

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 22	Bramalea	2.50	2.26	3.07	-0.57	-22.8	
TOR_RG-028	Cummer	1.50	1.70	1.82	-0.32	-21.3	
TOR_RG-021	Emery Yard	1.75	1.86	2.12	-0.37	-21.1	
TOR_RG-023	Bermondsey Yard	1.50	1.52	1.80	-0.30	-20.0	
STN 13	Fire Station #105	3.00	2.88	3.56	-0.56	-18.7	
HY033	Heart Lake CA	3.20	2.46	3.76	-0.56	-17.5	
R-MUN-MA-13	Roy H Crosby P.S.	1.40	1.36	1.64	-0.24	-17.1	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-003	Central	1.50	1.27	1.71	-0.21	-14.0	
R_ET_NO01	65 Janet Ave.	1.40	1.56	1.58	-0.18	-12.9	
TOR_RG-024	Wilson	1.75	1.75	1.95	-0.20	-11.4	
HY046	Mississauga Works Yard	3.00	2.58	3.34	-0.34	-11.3	
STN 08	Fire Station #116	2.60	2.16	2.89	-0.29	-11.2	
HY008	Brickworks	2.00	1.52	2.22	-0.22	-11.0	
STN 06	Mississauga Valley Community Centre	2.20	1.94	2.40	-0.20	-9.1	
TOR_RG-031	Liamoreaux	2.00	1.79	2.17	-0.17	-8.5	
HY039	Kortright	1.80	1.63	1.94	-0.14	-7.8	
STN 05	Winding Trail	2.20	1.81	2.37	-0.17	-7.7	
HY041	Tullamore	2.00	1.84	2.15	-0.15	-7.5	
TOR_RG-027	Mitchell Field	1.78	1.54	1.91	-0.13	-7.3	
Mississauga RG	Mississauga	2.79	1.91	2.96	-0.17	-6.1	
R_ET_MA03	2401 Denison St.	1.80	1.56	1.91	-0.11	-6.1	
HY012	Caledon Pumping Station	3.20	3.17	3.38	-0.18	-5.6	
HY102	Petticoat Works Yard	1.60	1.50	1.69	-0.09	-5.6	
TOR_RG-040	Denton	2.50	1.89	2.62	-0.12	-4.8	
TOR_RG-041	Poplar	1.75	1.62	1.83	-0.08	-4.6	
HY064	TRCA Head Office	1.80	1.64	1.88	-0.08	-4.4	
HY021	Dufferin Reservoir	2.30	1.96	2.40	-0.10	-4.3	
HY050	Morningside Works Yard	1.40	1.29	1.46	-0.06	-4.3	
STN 10	Fire Station #114	2.80	2.11	2.89	-0.09	-3.2	
RG 28	TANK - SNELGROVE	3.25	2.19	3.35	-0.10	-3.1	
TOR_RG-007	Greenwood	2.75	1.83	2.82	-0.07	-2.5	
TOR_RG-016	Kipling	2.75	1.80	2.82	-0.07	-2.5	
HY061	Sue Grange Farm	3.00	2.17	3.06	-0.06	-2.0	
RG 33	CASTLEMORE SEWAGE PUMPING	2.50	2.14	2.54	-0.04	-1.6	
TOR_RG-017	Castlefield	3.00	2.06	3.04	-0.04	-1.3	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	1.52	1.46	1.53	-0.01	-0.7	
HY002	Albion Hills	4.70	4.63	4.72	-0.02	-0.4	
HY030	Glen Haffy	5.60	6.49	5.61	-0.01	-0.2	
HY015	Claremont Shop	1.60	1.30	1.60	0.00	0.0	
TOR_RG-025	Ancaster	2.00	1.65	2.00	0.00	0.0	
RG 42	Caledon Reservoir	11.50	8.15	11.48	0.02	0.2	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R-MUN-MA-05	Thornhill C.C.	1.52	1.47	1.51	0.01	0.7	
HY004	Bayly and Church	2.00	1.35	1.98	0.02	1.0	
HY037	King and Albion-Vaughan	1.60	1.51	1.58	0.02	1.3	
RG 39	Inglewood Pumping Stn	4.50	3.03	4.44	0.06	1.3	
HY055	Restoration Services	2.00	1.64	1.97	0.03	1.5	
RG 31	East Brampton Res	3.25	2.27	3.20	0.05	1.5	
RG 25	RESERVOIR - BECKETT SPROULE	3.25	2.25	3.18	0.07	2.2	
TOR_RG-015	Bering	3.25	2.02	3.18	0.07	2.2	
R_ET_VA01	4630 Langstaff Rd.	3.00	2.32	2.88	0.12	4.0	
TOR_RG-042	Seminole	1.75	1.36	1.68	0.07	4.0	
STN 12	CVC Facility	4.60	2.72	4.38	0.22	4.8	
HY027	G Ross Dam	2.20	1.66	2.09	0.11	5.0	
HY036	Kennedy Pump Station	2.20	1.72	2.09	0.11	5.0	
Caledon East RG	Caledon East	3.56	3.17	3.38	0.18	5.1	
TOR_RG-012	Albion	2.50	1.94	2.36	0.14	5.6	
STN 01	Fire Station #102	3.20	1.95	3.01	0.19	5.9	
TOR_RG-019	Jane	2.00	1.66	1.88	0.12	6.0	
R_YR_VA04	2850 Rutherford Rd.	3.40	2.42	3.19	0.21	6.2	
TOR_RG-001	Swansea	2.25	1.34	2.10	0.15	6.7	
HY025	Etobicoke at QEW	3.20	1.95	2.98	0.22	6.9	
TOR_RG-013	Martin Grove	2.75	1.83	2.56	0.19	6.9	
TOR_RG-006	Church	2.25	1.45	2.08	0.17	7.6	
RG 26	McLaughlin	4.00	2.04	3.69	0.31	7.8	
R_YR_VA03	4738 Steeles Ave. W.	3.00	2.28	2.75	0.25	8.3	
RG 16	Hanlan	3.00	2.02	2.74	0.26	8.7	
HY038	East Humber at Mill Road	2.00	1.65	1.82	0.18	9.0	
TOR_RG-044	Fire Station 121	3.00	2.02	2.73	0.27	9.0	
TOR_RG-038	Fire Station 215	2.25	1.68	2.04	0.21	9.3	
TOR_RG-022	Fire Station 116	2.50	1.81	2.26	0.24	9.6	
Copper Road RG	Copper Road	3.78	2.48	3.41	0.37	9.8	
R-MUN-MA-11	Milliken Mills C.C.	2.00	1.45	1.79	0.21	10.5	
R-MUN-MA-15	Rouge River C.C.	2.25	1.55	2.00	0.25	11.1	
HY016	Danforth and Coxwell	3.20	1.79	2.72	0.48	15.0	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 29	RESERVOIR - NORTH BRAMPTON	4.00	2.08	3.32	0.68	17.0	
RG 20	PEEL YORK ODOUR CONTROL	4.00	2.44	3.28	0.72	18.0	
HY003	Alex Duff Memorial Pool	1.20	---	---	---	---	MSTT
HY009	Brock West Landfill	1.20	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.80	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	0.60	---	---	---	---	MSTT
HY043	Little Rouge at 16th	1.00	---	---	---	---	MSTT
HY044	Milne Dam	1.20	---	---	---	---	MSTT
HY060	Stouffville Dam	0.80	---	---	---	---	MSTT
HY063	Transport Canada	1.20	---	---	---	---	MSTT
HY069	York Pumping Station	1.20	---	---	---	---	MSTT
HY070	York Region Works Yard	1.20	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	1.20	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	0.25	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	1.00	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	1.00	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	1.00	---	---	---	---	MSTT
R-MUN-MA-18	Angus Glen C.C.	0.75	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	3.75	---	---	---	---	O
RG 27	RESERVOIR - WEST BRAMPTON	1.75	---	---	---	---	S
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 34	MCVEAN SEWAGE PUMPING	0.00	---	---	---	---	Z
R_YR_AU02	242 St John's Sideroad	1.00	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	1.20	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
STN 14	Fire Station #104	0.00	---	---	---	---	Z
TOR_RG-002	Howard	1.50	---	---	---	---	MSTT
TOR_RG-004	Brown	1.25	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-014	Richview	0.00	---	---	---	---	Z
TOR_RG-018	Thorncliffe	0.25	---	---	---	---	S
TOR_RG-020	Finch Yard	0.00	---	---	---	---	Z
TOR_RG-030	Pharmacy/401	1.00	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	1.25	---	---	---	---	MSTT
TOR_RG-034	Ellesmere Yard	0.75	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	1.00	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-037	Edwards Gardens	1.00	---	---	---	---	MSTT
TOR_RG-039	Mount Pleasant	1.25	---	---	---	---	MSTT

Table 7. Summary of Individual RG Pairs for Event 1b

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-016	Kipling	3.50	5.43	5.29	-1.79	-51.1	
TOR_RG-037	Edwards Gardens	5.25	5.32	6.69	-1.44	-27.4	
R_ET_MA03	2401 Denison St.	15.40	14.03	19.30	-3.90	-25.3	
TOR_RG-034	Ellesmere Yard	1.75	2.53	2.14	-0.39	-22.3	
TOR_RG-039	Mount Pleasant	5.50	5.98	6.69	-1.19	-21.6	
STN 01	Fire Station #102	1.40	1.44	1.66	-0.26	-18.6	
HY064	TRCA Head Office	7.20	5.21	8.53	-1.33	-18.5	
R-MUN-MA-18	Angus Glen C.C.	4.25	4.04	4.99	-0.74	-17.4	
RG 22	Bramalea	7.50	5.44	8.57	-1.07	-14.3	
TOR_RG-030	Pharmacy/401	4.00	4.14	4.55	-0.55	-13.7	
TOR_RG-031	Liamoreaux	11.75	10.01	13.19	-1.44	-12.3	
R-MUN-MA-07	Stornoway P.S.	6.80	4.99	7.58	-0.78	-11.5	
STN 10	Fire Station #114	21.40	19.80	23.75	-2.35	-11.0	
TOR_RG-001	Swansea	5.75	5.32	6.29	-0.54	-9.4	
R-MUN-MA-16	Fire Hall #94	7.00	5.67	7.64	-0.64	-9.1	
TOR_RG-028	Cummer	18.50	12.14	20.07	-1.57	-8.5	
HY070	York Region Works Yard	4.40	3.60	4.73	-0.33	-7.5	
TOR_RG-013	Martin Grove	19.00	12.32	20.31	-1.31	-6.9	
TOR_RG-012	Albion	11.00	7.36	11.72	-0.72	-6.5	
TOR_RG-025	Ancaster	20.50	13.04	21.66	-1.16	-5.7	
HY036	Kennedy Pump Station	15.60	12.14	16.39	-0.79	-5.1	
HY061	Sue Grange Farm	8.40	3.71	8.83	-0.43	-5.1	
R-MUN-MA-13	Roy H Crosby P.S.	13.80	10.13	14.43	-0.63	-4.6	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-021	Emery Yard	9.75	6.22	10.17	-0.42	-4.3	
HY021	Dufferin Reservoir	6.90	4.73	7.19	-0.29	-4.2	
HY037	King and Albion-Vaughan	6.20	3.11	6.40	-0.20	-3.2	
STN 06	Mississauga Valley Community Centre	32.40	25.49	33.32	-0.92	-2.8	
HY039	Kortright	4.80	3.07	4.93	-0.13	-2.7	
STN 08	Fire Station #116	15.60	10.66	16.02	-0.42	-2.7	
TOR_RG-033	Nashdene Yard	7.25	5.85	7.42	-0.17	-2.3	
HY015	Claremont Shop	3.60	3.82	3.68	-0.08	-2.2	
Caledon East RG	Caledon East	4.06	2.18	4.14	-0.08	-2.0	
HY027	G Ross Dam	13.80	8.22	14.06	-0.26	-1.9	
R-MUN-MA-05	Thornhill C.C.	10.41	6.72	10.58	-0.17	-1.6	
RG 20	PEEL YORK ODOUR CONTROL	9.75	6.44	9.79	-0.04	-0.4	
R_ET_VA01	4630 Langstaff Rd.	7.80	4.81	7.82	-0.02	-0.3	
R-MUN-MA-15	Rouge River C.C.	18.00	12.51	18.03	-0.03	-0.2	
HY009	Brock West Landfill	2.60	2.97	2.60	0.00	0.0	
HY030	Glen Haffy	3.80	3.03	3.80	0.00	0.0	
HY031	Goodwood Pumping Station	2.00	1.55	2.00	0.00	0.0	
HY041	Tullamore	3.20	1.32	3.20	0.00	0.0	
HY060	Stouffville Dam	2.80	2.06	2.80	0.00	0.0	
RG 42	Caledon Reservoir	3.50	2.94	3.50	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	5.00	2.70	5.00	0.00	0.0	
HY069	York Pumping Station	6.40	3.70	6.39	0.01	0.2	
HY046	Mississauga Works Yard	13.00	8.39	12.90	0.10	0.8	
HY055	Restoration Services	5.00	3.08	4.94	0.06	1.2	
HY063	Transport Canada	5.40	3.54	5.33	0.07	1.3	
RG 26	McLaughlin	9.50	5.24	9.38	0.12	1.3	
HY012	Caledon Pumping Station	4.20	2.18	4.14	0.06	1.4	
HY002	Albion Hills	4.60	1.99	4.53	0.07	1.5	
R_ET_NO01	65 Janet Ave.	6.80	2.44	6.69	0.11	1.6	
HY011	Bruces Mill CA	4.40	2.95	4.31	0.09	2.0	
Copper Road RG	Copper Road	10.16	6.30	9.90	0.26	2.6	
TOR_RG-017	Castlefield	22.25	14.56	21.41	0.84	3.8	
RG 39	Inglewood Pumping Stn	5.00	1.76	4.80	0.20	4.0	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 25	RESERVOIR - BECKETT SPROULE	9.00	5.37	8.63	0.37	4.1	
STN 12	CVC Facility	15.00	9.85	14.29	0.71	4.7	
R_YR_VA04	2850 Rutherford Rd.	8.40	4.85	8.00	0.40	4.8	
R_YR_VA03	4738 Steeles Ave. W.	12.40	7.16	11.70	0.70	5.6	
R-MUN-MA-14	8100 Warden Ave	12.40	7.92	11.64	0.76	6.1	
STN 05	Winding Trail	35.40	23.94	33.23	2.17	6.1	
TOR_RG-024	Wilson	24.50	13.19	22.94	1.56	6.4	
TOR_RG-014	Richview	31.00	16.75	28.71	2.29	7.4	
TOR_RG-027	Mitchell Field	23.88	11.58	21.55	2.33	9.8	
R-MUN-MA-09	Lincoln Alexander P.S.	6.00	4.06	5.40	0.60	10.0	
RG 31	East Brampton Res	4.75	2.26	4.24	0.51	10.7	
R_YR_MA03	7021 Leslie Street	19.00	10.43	16.83	2.17	11.4	
TOR_RG-022	Fire Station 116	17.50	9.31	15.45	2.05	11.7	
TOR_RG-044	Fire Station 121	23.50	11.79	20.73	2.77	11.8	
HY044	Milne Dam	19.00	11.48	16.49	2.51	13.2	
TOR_RG-019	Jane	10.50	5.51	9.06	1.44	13.7	
HY025	Etobicoke at QEW	28.40	18.82	23.13	5.27	18.6	
R-MUN-MA-11	Milliken Mills C.C.	25.50	14.17	20.02	5.48	21.5	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	1.52	---	---	---	---	C
HY003	Alex Duff Memorial Pool	0.40	---	---	---	---	MSTT
HY004	Bayly and Church	0.20	---	---	---	---	MSTT
HY008	Brickworks	0.20	---	---	---	---	MSTT
HY016	Danforth and Coxwell	0.00	---	---	---	---	MSTT
HY033	Heart Lake CA	1.60	---	---	---	---	MSTT
HY038	East Humber at Mill Road	4.40	---	---	---	---	OMFB
HY043	Little Rouge at 16th	0.20	---	---	---	---	S
HY050	Morningside Works Yard	0.60	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.00	---	---	---	---	MSTT
Mississauga RG	Mississauga	0.25	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	1.60	---	---	---	---	S
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 16	Hanlan	18.50	---	---	---	---	S

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 23	BRITANNIA LEACHATE PUMPING	9.75	---	---	---	---	T
RG 27	RESERVOIR - WEST BRAMPTON	1.25	---	---	---	---	S
RG 28	TANK - SNELGROVE	2.00	---	---	---	---	MSTT
RG 29	RESERVOIR - NORTH BRAMPTON	1.50	---	---	---	---	MSTT
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 33	CASTLEMORE SEWAGE PUMPING	2.00	---	---	---	---	MSTT
RG 34	MCVEAN SEWAGE PUMPING	0.00	---	---	---	---	Z
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
STN 13	Fire Station #105	5.60	---	---	---	---	U
STN 14	Fire Station #104	0.00	---	---	---	---	MSTT
TOR_RG-002	Howard	0.00	---	---	---	---	Z
TOR_RG-003	Central	0.00	---	---	---	---	MSTT
TOR_RG-004	Brown	1.25	---	---	---	---	MSTT
TOR_RG-006	Church	0.00	---	---	---	---	MSTT
TOR_RG-007	Greenwood	0.00	---	---	---	---	MSTT
TOR_RG-015	Bering	15.00	---	---	---	---	S
TOR_RG-018	Thorncliffe	0.25	---	---	---	---	MSTT
TOR_RG-020	Finch Yard	0.00	---	---	---	---	Z
TOR_RG-023	Bermondsey Yard	0.25	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	1.25	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-038	Fire Station 215	0.00	---	---	---	---	MSTT
TOR_RG-040	Denton	0.00	---	---	---	---	MSTT
TOR_RG-041	Poplar	0.25	---	---	---	---	MSTT
TOR_RG-042	Seminole	0.00	---	---	---	---	MSTT

Table 8. Summary of Individual RG Pairs for Event 1c

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-035	Morningsidede Yard	2.25	1.58	3.02	-0.77	-34.2	
R_YR_VA03	4738 Steeles Ave. W.	2.00	1.72	2.36	-0.36	-18.0	
HY046	Mississauga Works Yard	4.40	2.95	5.18	-0.78	-17.7	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-040	Denton	3.75	2.65	4.35	-0.60	-16.0	
HY039	Kortright	4.40	3.39	5.09	-0.69	-15.7	
RG 25	RESERVOIR - BECKETT SPROULE	3.50	2.41	4.04	-0.54	-15.4	
TOR_RG-004	Brown	3.75	2.72	4.31	-0.56	-14.9	
TOR_RG-034	Ellesmere Yard	1.75	1.32	2.00	-0.25	-14.3	
TOR_RG-025	Ancaster	2.50	1.87	2.83	-0.33	-13.2	
HY003	Alex Duff Memorial Pool	4.80	3.52	5.41	-0.61	-12.7	
HY027	G Ross Dam	3.80	2.86	4.27	-0.47	-12.4	
TOR_RG-016	Kipling	6.25	4.55	7.02	-0.77	-12.3	
R-MUN-MA-11	Milliken Mills C.C.	6.50	4.25	7.20	-0.70	-10.8	
TOR_RG-021	Emery Yard	4.00	2.96	4.43	-0.43	-10.7	
TOR_RG-023	Bermondsey Yard	5.25	3.73	5.81	-0.56	-10.7	
R-MUN-MA-15	Rouge River C.C.	9.25	6.06	10.00	-0.75	-8.1	
TOR_RG-022	Fire Station 116	4.25	2.82	4.59	-0.34	-8.0	
Mississauga RG	Mississauga	8.38	5.68	9.04	-0.66	-7.9	
RG 22	Bramalea	4.75	2.75	5.07	-0.32	-6.7	
STN 01	Fire Station #102	9.40	6.10	9.99	-0.59	-6.3	
TOR_RG-031	Liamoreaux	6.25	3.93	6.63	-0.38	-6.1	
STN 08	Fire Station #116	4.40	2.78	4.65	-0.25	-5.7	
R-MUN-MA-07	Stornoway P.S.	4.40	2.44	4.64	-0.24	-5.5	
RG 26	McLaughlin	3.00	2.38	3.16	-0.16	-5.3	
TOR_RG-018	Thorncliffe	7.00	4.22	7.37	-0.37	-5.3	
STN 12	CVC Facility	3.60	2.17	3.78	-0.18	-5.0	
R_YR_MA03	7021 Leslie Street	5.20	3.01	5.43	-0.23	-4.4	
STN 06	Mississauga Valley Community Centre	8.20	4.86	8.55	-0.35	-4.3	
TOR_RG-007	Greenwood	6.00	3.34	6.25	-0.25	-4.2	
R-MUN-MA-14	8100 Warden Ave	5.00	3.07	5.17	-0.17	-3.4	
TOR_RG-017	Castlefield	3.50	2.03	3.59	-0.09	-2.6	
HY015	Claremont Shop	8.40	6.59	8.53	-0.13	-1.5	
TOR_RG-019	Jane	5.00	3.14	5.06	-0.06	-1.2	
TOR_RG-028	Cummer	5.00	2.86	5.05	-0.05	-1.0	
HY044	Milne Dam	7.80	4.66	7.84	-0.04	-0.5	
HY030	Glen Haffy	5.40	2.00	5.40	0.00	0.0	
HY069	York Pumping Station	4.20	2.89	4.20	0.00	0.0	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY031	Goodwood Pumping Station	7.80	3.05	7.79	0.01	0.1	
R_ET_NO01	65 Janet Ave.	4.40	1.88	4.39	0.01	0.2	
TOR_RG-013	Martin Grove	4.50	2.30	4.49	0.01	0.2	
TOR_RG-044	Fire Station 121	3.00	1.87	2.99	0.01	0.3	
HY063	Transport Canada	4.40	2.43	4.36	0.04	0.9	
TOR_RG-033	Nashdene Yard	3.00	1.73	2.96	0.04	1.3	
R-MUN-MA-13	Roy H Crosby P.S.	7.40	4.30	7.29	0.11	1.5	
HY008	Brickworks	7.20	4.02	7.07	0.13	1.8	
TOR_RG-042	Seminole	4.25	2.49	4.14	0.11	2.6	
STN 05	Winding Trail	7.80	4.28	7.56	0.24	3.1	
TOR_RG-014	Richview	3.50	1.69	3.37	0.13	3.7	
TOR_RG-012	Albion	4.50	2.93	4.31	0.19	4.2	
R-MUN-MA-16	Fire Hall #94	4.50	2.45	4.25	0.25	5.6	
TOR_RG-027	Mitchell Field	4.32	2.44	4.08	0.24	5.6	
TOR_RG-001	Swansea	5.75	3.11	5.42	0.33	5.7	
HY036	Kennedy Pump Station	7.60	4.19	7.07	0.53	7.0	
HY050	Morningside Works Yard	4.40	1.97	4.05	0.35	8.0	
STN 14	Fire Station #104	10.80	5.55	9.88	0.92	8.5	
STN 10	Fire Station #114	4.00	1.77	3.65	0.35	8.8	
R_ET_MA03	2401 Denison St.	8.60	4.59	7.83	0.77	9.0	
TOR_RG-006	Church	6.75	3.54	6.10	0.65	9.6	
Copper Road RG	Copper Road	3.30	1.74	2.98	0.32	9.7	
HY025	Etobicoke at QEW	7.80	4.31	7.02	0.78	10.0	
HY055	Restoration Services	4.80	2.75	4.23	0.57	11.9	
HY064	TRCA Head Office	6.00	3.25	5.25	0.75	12.5	
TOR_RG-024	Wilson	4.00	1.87	3.49	0.51	12.7	
R-MUN-MA-05	Thornhill C.C.	6.60	3.05	5.73	0.87	13.2	
TOR_RG-041	Poplar	4.25	1.67	3.63	0.62	14.6	
HY016	Danforth and Coxwell	7.80	3.43	6.32	1.48	19.0	
RG 20	PEEL YORK ODOUR CONTROL	3.25	1.28	2.56	0.69	21.2	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	1.02	---	---	---	---	C
Caledon East RG	Caledon East	0.00	---	---	---	---	MSTT
HY002	Albion Hills	1.70	---	---	---	---	MSTT
HY004	Bayly and Church	1.60	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY009	Brock West Landfill	0.80	---	---	---	---	MSTT
HY011	Bruces Mill CA	1.80	---	---	---	---	MSTT
HY012	Caledon Pumping Station	0.00	---	---	---	---	MSTT
HY021	Dufferin Reservoir	0.30	---	---	---	---	MSTT
HY033	Heart Lake CA	0.40	---	---	---	---	MSTT
HY037	King and Albion-Vaughan	1.40	---	---	---	---	MSTT
HY038	East Humber at Mill Road	2.20	---	---	---	---	MSTT
HY041	Tullamore	1.80	---	---	---	---	MSTT
HY043	Little Rouge at 16th	19.20	---	---	---	---	O
HY060	Stouffville Dam	0.70	---	---	---	---	MSTT
HY061	Sue Grange Farm	2.60	---	---	---	---	MSTT
HY070	York Region Works Yard	1.40	---	---	---	---	MSTT
HY102	Petticoat Works Yard	1.20	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	2.25	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	1.40	---	---	---	---	S
R-MUN-MA-18	Angus Glen C.C.	1.75	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 16	Hanlan	0.00	---	---	---	---	Z
RG 23	BRITANNIA LEACHATE PUMPING	1.75	---	---	---	---	T
RG 27	RESERVOIR - WEST BRAMPTON	0.50	---	---	---	---	MSTT
RG 28	TANK - SNELGROVE	0.25	---	---	---	---	MSTT
RG 29	RESERVOIR - NORTH BRAMPTON	0.00	---	---	---	---	MSTT
RG 31	East Brampton Res	0.00	---	---	---	---	MSTT
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 33	CASTLEMORE SEWAGE PUMPING	0.00	---	---	---	---	MSTT
RG 34	MCVEAN SEWAGE PUMPING	0.00	---	---	---	---	Z
RG 39	Inglewood Pumping Stn	0.50	---	---	---	---	MSTT
RG 42	Caledon Reservoir	1.25	---	---	---	---	MSTT
R_ET_VA01	4630 Langstaff Rd.	0.20	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R_YR_AU02	242 St John's Sideroad	2.60	---	---	---	---	MSTT
R_YR_VA04	2850 Rutherford Rd.	2.60	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
STN 13	Fire Station #105	2.60	---	---	---	---	OAD
TOR_RG-002	Howard	0.00	---	---	---	---	Z
TOR_RG-003	Central	0.00	---	---	---	---	Z
TOR_RG-015	Bering	0.00	---	---	---	---	Z
TOR_RG-020	Finch Yard	0.75	---	---	---	---	S
TOR_RG-030	Pharmacy/401	1.75	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-037	Edwards Gardens	3.50	---	---	---	---	MSTT
TOR_RG-038	Fire Station 215	2.50	---	---	---	---	MSTT
TOR_RG-039	Mount Pleasant	4.75	---	---	---	---	OMFB

Table 9. Summary of Individual RG Pairs for Event 1d

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
STN 13	Fire Station #105	3.60	5.18	5.03	-1.43	-39.7	
TOR_RG-023	Bermondsey Yard	2.75	4.25	3.25	-0.50	-18.2	
TOR_RG-031	Liamoreaux	1.50	2.23	1.75	-0.25	-16.7	
RG 34	MCVEAN SEWAGE PUMPING	2.25	2.48	2.62	-0.37	-16.4	
HY070	York Region Works Yard	2.40	2.33	2.79	-0.39	-16.3	
TOR_RG-034	Ellesmere Yard	2.00	2.98	2.25	-0.25	-12.5	
RG 27	RESERVOIR - WEST BRAMPTON	3.25	3.48	3.64	-0.39	-12.0	
HY027	G Ross Dam	3.60	4.36	4.01	-0.41	-11.4	
TOR_RG-038	Fire Station 215	3.00	3.87	3.34	-0.34	-11.3	
TOR_RG-022	Fire Station 116	2.50	3.55	2.77	-0.27	-10.8	
R-MUN-MA-12	Markham Museum	1.40	1.95	1.55	-0.15	-10.7	
R-MUN-MA-14	8100 Warden Ave	2.00	2.53	2.21	-0.21	-10.5	
HY044	Milne Dam	1.40	1.90	1.53	-0.13	-9.3	
TOR_RG-012	Albion	5.25	5.88	5.74	-0.49	-9.3	
RG 22	Bramalea	4.50	3.76	4.85	-0.35	-7.8	
STN 08	Fire Station #116	6.80	5.80	7.32	-0.52	-7.6	
TOR_RG-021	Emery Yard	5.75	5.82	6.18	-0.43	-7.5	
HY055	Restoration Services	1.80	1.48	1.93	-0.13	-7.2	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-025	Ancaster	3.50	4.36	3.75	-0.25	-7.1	
HY036	Kennedy Pump Station	1.60	2.15	1.71	-0.11	-6.9	
TOR_RG-013	Martin Grove	4.50	5.81	4.81	-0.31	-6.9	
TOR_RG-041	Poplar	3.50	4.00	3.74	-0.24	-6.9	
STN 06	Mississauga Valley Community Centre	4.60	5.54	4.89	-0.29	-6.3	
TOR_RG-037	Edwards Gardens	3.00	4.14	3.19	-0.19	-6.3	
R_YR_VA04	2850 Rutherford Rd.	2.20	2.12	2.33	-0.13	-5.9	
R_YR_MA03	7021 Leslie Street	2.40	2.87	2.53	-0.13	-5.4	
HY008	Brickworks	4.00	4.82	4.21	-0.21	-5.2	
TOR_RG-039	Mount Pleasant	3.50	4.47	3.68	-0.18	-5.1	
TOR_RG-002	Howard	4.50	5.43	4.70	-0.20	-4.4	
TOR_RG-017	Castlefield	4.25	5.25	4.42	-0.17	-4.0	
STN 05	Winding Trail	4.40	5.27	4.56	-0.16	-3.6	
TOR_RG-003	Central	4.50	5.22	4.66	-0.16	-3.6	
TOR_RG-016	Kipling	4.75	5.74	4.91	-0.16	-3.4	
HY064	TRCA Head Office	5.40	5.17	5.58	-0.18	-3.3	
HY025	Etobicoke at QEW	4.80	5.75	4.92	-0.12	-2.5	
R-MUN-MA-13	Roy H Crosby P.S.	1.60	2.00	1.64	-0.04	-2.5	
TOR_RG-007	Greenwood	4.25	5.03	4.35	-0.10	-2.4	
TOR_RG-004	Brown	4.00	4.63	4.07	-0.07	-1.8	
TOR_RG-024	Wilson	4.50	5.03	4.58	-0.08	-1.8	
TOR_RG-044	Fire Station 121	3.25	4.17	3.30	-0.05	-1.5	
HY102	Petticoat Works Yard	2.40	3.08	2.42	-0.02	-0.8	
TOR_RG-035	Morningsidede Yard	3.00	3.10	3.02	-0.02	-0.7	
HY004	Bayly and Church	1.60	2.40	1.61	-0.01	-0.6	
Mississauga RG	Mississauga	5.33	6.12	5.36	-0.03	-0.6	
TOR_RG-001	Swansea	4.50	5.32	4.52	-0.02	-0.4	
TOR_RG-027	Mitchell Field	2.79	3.39	2.80	-0.01	-0.4	
HY016	Danforth and Coxwell	4.40	5.15	4.41	-0.01	-0.2	
HY002	Albion Hills	1.90	1.72	1.90	0.00	0.0	
R-MUN-MA-16	Fire Hall #94	2.25	2.39	2.25	0.00	0.0	
STN 01	Fire Station #102	5.60	6.23	5.58	0.02	0.4	
Copper Road RG	Copper Road	5.56	4.28	5.53	0.03	0.5	
TOR_RG-040	Denton	4.00	4.87	3.98	0.02	0.5	
R_ET_MA03	2401 Denison St.	1.60	1.90	1.59	0.01	0.6	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
STN 12	CVC Facility	9.20	7.12	9.13	0.07	0.8	
STN 10	Fire Station #114	8.40	6.80	8.32	0.08	1.0	
R-MUN-MA-11	Milliken Mills C.C.	1.75	2.10	1.73	0.02	1.1	
TOR_RG-042	Seminole	3.50	4.42	3.45	0.05	1.4	
HY021	Dufferin Reservoir	3.50	3.23	3.42	0.08	2.3	
TOR_RG-014	Richview	4.50	5.17	4.37	0.13	2.9	
R-MUN-MA-07	Stornoway P.S.	4.40	4.41	4.26	0.14	3.2	
R-MUN-MA-15	Rouge River C.C.	1.50	1.77	1.45	0.05	3.3	
R-MUN-MA-05	Thornhill C.C.	3.56	3.68	3.44	0.12	3.4	
TOR_RG-020	Finch Yard	4.50	4.58	4.32	0.18	4.0	
STN 14	Fire Station #104	6.40	6.41	6.10	0.30	4.7	
R_ET_VA01	4630 Langstaff Rd.	3.60	2.65	3.41	0.19	5.3	
TOR_RG-015	Bering	5.25	5.68	4.96	0.29	5.5	
TOR_RG-028	Cummer	2.75	3.02	2.59	0.16	5.8	
HY039	Kortright	2.00	1.45	1.88	0.12	6.0	
RG 25	RESERVOIR - BECKETT SPROULE	6.00	4.24	5.64	0.36	6.0	
RG 26	McLaughlin	6.50	4.22	6.08	0.42	6.5	
HY046	Mississauga Works Yard	6.60	5.20	6.16	0.44	6.7	
RG 33	CASTLEMORE SEWAGE PUMPING	2.75	1.94	2.56	0.19	6.9	
R-MUN-MA-18	Angus Glen C.C.	3.25	2.71	3.02	0.23	7.1	
RG 16	Hanlan	9.25	6.85	8.56	0.69	7.5	
HY003	Alex Duff Memorial Pool	5.00	5.17	4.62	0.38	7.6	
RG 20	PEEL YORK ODOUR CONTROL	4.75	3.74	4.38	0.37	7.8	
R_YR_VA03	4738 Steeles Ave. W.	5.80	4.87	5.31	0.49	8.4	
RG 31	East Brampton Res	4.75	2.94	4.34	0.41	8.6	
TOR_RG-030	Pharmacy/401	3.00	3.58	2.74	0.26	8.7	
TOR_RG-006	Church	4.75	4.75	4.30	0.45	9.5	
TOR_RG-018	Thorncliffe	4.25	4.41	3.71	0.54	12.7	
HY050	Morningside Works Yard	4.00	3.64	3.47	0.53	13.2	
TOR_RG-019	Jane	6.75	5.29	5.72	1.03	15.3	
TOR_RG-033	Nashdene Yard	2.75	2.40	2.21	0.54	19.6	
R-MUN-MA-09	Lincoln Alexander P.S.	5.25	3.58	4.19	1.06	20.2	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.25	---	---	---	---	C

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
Caledon East RG	Caledon East	1.78	---	---	---	---	MSTT
HY009	Brock West Landfill	1.00	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.40	---	---	---	---	MSTT
HY012	Caledon Pumping Station	1.60	---	---	---	---	MSTT
HY015	Claremont Shop	0.80	---	---	---	---	MSTT
HY030	Glen Haffy	0.60	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	2.00	---	---	---	---	MSTT
HY033	Heart Lake CA	3.80	---	---	---	---	OMFB
HY037	King and Albion-Vaughan	0.40	---	---	---	---	MSTT
HY038	East Humber at Mill Road	0.20	---	---	---	---	MSTT
HY041	Tullamore	0.80	---	---	---	---	MSTT
HY043	Little Rouge at 16th	1.00	---	---	---	---	MSTT
HY060	Stouffville Dam	2.20	---	---	---	---	MSTT
HY061	Sue Grange Farm	1.20	---	---	---	---	MSTT
HY063	Transport Canada	1.20	---	---	---	---	MSTT
HY069	York Pumping Station	0.80	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	9.00	---	---	---	---	T
RG 28	TANK - SNELGROVE	1.50	---	---	---	---	MSTT
RG 29	RESERVOIR - NORTH BRAMPTON	3.00	---	---	---	---	MSTT
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 39	Inglewood Pumping Stn	2.75	---	---	---	---	OMFB
RG 42	Caledon Reservoir	1.00	---	---	---	---	MSTT
R_ET_NO01	65 Janet Ave.	0.60	---	---	---	---	MSTT
R_YR_AU02	242 St John's Sideroad	0.60	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND

Table 10. Summary of Individual RG Pairs for Event 1e

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 29	RESERVOIR - NORTH BRAMPTON	2.75	1.50	3.01	-0.26	-9.5	
R_YR_VA04	2850 Rutherford Rd.	3.00	1.63	3.26	-0.26	-8.7	
HY070	York Region Works Yard	4.20	2.74	4.38	-0.18	-4.3	
R_ET_VA01	4630 Langstaff Rd.	2.40	1.35	2.47	-0.07	-2.9	
HY060	Stouffville Dam	7.40	5.09	7.46	-0.06	-0.8	
HY030	Glen Haffy	8.80	5.72	8.82	-0.02	-0.2	
HY011	Bruces Mill CA	3.20	1.96	3.20	0.00	0.0	
HY063	Transport Canada	4.60	2.88	4.60	0.00	0.0	
HY069	York Pumping Station	3.20	1.56	3.20	0.00	0.0	
RG 16	Hanlan	1.50	2.30	1.50	0.00	0.0	
RG 39	Inglewood Pumping Stn	4.00	1.76	4.00	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	3.20	1.97	3.20	0.00	0.0	
TOR_RG-014	Richview	3.00	2.89	3.00	0.00	0.0	
TOR_RG-022	Fire Station 116	1.50	2.03	1.50	0.00	0.0	
TOR_RG-024	Wilson	2.25	2.18	2.25	0.00	0.0	
HY002	Albion Hills	7.70	2.91	7.69	0.01	0.1	
RG 42	Caledon Reservoir	5.25	2.22	5.24	0.01	0.2	
RG 33	CASTLEMORE SEWAGE PUMPING	4.00	1.81	3.98	0.02	0.5	
HY031	Goodwood Pumping Station	4.00	1.99	3.97	0.03	0.7	
HY055	Restoration Services	2.60	1.38	2.58	0.02	0.8	
R-MUN-MA-18	Angus Glen C.C.	3.75	2.27	3.70	0.05	1.3	
HY039	Kortright	2.60	1.36	2.56	0.04	1.5	
R-MUN-MA-09	Lincoln Alexander P.S.	4.00	2.42	3.89	0.11	2.7	
HY021	Dufferin Reservoir	3.90	1.52	3.63	0.27	6.9	
RG 28	TANK - SNELGROVE	3.75	1.49	3.48	0.27	7.2	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.00	---	---	---	---	C
Caledon East RG	Caledon East	2.03	---	---	---	---	MSTT
Copper Road RG	Copper Road	1.25	---	---	---	---	MSTT
HY003	Alex Duff Memorial Pool	0.00	---	---	---	---	MSTT
HY004	Bayly and Church	0.60	---	---	---	---	MSTT
HY008	Brickworks	0.40	---	---	---	---	MSTT
HY009	Brock West Landfill	1.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY012	Caledon Pumping Station	2.00	---	---	---	---	MSTT
HY015	Claremont Shop	1.40	---	---	---	---	MSTT
HY016	Danforth and Coxwell	0.20	---	---	---	---	MSTT
HY025	Etobicoke at QEW	0.40	---	---	---	---	MSTT
HY027	G Ross Dam	0.60	---	---	---	---	MSTT
HY033	Heart Lake CA	2.60	---	---	---	---	MSTT
HY036	Kennedy Pump Station	0.60	---	---	---	---	MSTT
HY037	King and Albion-Vaughan	1.20	---	---	---	---	MSTT
HY038	East Humber at Mill Road	1.00	---	---	---	---	MSTT
HY041	Tullamore	2.60	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.80	---	---	---	---	MSTT
HY044	Milne Dam	1.00	---	---	---	---	MSTT
HY046	Mississauga Works Yard	1.00	---	---	---	---	MSTT
HY050	Morningside Works Yard	0.40	---	---	---	---	MSTT
HY061	Sue Grange Farm	0.80	---	---	---	---	MSTT
HY064	TRCA Head Office	1.40	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.20	---	---	---	---	MSTT
Mississauga RG	Mississauga	0.00	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	1.27	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	2.00	---	---	---	---	MSTT
R-MUN-MA-11	Milliken Mills C.C.	1.25	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	0.40	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	1.60	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	1.40	---	---	---	---	MSTT
R-MUN-MA-15	Rouge River C.C.	0.50	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	1.50	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 20	PEEL YORK ODOUR CONTROL	1.25	---	---	---	---	MSTT
RG 22	Bramalea	0.75	---	---	---	---	MSTT
RG 23	BRITANNIA LEACHATE PUMPING	1.75	---	---	---	---	O
RG 25	RESERVOIR - BECKETT SPROULE	0.50	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 26	McLaughlin	1.00	---	---	---	---	MSTT
RG 27	RESERVOIR - WEST BRAMPTON	0.25	---	---	---	---	MSTT
RG 31	East Brampton Res	2.75	---	---	---	---	MSTT
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 34	MCVEAN SEWAGE PUMPING	2.50	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	1.20	---	---	---	---	MSTT
R_ET_NO01	65 Janet Ave.	1.40	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	1.00	---	---	---	---	MSTT
R_YR_VA03	4738 Steeles Ave. W.	1.60	---	---	---	---	MSTT
STN 01	Fire Station #102	0.00	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	MSTT
STN 05	Winding Trail	0.40	---	---	---	---	MSTT
STN 06	Mississauga Valley Community Centre	0.20	---	---	---	---	MSTT
STN 08	Fire Station #116	0.40	---	---	---	---	MSTT
STN 10	Fire Station #114	2.00	---	---	---	---	MSTT
STN 12	CVC Facility	1.00	---	---	---	---	MSTT
STN 13	Fire Station #105	1.00	---	---	---	---	MSTT
STN 14	Fire Station #104	0.20	---	---	---	---	MSTT
TOR_RG-001	Swansea	0.00	---	---	---	---	MSTT
TOR_RG-002	Howard	0.25	---	---	---	---	MSTT
TOR_RG-003	Central	0.00	---	---	---	---	MSTT
TOR_RG-004	Brown	0.25	---	---	---	---	MSTT
TOR_RG-006	Church	0.25	---	---	---	---	MSTT
TOR_RG-007	Greenwood	0.00	---	---	---	---	MSTT
TOR_RG-012	Albion	1.00	---	---	---	---	MSTT
TOR_RG-013	Martin Grove	0.75	---	---	---	---	MSTT
TOR_RG-015	Bering	0.50	---	---	---	---	MSTT
TOR_RG-016	Kipling	0.00	---	---	---	---	MSTT
TOR_RG-017	Castlefield	1.75	---	---	---	---	MSTT
TOR_RG-018	Thorncliffe	0.00	---	---	---	---	MSTT
TOR_RG-019	Jane	1.50	---	---	---	---	MSTT
TOR_RG-020	Finch Yard	0.75	---	---	---	---	MSTT
TOR_RG-021	Emery Yard	1.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-023	Bermondsey Yard	0.25	---	---	---	---	MSTT
TOR_RG-025	Ancaster	0.50	---	---	---	---	MSTT
TOR_RG-027	Mitchell Field	1.02	---	---	---	---	MSTT
TOR_RG-028	Cummer	0.75	---	---	---	---	MSTT
TOR_RG-030	Pharmacy/401	0.50	---	---	---	---	MSTT
TOR_RG-031	Liamoreaux	1.50	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	1.00	---	---	---	---	MSTT
TOR_RG-034	Ellesmere Yard	0.50	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	0.50	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-037	Edwards Gardens	0.50	---	---	---	---	MSTT
TOR_RG-038	Fire Station 215	0.25	---	---	---	---	MSTT
TOR_RG-039	Mount Pleasant	0.25	---	---	---	---	MSTT
TOR_RG-040	Denton	0.25	---	---	---	---	MSTT
TOR_RG-041	Poplar	0.00	---	---	---	---	MSTT
TOR_RG-042	Seminole	0.25	---	---	---	---	MSTT
TOR_RG-044	Fire Station 121	0.25	---	---	---	---	MSTT

Table 11. Summary of Individual RG Pairs for Event 1f

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-030	Pharmacy/401	5.50	10.59	9.95	-4.45	-80.9	
TOR_RG-006	Church	3.75	4.58	5.89	-2.14	-57.1	
TOR_RG-027	Mitchell Field	1.27	2.24	1.77	-0.50	-39.4	
HY064	TRCA Head Office	2.60	3.69	3.59	-0.99	-38.1	
TOR_RG-014	Richview	14.00	15.82	17.14	-3.14	-22.4	
HY050	Morningside Works Yard	5.80	4.90	7.00	-1.20	-20.7	
RG 27	RESERVOIR - WEST BRAMPTON	7.50	12.18	8.95	-1.45	-19.3	
STN 08	Fire Station #116	6.60	5.92	7.41	-0.81	-12.3	
TOR_RG-018	Thorncliffe	6.25	4.28	6.95	-0.70	-11.2	
HY102	Petticoat Works Yard	3.80	3.76	4.19	-0.39	-10.3	
HY016	Danforth and Coxwell	2.00	1.38	2.20	-0.20	-10.0	
TOR_RG-044	Fire Station 121	18.00	18.46	19.76	-1.76	-9.8	
RG 25	RESERVOIR - BECKETT SPROULE	23.00	18.09	24.48	-1.48	-6.4	
TOR_RG-039	Mount Pleasant	10.75	7.66	11.40	-0.65	-6.0	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-019	Jane	5.00	5.17	5.25	-0.25	-5.0	
HY046	Mississauga Works Yard	14.40	11.40	15.01	-0.61	-4.2	
HY033	Heart Lake CA	23.20	20.61	24.01	-0.81	-3.5	
TOR_RG-034	Ellesmere Yard	11.00	10.42	11.30	-0.30	-2.7	
HY009	Brock West Landfill	4.00	3.48	4.07	-0.07	-1.8	
HY063	Transport Canada	1.80	3.05	1.83	-0.03	-1.7	
TOR_RG-021	Emery Yard	13.50	10.97	13.51	-0.01	-0.1	
HY037	King and Albion-Vaughan	3.40	1.76	3.40	0.00	0.0	
HY061	Sue Grange Farm	1.80	2.30	1.80	0.00	0.0	
HY070	York Region Works Yard	1.80	1.37	1.80	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	4.20	2.75	4.20	0.00	0.0	
HY031	Goodwood Pumping Station	7.40	2.90	7.37	0.03	0.4	
TOR_RG-025	Ancaster	26.75	21.54	26.55	0.20	0.7	
TOR_RG-013	Martin Grove	20.50	17.62	20.32	0.18	0.9	
HY003	Alex Duff Memorial Pool	11.60	9.50	11.46	0.14	1.2	
STN 13	Fire Station #105	26.40	19.21	26.06	0.34	1.3	
TOR_RG-035	Morningsidede Yard	7.25	5.12	7.13	0.12	1.7	
RG 33	CASTLEMORE SEWAGE PUMPING	26.25	13.26	25.69	0.56	2.1	
HY004	Bayly and Church	2.20	1.59	2.15	0.05	2.3	
TOR_RG-038	Fire Station 215	6.25	4.46	6.10	0.15	2.4	
RG 22	Bramalea	32.00	22.33	31.13	0.87	2.7	
TOR_RG-017	Castlefield	20.75	15.64	19.97	0.78	3.8	
RG 26	McLaughlin	22.00	18.20	21.03	0.97	4.4	
R_YR_VA03	4738 Steeles Ave. W.	13.40	9.19	12.41	0.99	7.4	
TOR_RG-012	Albion	26.25	17.29	24.09	2.16	8.2	
TOR_RG-042	Seminole	6.75	4.43	6.16	0.59	8.7	
Copper Road RG	Copper Road	22.34	14.77	19.94	2.40	10.7	
TOR_RG-007	Greenwood	3.00	1.68	2.64	0.36	12.0	
TOR_RG-023	Bermondsey Yard	6.00	3.10	5.16	0.84	14.0	
TOR_RG-024	Wilson	28.75	17.85	24.09	4.66	16.2	
TOR_RG-041	Poplar	8.50	4.78	7.05	1.45	17.1	
HY008	Brickworks	10.00	5.47	8.20	1.80	18.0	
TOR_RG-037	Edwards Gardens	15.25	7.62	12.27	2.98	19.5	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.00	---	---	---	---	C
Caledon East RG	Caledon East	1.78	---	---	---	---	MSTT
HY002	Albion Hills	1.50	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.80	---	---	---	---	MSTT
HY012	Caledon Pumping Station	2.00	---	---	---	---	MSTT
HY015	Claremont Shop	0.00	---	---	---	---	MSTT
HY021	Dufferin Reservoir	0.00	---	---	---	---	MSTT
HY025	Etobicoke at QEW	0.00	---	---	---	---	MSTT
HY027	G Ross Dam	0.80	---	---	---	---	MSTT
HY030	Glen Haffy	2.20	---	---	---	---	MSTT
HY036	Kennedy Pump Station	0.20	---	---	---	---	MSTT
HY038	East Humber at Mill Road	1.80	---	---	---	---	MSTT
HY039	Kortright	0.40	---	---	---	---	MSTT
HY041	Tullamore	0.60	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.20	---	---	---	---	MSTT
HY044	Milne Dam	0.00	---	---	---	---	MSTT
HY055	Restoration Services	1.20	---	---	---	---	MSTT
HY060	Stouffville Dam	1.20	---	---	---	---	MSTT
HY069	York Pumping Station	0.80	---	---	---	---	MSTT
Mississauga RG	Mississauga	0.25	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	2.00	---	---	---	---	MSTT
R-MUN-MA-11	Milliken Mills C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	0.00	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	0.00	---	---	---	---	MSTT
R-MUN-MA-15	Rouge River C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	0.50	---	---	---	---	MSTT
R-MUN-MA-18	Angus Glen C.C.	0.75	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 16	Hanlan	0.00	---	---	---	---	MSTT
RG 20	PEEL YORK ODOUR CONTROL	0.00	---	---	---	---	Z

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 23	BRITANNIA LEACHATE PUMPING	5.00	---	---	---	---	O
RG 28	TANK - SNELGROVE	0.00	---	---	---	---	Z
RG 29	RESERVOIR - NORTH BRAMPTON	11.50	---	---	---	---	U
RG 31	East Brampton Res	0.00	---	---	---	---	Z
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 34	MCVEAN SEWAGE PUMPING	0.00	---	---	---	---	Z
RG 39	Inglewood Pumping Stn	0.75	---	---	---	---	MSTT
RG 42	Caledon Reservoir	2.25	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	0.00	---	---	---	---	MSTT
R_ET_NO01	65 Janet Ave.	2.80	---	---	---	---	MSTT
R_ET_VA01	4630 Langstaff Rd.	0.00	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	0.00	---	---	---	---	MSTT
R_YR_VA04	2850 Rutherford Rd.	0.40	---	---	---	---	MSTT
STN 01	Fire Station #102	0.00	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	MSTT
STN 05	Winding Trail	1.20	---	---	---	---	MSTT
STN 06	Mississauga Valley Community Centre	0.00	---	---	---	---	MSTT
STN 10	Fire Station #114	0.00	---	---	---	---	MSTT
STN 12	CVC Facility	1.00	---	---	---	---	MSTT
STN 14	Fire Station #104	0.00	---	---	---	---	MSTT
TOR_RG-001	Swansea	0.00	---	---	---	---	MSTT
TOR_RG-002	Howard	0.25	---	---	---	---	MSTT
TOR_RG-003	Central	0.00	---	---	---	---	Z
TOR_RG-004	Brown	0.00	---	---	---	---	Z
TOR_RG-015	Bering	0.00	---	---	---	---	MSTT
TOR_RG-016	Kipling	0.00	---	---	---	---	MSTT
TOR_RG-020	Finch Yard	0.75	---	---	---	---	MSTT
TOR_RG-022	Fire Station 116	2.50	---	---	---	---	OAD
TOR_RG-028	Cummer	0.00	---	---	---	---	MSTT
TOR_RG-031	Liamoreaux	0.00	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	0.25	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-040	Denton	0.00	---	---	---	---	MSTT

Table 12. Summary of Individual RG Pairs for Event 1g

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-037	Edwards Gardens	3.00	3.20	4.62	-1.62	-54.0	
TOR_RG-023	Bermondsey Yard	7.00	6.51	9.71	-2.71	-38.7	
TOR_RG-013	Martin Grove	3.00	2.92	4.10	-1.10	-36.7	
TOR_RG-015	Bering	9.75	10.69	12.43	-2.68	-27.5	
TOR_RG-017	Castlefield	11.00	9.87	13.99	-2.99	-27.2	
HY064	TRCA Head Office	6.20	5.16	7.64	-1.44	-23.2	
HY041	Tullamore	6.00	5.63	7.37	-1.37	-22.8	
TOR_RG-041	Poplar	3.00	1.80	3.68	-0.68	-22.7	
TOR_RG-003	Central	11.00	7.58	12.96	-1.96	-17.8	
HY025	Etobicoke at QEW	1.60	1.78	1.85	-0.25	-15.6	
TOR_RG-007	Greenwood	13.50	7.79	14.95	-1.45	-10.7	
HY027	G Ross Dam	4.80	3.58	5.19	-0.39	-8.1	
RG 39	Inglewood Pumping Stn	12.50	11.07	12.92	-0.42	-3.4	
STN 13	Fire Station #105	4.00	2.92	4.11	-0.11	-2.8	
RG 31	East Brampton Res	3.00	1.52	3.05	-0.05	-1.7	
TOR_RG-012	Albion	10.25	6.14	10.36	-0.11	-1.1	
HY008	Brickworks	15.20	8.11	15.27	-0.07	-0.5	
TOR_RG-039	Mount Pleasant	13.75	7.88	13.80	-0.05	-0.4	
TOR_RG-042	Seminole	3.75	2.30	3.76	-0.01	-0.3	
R_ET_VA01	4630 Langstaff Rd.	5.20	2.90	5.19	0.01	0.2	
TOR_RG-020	Finch Yard	6.00	4.11	5.95	0.05	0.8	
TOR_RG-019	Jane	9.00	5.82	8.76	0.24	2.7	
HY061	Sue Grange Farm	7.00	5.24	6.79	0.21	3.0	
TOR_RG-025	Ancaster	7.00	4.07	6.77	0.23	3.3	
TOR_RG-004	Brown	18.00	9.52	17.26	0.74	4.1	
HY033	Heart Lake CA	6.00	2.75	5.75	0.25	4.2	
TOR_RG-040	Denton	15.00	7.80	14.30	0.70	4.7	
HY003	Alex Duff Memorial Pool	14.60	8.02	13.82	0.78	5.3	
TOR_RG-021	Emery Yard	10.75	6.03	10.02	0.73	6.8	
TOR_RG-001	Swansea	14.00	8.76	13.03	0.97	6.9	
TOR_RG-002	Howard	13.75	7.91	12.77	0.98	7.1	
R_YR_VA03	4738 Steeles Ave. W.	10.40	5.46	9.61	0.79	7.6	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-006	Church	15.00	7.45	13.86	1.14	7.6	
HY050	Morningside Works Yard	3.80	1.64	3.50	0.30	7.9	
TOR_RG-024	Wilson	12.75	6.85	11.68	1.07	8.4	
RG 33	CASTLEMORE SEWAGE PUMPING	23.50	12.30	21.38	2.12	9.0	
HY016	Danforth and Coxwell	16.80	7.94	15.12	1.68	10.0	
TOR_RG-038	Fire Station 215	4.00	1.48	3.58	0.42	10.5	
TOR_RG-044	Fire Station 121	3.75	1.86	3.26	0.49	13.1	
TOR_RG-016	Kipling	5.50	4.12	4.76	0.74	13.5	
TOR_RG-018	Thorncliffe	18.25	8.48	15.17	3.08	16.9	
TOR_RG-014	Richview	8.75	4.62	7.04	1.71	19.5	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.00	---	---	---	---	MSTT
Caledon East RG	Caledon East	0.76	---	---	---	---	MSTT
Copper Road RG	Copper Road	0.50	---	---	---	---	MSTT
HY002	Albion Hills	0.20	---	---	---	---	MSTT
HY004	Bayly and Church	0.00	---	---	---	---	MSTT
HY009	Brock West Landfill	0.00	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.00	---	---	---	---	MSTT
HY012	Caledon Pumping Station	0.60	---	---	---	---	MSTT
HY015	Claremont Shop	0.20	---	---	---	---	MSTT
HY021	Dufferin Reservoir	0.00	---	---	---	---	MSTT
HY030	Glen Haffy	0.20	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	0.00	---	---	---	---	MSTT
HY036	Kennedy Pump Station	0.00	---	---	---	---	MSTT
HY037	King and Albion-Vaughan	0.00	---	---	---	---	MSTT
HY038	East Humber at Mill Road	0.00	---	---	---	---	MSTT
HY039	Kortright	0.00	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.00	---	---	---	---	MSTT
HY044	Milne Dam	0.00	---	---	---	---	MSTT
HY046	Mississauga Works Yard	1.60	---	---	---	---	MSTT
HY055	Restoration Services	1.00	---	---	---	---	MSTT
HY060	Stouffville Dam	0.00	---	---	---	---	MSTT
HY063	Transport Canada	0.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY069	York Pumping Station	0.00	---	---	---	---	MSTT
HY070	York Region Works Yard	0.20	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.20	---	---	---	---	MSTT
Mississauga RG	Mississauga	0.25	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-11	Milliken Mills C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	0.00	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	0.00	---	---	---	---	MSTT
R-MUN-MA-15	Rouge River C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	0.00	---	---	---	---	MSTT
R-MUN-MA-18	Angus Glen C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 16	Hanlan	0.25	---	---	---	---	MSTT
RG 20	PEEL YORK ODOUR CONTROL	1.25	---	---	---	---	MSTT
RG 22	Bramalea	1.50	---	---	---	---	MSTT
RG 23	BRITANNIA LEACHATE PUMPING	0.50	---	---	---	---	MSTT
RG 25	RESERVOIR - BECKETT SPROULE	0.50	---	---	---	---	MSTT
RG 26	McLaughlin	0.25	---	---	---	---	MSTT
RG 27	RESERVOIR - WEST BRAMPTON	1.25	---	---	---	---	MSTT
RG 28	TANK - SNELGROVE	0.25	---	---	---	---	MSTT
RG 29	RESERVOIR - NORTH BRAMPTON	0.75	---	---	---	---	S
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 34	MCVEAN SEWAGE PUMPING	9.75	---	---	---	---	T
RG 42	Caledon Reservoir	2.75	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	0.20	---	---	---	---	MSTT
R_ET_NO01	65 Janet Ave.	0.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R_YR_AU02	242 St John's Sideroad	0.00	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	0.00	---	---	---	---	MSTT
R_YR_VA04	2850 Rutherford Rd.	0.40	---	---	---	---	MSTT
STN 01	Fire Station #102	0.20	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	MSTT
STN 05	Winding Trail	1.20	---	---	---	---	MSTT
STN 06	Mississauga Valley Community Centre	0.20	---	---	---	---	MSTT
STN 08	Fire Station #116	0.00	---	---	---	---	MSTT
STN 10	Fire Station #114	1.20	---	---	---	---	MSTT
STN 12	CVC Facility	0.20	---	---	---	---	MSTT
STN 14	Fire Station #104	0.20	---	---	---	---	MSTT
TOR_RG-022	Fire Station 116	0.75	---	---	---	---	MSTT
TOR_RG-027	Mitchell Field	1.52	---	---	---	---	MSTT
TOR_RG-028	Cummer	0.25	---	---	---	---	MSTT
TOR_RG-030	Pharmacy/401	0.25	---	---	---	---	MSTT
TOR_RG-031	Liamoreaux	0.00	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	0.00	---	---	---	---	MSTT
TOR_RG-034	Ellesmere Yard	0.50	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	0.75	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND

Table 13. Summary of Individual RG Pairs for Event 1h

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 28	TANK - SNELGROVE	2.25	3.55	3.60	-1.35	-60.0	
STN 06	Mississauga Valley Community Centre	5.60	9.63	8.79	-3.19	-57.0	
TOR_RG-044	Fire Station 121	3.00	2.92	3.81	-0.81	-27.0	
TOR_RG-013	Martin Grove	2.25	2.97	2.83	-0.58	-25.8	
TOR_RG-023	Bermondsey Yard	4.25	3.21	5.24	-0.99	-23.3	
STN 12	CVC Facility	3.00	3.72	3.54	-0.54	-18.0	
TOR_RG-030	Pharmacy/401	1.50	1.72	1.73	-0.23	-15.3	
RG 25	RESERVOIR - BECKETT SPROULE	2.25	1.75	2.57	-0.32	-14.2	
TOR_RG-014	Richview	3.50	3.66	3.93	-0.43	-12.3	
TOR_RG-017	Castlefield	8.00	6.16	8.98	-0.98	-12.3	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-003	Central	9.50	6.30	10.62	-1.12	-11.8	
TOR_RG-041	Poplar	1.75	1.93	1.94	-0.19	-10.9	
TOR_RG-016	Kipling	18.75	14.97	20.60	-1.85	-9.9	
TOR_RG-021	Emery Yard	3.00	2.64	3.29	-0.29	-9.7	
STN 10	Fire Station #114	5.60	5.06	6.03	-0.43	-7.7	
STN 13	Fire Station #105	3.00	2.49	3.23	-0.23	-7.7	
RG 22	Bramalea	2.25	1.58	2.42	-0.17	-7.6	
TOR_RG-022	Fire Station 116	1.50	1.39	1.61	-0.11	-7.3	
TOR_RG-006	Church	7.25	4.11	7.69	-0.44	-6.1	
TOR_RG-042	Seminole	2.50	2.70	2.63	-0.13	-5.2	
HY003	Alex Duff Memorial Pool	9.20	5.55	9.50	-0.30	-3.3	
STN 08	Fire Station #116	16.80	11.51	17.36	-0.56	-3.3	
TOR_RG-007	Greenwood	8.25	4.10	8.51	-0.26	-3.2	
HY008	Brickworks	7.40	3.79	7.62	-0.22	-3.0	
TOR_RG-034	Ellesmere Yard	1.75	1.94	1.80	-0.05	-2.9	
HY025	Etobicoke at QEW	20.40	17.08	20.97	-0.57	-2.8	
TOR_RG-035	Morningsidede Yard	1.75	1.71	1.78	-0.03	-1.7	
TOR_RG-040	Denton	6.75	3.59	6.86	-0.11	-1.6	
RG 27	RESERVOIR - WEST BRAMPTON	17.00	9.09	17.23	-0.23	-1.4	
STN 01	Fire Station #102	15.80	13.98	16.02	-0.22	-1.4	
TOR_RG-002	Howard	12.75	7.91	12.77	-0.02	-0.2	
Mississauga RG	Mississauga	20.07	16.96	20.01	0.06	0.3	
HY061	Sue Grange Farm	2.20	1.79	2.18	0.02	0.9	
RG 33	CASTLEMORE SEWAGE PUMPING	4.00	1.86	3.94	0.06	1.5	
TOR_RG-039	Mount Pleasant	9.00	4.65	8.82	0.18	2.0	
TOR_RG-037	Edwards Gardens	6.00	3.56	5.79	0.21	3.5	
TOR_RG-025	Ancaster	9.00	5.32	8.59	0.41	4.6	
TOR_RG-001	Swansea	16.00	9.35	14.91	1.09	6.8	
TOR_RG-012	Albion	4.50	3.36	4.18	0.32	7.1	
RG 20	PEEL YORK ODOUR CONTROL	3.75	2.38	3.47	0.28	7.5	
RG 26	McLaughlin	18.00	8.70	16.61	1.39	7.7	
HY016	Danforth and Coxwell	9.60	4.18	8.66	0.94	9.8	
HY050	Morningside Works Yard	2.00	1.76	1.80	0.20	10.0	
RG 31	East Brampton Res	6.50	3.09	5.75	0.75	11.5	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY033	Heart Lake CA	5.20	2.78	4.58	0.62	11.9	
TOR_RG-024	Wilson	10.25	6.10	9.01	1.24	12.1	
STN 05	Winding Trail	20.00	14.93	17.52	2.48	12.4	
TOR_RG-004	Brown	9.50	4.26	8.09	1.41	14.8	
RG 16	Hanlan	33.50	18.35	28.43	5.07	15.1	
TOR_RG-018	Thorncliffe	9.75	4.13	8.27	1.48	15.2	
TOR_RG-015	Bering	21.50	11.69	17.95	3.55	16.5	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.00	---	---	---	---	MSTT
Caledon East RG	Caledon East	0.00	---	---	---	---	MSTT
Copper Road RG	Copper Road	0.75	---	---	---	---	MSTT
HY002	Albion Hills	0.00	---	---	---	---	MSTT
HY004	Bayly and Church	0.00	---	---	---	---	MSTT
HY009	Brock West Landfill	0.20	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.00	---	---	---	---	MSTT
HY012	Caledon Pumping Station	0.20	---	---	---	---	MSTT
HY015	Claremont Shop	0.00	---	---	---	---	MSTT
HY021	Dufferin Reservoir	0.20	---	---	---	---	MSTT
HY027	G Ross Dam	0.60	---	---	---	---	MSTT
HY030	Glen Haffy	0.00	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	0.00	---	---	---	---	MSTT
HY036	Kennedy Pump Station	0.40	---	---	---	---	MSTT
HY037	King and Albion-Vaughan	0.00	---	---	---	---	MSTT
HY038	East Humber at Mill Road	0.00	---	---	---	---	MSTT
HY039	Kortright	1.00	---	---	---	---	MSTT
HY041	Tullamore	1.00	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.00	---	---	---	---	MSTT
HY044	Milne Dam	0.00	---	---	---	---	MSTT
HY046	Mississauga Works Yard	0.40	---	---	---	---	MSTT
HY055	Restoration Services	1.00	---	---	---	---	MSTT
HY060	Stouffville Dam	0.00	---	---	---	---	MSTT
HY063	Transport Canada	0.00	---	---	---	---	MSTT
HY064	TRCA Head Office	0.60	---	---	---	---	MSTT
HY069	York Pumping Station	0.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY070	York Region Works Yard	0.20	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.40	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	0.25	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	0.25	---	---	---	---	MSTT
R-MUN-MA-11	Milliken Mills C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	0.00	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	0.00	---	---	---	---	MSTT
R-MUN-MA-15	Rouge River C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	0.00	---	---	---	---	MSTT
R-MUN-MA-18	Angus Glen C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	13.25	---	---	---	---	O
RG 29	RESERVOIR - NORTH BRAMPTON	2.50	---	---	---	---	S
RG 32	RESERVOIR - AIRPORT	0.00	---	---	---	---	Z
RG 34	MCVEAN SEWAGE PUMPING	1.00	---	---	---	---	U
RG 39	Inglewood Pumping Stn	0.00	---	---	---	---	MSTT
RG 42	Caledon Reservoir	0.00	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	0.00	---	---	---	---	MSTT
R_ET_NO01	65 Janet Ave.	0.40	---	---	---	---	MSTT
R_ET_VA01	4630 Langstaff Rd.	1.40	---	---	---	---	MSTT
R_YR_AU02	242 St John's Sideroad	0.00	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	0.20	---	---	---	---	MSTT
R_YR_VA03	4738 Steeles Ave. W.	0.80	---	---	---	---	MSTT
R_YR_VA04	2850 Rutherford Rd.	0.40	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
STN 14	Fire Station #104	2.60	---	---	---	---	S
TOR_RG-019	Jane	0.75	---	---	---	---	MSTT
TOR_RG-020	Finch Yard	0.50	---	---	---	---	MSTT
TOR_RG-027	Mitchell Field	1.52	---	---	---	---	MSTT
TOR_RG-028	Cummer	0.75	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-031	Liamoreaux	0.25	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	0.25	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-038	Fire Station 215	1.25	---	---	---	---	MSTT

Table 14. Summary of Individual RG Pairs for Event 1i

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 27	RESERVOIR - WEST BRAMPTON	2.00	3.20	2.43	-0.43	-21.5	
RG 25	RESERVOIR - BECKETT SPROULE	1.50	1.81	1.75	-0.25	-16.7	
RG 29	RESERVOIR - NORTH BRAMPTON	1.50	1.63	1.67	-0.17	-11.3	
HY041	Tullamore	2.00	2.02	2.21	-0.21	-10.5	
STN 10	Fire Station #114	1.80	1.70	1.98	-0.18	-10.0	
RG 16	Hanlan	2.75	2.43	2.83	-0.08	-2.9	
HY037	King and Albion-Vaughan	2.20	2.75	2.25	-0.05	-2.3	
Copper Road RG	Copper Road	1.50	1.54	1.51	-0.01	-0.7	
HY061	Sue Grange Farm	2.80	2.92	2.82	-0.02	-0.7	
Caledon East RG	Caledon East	12.19	7.32	12.19	0.00	0.0	
HY012	Caledon Pumping Station	12.20	7.33	12.20	0.00	0.0	
RG 42	Caledon Reservoir	2.00	1.93	2.00	0.00	0.0	
TOR_RG-014	Richview	1.50	1.37	1.50	0.00	0.0	
STN 06	Mississauga Valley Community Centre	2.20	1.51	2.19	0.01	0.5	
R_ET_NO01	65 Janet Ave.	1.80	1.74	1.78	0.02	1.1	
STN 05	Winding Trail	3.00	1.91	2.87	0.13	4.3	
STN 12	CVC Facility	3.60	2.41	3.35	0.25	6.9	
RG 28	TANK - SNELGROVE	2.25	1.72	2.08	0.17	7.6	
STN 08	Fire Station #116	3.00	2.47	2.75	0.25	8.3	
RG 33	CASTLEMORE SEWAGE PUMPING	2.75	1.82	2.50	0.25	9.1	
RG 26	McLaughlin	4.00	2.98	3.52	0.48	12.0	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.25	---	---	---	---	C
HY002	Albion Hills	0.10	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY003	Alex Duff Memorial Pool	0.40	---	---	---	---	MSTT
HY004	Bayly and Church	0.40	---	---	---	---	MSTT
HY008	Brickworks	0.40	---	---	---	---	MSTT
HY009	Brock West Landfill	0.00	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.20	---	---	---	---	MSTT
HY015	Claremont Shop	0.00	---	---	---	---	MSTT
HY016	Danforth and Coxwell	0.20	---	---	---	---	MSTT
HY021	Dufferin Reservoir	0.00	---	---	---	---	MSTT
HY025	Etobicoke at QEW	1.40	---	---	---	---	MSTT
HY027	G Ross Dam	0.00	---	---	---	---	MSTT
HY030	Glen Haffy	0.80	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	0.00	---	---	---	---	MSTT
HY033	Heart Lake CA	1.80	---	---	---	---	MSTT
HY036	Kennedy Pump Station	0.00	---	---	---	---	MSTT
HY038	East Humber at Mill Road	1.00	---	---	---	---	MSTT
HY039	Kortright	0.40	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.00	---	---	---	---	MSTT
HY044	Milne Dam	0.20	---	---	---	---	MSTT
HY046	Mississauga Works Yard	1.00	---	---	---	---	MSTT
HY050	Morningside Works Yard	0.20	---	---	---	---	MSTT
HY055	Restoration Services	1.00	---	---	---	---	MSTT
HY060	Stouffville Dam	0.00	---	---	---	---	MSTT
HY063	Transport Canada	0.00	---	---	---	---	MSTT
HY064	TRCA Head Office	0.00	---	---	---	---	MSTT
HY069	York Pumping Station	0.20	---	---	---	---	MSTT
HY070	York Region Works Yard	0.00	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.40	---	---	---	---	MSTT
Mississauga RG	Mississauga	2.03	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	0.20	---	---	---	---	MSTT
R-MUN-MA-09	Lincoln Alexander P.S.	4.00	---	---	---	---	O
R-MUN-MA-11	Milliken Mills C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	0.20	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	0.00	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	0.60	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R-MUN-MA-15	Rouge River C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-16	Fire Hall #94	0.25	---	---	---	---	MSTT
R-MUN-MA-18	Angus Glen C.C.	0.00	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 20	PEEL YORK ODOUR CONTROL	0.25	---	---	---	---	MSTT
RG 22	Bramalea	1.00	---	---	---	---	MSTT
RG 23	BRITANNIA LEACHATE PUMPING	4.50	---	---	---	---	O
RG 31	East Brampton Res	1.50	---	---	---	---	MSTT
RG 32	RESERVOIR - AIRPORT	17.75	---	---	---	---	O
RG 34	MCVEAN SEWAGE PUMPING	0.75	---	---	---	---	MSTT
RG 39	Inglewood Pumping Stn	1.25	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	0.00	---	---	---	---	MSTT
R_ET_VA01	4630 Langstaff Rd.	0.80	---	---	---	---	MSTT
R_YR_AU02	242 St John's Sideroad	0.00	---	---	---	---	MSTT
R_YR_MA03	7021 Leslie Street	0.00	---	---	---	---	MSTT
R_YR_VA03	4738 Steeles Ave. W.	0.40	---	---	---	---	MSTT
R_YR_VA04	2850 Rutherford Rd.	0.40	---	---	---	---	MSTT
STN 01	Fire Station #102	2.00	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	0.00	---	---	---	---	Z
STN 13	Fire Station #105	0.20	---	---	---	---	MSTT
STN 14	Fire Station #104	1.60	---	---	---	---	MSTT
TOR_RG-001	Swansea	0.50	---	---	---	---	MSTT
TOR_RG-002	Howard	0.50	---	---	---	---	MSTT
TOR_RG-003	Central	0.25	---	---	---	---	MSTT
TOR_RG-004	Brown	0.25	---	---	---	---	MSTT
TOR_RG-006	Church	0.25	---	---	---	---	MSTT
TOR_RG-007	Greenwood	0.25	---	---	---	---	MSTT
TOR_RG-012	Albion	0.00	---	---	---	---	MSTT
TOR_RG-013	Martin Grove	0.50	---	---	---	---	MSTT
TOR_RG-015	Bering	1.00	---	---	---	---	MSTT
TOR_RG-016	Kipling	0.75	---	---	---	---	MSTT
TOR_RG-017	Castlefield	0.00	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-018	Thorncliffe	0.25	---	---	---	---	MSTT
TOR_RG-019	Jane	0.00	---	---	---	---	MSTT
TOR_RG-020	Finch Yard	0.00	---	---	---	---	MSTT
TOR_RG-021	Emery Yard	0.00	---	---	---	---	MSTT
TOR_RG-022	Fire Station 116	0.00	---	---	---	---	MSTT
TOR_RG-023	Bermondsey Yard	0.25	---	---	---	---	MSTT
TOR_RG-024	Wilson	0.25	---	---	---	---	MSTT
TOR_RG-025	Ancaster	0.00	---	---	---	---	MSTT
TOR_RG-027	Mitchell Field	0.00	---	---	---	---	MSTT
TOR_RG-028	Cummer	0.00	---	---	---	---	MSTT
TOR_RG-030	Pharmacy/401	0.75	---	---	---	---	MSTT
TOR_RG-031	Liamoreaux	0.00	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	0.00	---	---	---	---	MSTT
TOR_RG-034	Ellesmere Yard	0.00	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	0.00	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-037	Edwards Gardens	0.25	---	---	---	---	MSTT
TOR_RG-038	Fire Station 215	0.00	---	---	---	---	MSTT
TOR_RG-039	Mount Pleasant	0.25	---	---	---	---	MSTT
TOR_RG-040	Denton	0.00	---	---	---	---	MSTT
TOR_RG-041	Poplar	0.00	---	---	---	---	MSTT
TOR_RG-042	Seminole	0.25	---	---	---	---	MSTT
TOR_RG-044	Fire Station 121	0.25	---	---	---	---	MSTT

Table 15. Summary of Individual RG Pairs for Event 1j

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-030	Pharmacy/401	11.50	21.60	16.70	-5.20	-45.2	
TOR_RG-028	Cummer	23.00	27.95	31.17	-8.17	-35.5	
R-MUN-MA-18	Angus Glen C.C.	3.00	6.38	4.04	-1.04	-34.7	
TOR_RG-004	Brown	36.75	41.51	48.45	-11.70	-31.8	
STN 13	Fire Station #105	38.20	55.79	50.29	-12.09	-31.6	
HY038	East Humber at Mill Road	24.80	36.98	31.27	-6.47	-26.1	
HY055	Restoration Services	29.80	40.15	37.46	-7.66	-25.7	
HY036	Kennedy Pump Station	3.00	5.34	3.70	-0.70	-23.3	
STN 08	Fire Station #116	23.40	42.86	28.73	-5.33	-22.8	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 22	Bramalea	26.25	40.35	32.00	-5.75	-21.9	
HY008	Brickworks	41.00	41.67	49.57	-8.57	-20.9	
TOR_RG-002	Howard	12.50	13.51	14.85	-2.35	-18.8	
Copper Road RG	Copper Road	25.90	42.44	30.57	-4.67	-18.0	
R_ET_VA01	4630 Langstaff Rd.	29.00	35.69	33.02	-4.02	-13.9	
TOR_RG-037	Edwards Gardens	35.50	34.10	39.40	-3.90	-11.0	
R-MUN-MA-14	8100 Warden Ave	6.60	10.19	7.31	-0.71	-10.8	
RG 25	RESERVOIR - BECKETT SPROULE	22.25	34.57	24.64	-2.39	-10.7	
RG 27	RESERVOIR - WEST BRAMPTON	20.00	26.56	21.96	-1.96	-9.8	
TOR_RG-001	Swansea	12.25	13.49	13.33	-1.08	-8.8	
TOR_RG-034	Ellesmere Yard	3.50	6.04	3.80	-0.30	-8.6	
R-MUN-MA-11	Milliken Mills C.C.	2.50	3.90	2.69	-0.19	-7.6	
HY070	York Region Works Yard	11.60	19.38	12.44	-0.84	-7.2	
HY016	Danforth and Coxwell	33.80	28.84	36.16	-2.36	-7.0	
RG 39	Inglewood Pumping Stn	15.25	14.14	16.23	-0.98	-6.4	
TOR_RG-015	Bering	31.75	36.01	33.63	-1.88	-5.9	
STN 06	Mississauga Valley Community Centre	23.00	29.33	24.31	-1.31	-5.7	
TOR_RG-044	Fire Station 121	45.75	40.45	48.17	-2.42	-5.3	
RG 28	TANK - SNELGROVE	13.75	14.91	14.44	-0.69	-5.0	
HY021	Dufferin Reservoir	25.20	22.54	26.44	-1.24	-4.9	
TOR_RG-007	Greenwood	36.00	30.61	37.52	-1.52	-4.2	
HY064	TRCA Head Office	50.40	43.04	52.43	-2.03	-4.0	
STN 10	Fire Station #114	31.20	45.50	32.41	-1.21	-3.9	
HY002	Albion Hills	22.90	25.47	23.77	-0.87	-3.8	
R-MUN-MA-13	Roy H Crosby P.S.	1.80	2.44	1.86	-0.06	-3.3	
HY037	King and Albion-Vaughan	37.00	39.52	37.80	-0.80	-2.2	
HY044	Milne Dam	1.60	2.08	1.63	-0.03	-1.9	
HY033	Heart Lake CA	12.80	13.24	13.03	-0.23	-1.8	
HY041	Tullamore	27.60	29.59	28.09	-0.49	-1.8	
TOR_RG-033	Nashdene Yard	1.50	2.22	1.52	-0.02	-1.3	
Caledon East RG	Caledon East	26.92	20.27	27.24	-0.32	-1.2	
HY027	G Ross Dam	43.80	34.86	44.32	-0.52	-1.2	
TOR_RG-014	Richview	67.75	59.11	68.26	-0.51	-0.8	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY060	Stouffville Dam	1.40	1.98	1.41	-0.01	-0.7	
STN 14	Fire Station #104	1.60	1.45	1.61	-0.01	-0.6	
HY030	Glen Haffy	12.00	15.22	12.00	0.00	0.0	
RG 42	Caledon Reservoir	9.75	12.97	9.75	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	7.20	13.89	7.20	0.00	0.0	
R_ET_MA03	2401 Denison St.	1.60	2.28	1.59	0.01	0.6	
RG 16	Hanlan	33.00	48.02	32.68	0.32	1.0	
TOR_RG-024	Wilson	57.25	44.38	56.20	1.05	1.8	
HY012	Caledon Pumping Station	27.80	20.29	27.27	0.53	1.9	
RG 31	East Brampton Res	15.00	16.55	14.71	0.29	1.9	
TOR_RG-017	Castlefield	35.75	32.88	35.00	0.75	2.1	
R-MUN-MA-09	Lincoln Alexander P.S.	12.50	18.37	12.21	0.29	2.3	
TOR_RG-035	Morningsidede Yard	1.50	1.64	1.46	0.04	2.7	
RG 32	RESERVOIR - AIRPORT	24.25	23.95	23.47	0.78	3.2	
TOR_RG-020	Finch Yard	48.00	36.59	46.46	1.54	3.2	
R_YR_VA03	4738 Steeles Ave. W.	62.00	50.01	59.85	2.15	3.5	
TOR_RG-013	Martin Grove	87.75	71.96	84.61	3.14	3.6	
HY011	Bruces Mill CA	8.80	8.34	8.46	0.34	3.9	
Mississauga RG	Mississauga	7.37	5.97	7.04	0.33	4.5	
TOR_RG-025	Ancaster	49.25	36.05	46.99	2.26	4.6	
STN 05	Winding Trail	44.00	47.50	41.81	2.19	5.0	
R_YR_VA04	2850 Rutherford Rd.	34.80	28.69	32.93	1.87	5.4	
HY003	Alex Duff Memorial Pool	40.40	32.00	38.13	2.27	5.6	
TOR_RG-027	Mitchell Field	40.39	31.67	38.05	2.34	5.8	
HY061	Sue Grange Farm	12.40	8.58	11.67	0.73	5.9	
R-MUN-MA-05	Thornhill C.C.	38.86	28.45	36.52	2.34	6.0	
STN 12	CVC Facility	22.20	24.18	20.77	1.43	6.4	
RG 29	RESERVOIR - NORTH BRAMPTON	14.00	12.97	13.08	0.92	6.6	
TOR_RG-012	Albion	56.75	42.98	53.01	3.74	6.6	
TOR_RG-023	Bermondsey Yard	40.25	29.71	37.14	3.11	7.7	
R-MUN-MA-16	Fire Hall #94	3.50	4.58	3.21	0.29	8.3	
TOR_RG-022	Fire Station 116	42.25	36.29	38.59	3.66	8.7	
TOR_RG-031	Liamoreaux	4.25	5.43	3.75	0.50	11.8	
R-MUN-MA-07	Stornoway P.S.	43.80	29.24	38.55	5.25	12.0	
TOR_RG-039	Mount Pleasant	48.50	35.96	42.65	5.85	12.1	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-018	Thorncliffe	46.75	33.06	41.05	5.70	12.2	
TOR_RG-040	Denton	32.50	20.06	28.52	3.98	12.2	
RG 26	McLaughlin	21.50	18.15	18.54	2.96	13.8	
HY046	Mississauga Works Yard	58.40	61.69	50.29	8.11	13.9	
R_YR_MA03	7021 Leslie Street	34.60	25.96	29.76	4.84	14.0	
TOR_RG-003	Central	37.00	26.40	31.58	5.42	14.6	
R_ET_NO01	65 Janet Ave.	51.80	44.35	44.02	7.78	15.0	
TOR_RG-006	Church	52.00	35.62	43.60	8.40	16.2	
HY039	Kortright	49.60	41.06	40.23	9.37	18.9	
R-MUN-MA-12	Markham Museum	2.60	2.41	2.10	0.50	19.2	
RG 20	PEEL YORK ODOUR CONTROL	61.75	50.98	44.95	16.80	27.2	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.00	---	---	---	---	C
HY004	Bayly and Church	0.20	---	---	---	---	MSTT
HY009	Brock West Landfill	0.20	---	---	---	---	MSTT
HY015	Claremont Shop	0.00	---	---	---	---	MSTT
HY025	Etobicoke at QEW	7.60	---	---	---	---	S
HY031	Goodwood Pumping Station	1.00	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.00	---	---	---	---	MSTT
HY050	Morningside Works Yard	0.40	---	---	---	---	MSTT
HY063	Transport Canada	0.60	---	---	---	---	MSTT
HY069	York Pumping Station	15.00	---	---	---	---	S
HY102	Petticoat Works Yard	0.00	---	---	---	---	MSTT
R-MUN-MA-15	Rouge River C.C.	1.25	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	12.00	---	---	---	---	U
RG 33	CASTLEMORE SEWAGE PUMPING	20.25	---	---	---	---	S
RG 34	MCVEAN SEWAGE PUMPING	23.75	---	---	---	---	T
STN 01	Fire Station #102	1.00	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	22.40	---	---	---	---	O
TOR_RG-016	Kipling	5.75	---	---	---	---	OAD

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-019	Jane	30.00	---	---	---	---	S
TOR_RG-021	Emery Yard	25.00	---	---	---	---	S
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-038	Fire Station 215	0.25	---	---	---	---	MSTT
TOR_RG-041	Poplar	0.75	---	---	---	---	MSTT
TOR_RG-042	Seminole	4.00	---	---	---	---	OAD

Table 16. Summary of Individual RG Pairs for Event 1k

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-016	Kipling	23.00	38.88	35.55	-12.55	-54.6	
Copper Road RG	Copper Road	3.80	5.74	5.11	-1.31	-34.5	
TOR_RG-012	Albion	12.75	15.71	15.95	-3.20	-25.1	
HY016	Danforth and Coxwell	4.00	5.34	4.96	-0.96	-24.0	
TOR_RG-020	Finch Yard	9.75	10.57	11.57	-1.82	-18.7	
RG 16	Hanlan	9.00	12.93	10.66	-1.66	-18.4	
RG 22	Bramalea	4.75	6.11	5.54	-0.79	-16.6	
TOR_RG-019	Jane	9.75	10.67	11.31	-1.56	-16.0	
TOR_RG-017	Castlefield	22.50	24.50	25.73	-3.23	-14.4	
STN 01	Fire Station #102	65.40	64.73	72.70	-7.30	-11.2	
TOR_RG-044	Fire Station 121	5.00	4.63	5.53	-0.53	-10.6	
TOR_RG-013	Martin Grove	25.50	25.08	28.00	-2.50	-9.8	
HY039	Kortright	23.40	20.22	25.64	-2.24	-9.6	
TOR_RG-028	Cummer	1.50	1.47	1.64	-0.14	-9.3	
RG 28	TANK - SNELGROVE	2.50	3.28	2.73	-0.23	-9.2	
R_YR_MA03	7021 Leslie Street	1.40	1.34	1.52	-0.12	-8.6	
TOR_RG-037	Edwards Gardens	2.25	2.16	2.42	-0.17	-7.6	
R_ET_NO01	65 Janet Ave.	13.80	13.09	14.77	-0.97	-7.0	
HY008	Brickworks	14.20	13.74	15.17	-0.97	-6.8	
STN 05	Winding Trail	32.60	36.04	34.59	-1.99	-6.1	
R-MUN-MA-09	Lincoln Alexander P.S.	1.75	1.74	1.85	-0.10	-5.7	
TOR_RG-002	Howard	34.50	33.12	36.12	-1.62	-4.7	
STN 12	CVC Facility	11.60	15.00	12.13	-0.53	-4.6	
HY061	Sue Grange Farm	2.80	3.23	2.91	-0.11	-3.9	
RG 29	RESERVOIR - NORTH BRAMPTON	3.50	3.98	3.62	-0.12	-3.4	
HY003	Alex Duff Memorial Pool	36.20	32.37	37.37	-1.17	-3.2	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R-MUN-MA-18	Angus Glen C.C.	1.75	1.66	1.80	-0.05	-2.9	
R-MUN-MA-15	Rouge River C.C.	1.50	1.97	1.54	-0.04	-2.7	
TOR_RG-007	Greenwood	7.25	7.84	7.43	-0.18	-2.5	
STN 13	Fire Station #105	20.40	23.65	20.82	-0.42	-2.1	
HY033	Heart Lake CA	4.40	4.78	4.49	-0.09	-2.0	
R_ET_VA01	4630 Langstaff Rd.	25.40	20.84	25.88	-0.48	-1.9	
RG 33	CASTLEMORE SEWAGE PUMPING	4.75	4.19	4.83	-0.08	-1.7	
HY064	TRCA Head Office	11.40	10.97	11.56	-0.16	-1.4	
TOR_RG-034	Ellesmere Yard	1.50	1.82	1.51	-0.01	-0.7	
STN 06	Mississauga Valley Community Centre	40.80	43.02	41.02	-0.22	-0.5	
HY037	King and Albion-Vaughan	4.40	4.23	4.41	-0.01	-0.2	
HY002	Albion Hills	2.70	2.28	2.70	0.00	0.0	
HY050	Morningside Works Yard	1.60	1.82	1.60	0.00	0.0	
HY069	York Pumping Station	3.00	2.09	3.00	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	14.80	12.05	14.80	0.00	0.0	
TOR_RG-018	Thorncliffe	4.50	4.36	4.50	0.00	0.0	
HY021	Dufferin Reservoir	5.00	3.55	4.96	0.04	0.8	
HY046	Mississauga Works Yard	13.40	15.30	13.25	0.15	1.1	
TOR_RG-003	Central	39.75	33.87	38.72	1.03	2.6	
RG 32	RESERVOIR - AIRPORT	5.25	4.54	5.10	0.15	2.9	
R_YR_VA04	2850 Rutherford Rd.	13.20	9.38	12.80	0.40	3.0	
RG 39	Inglewood Pumping Stn	2.00	1.89	1.93	0.07	3.5	
TOR_RG-006	Church	30.00	25.28	28.76	1.24	4.1	
STN 10	Fire Station #114	21.40	23.83	20.48	0.92	4.3	
RG 20	PEEL YORK ODOUR CONTROL	12.75	13.81	12.16	0.59	4.6	
STN 14	Fire Station #104	51.60	42.88	49.24	2.36	4.6	
RG 26	McLaughlin	6.50	5.29	6.18	0.32	4.9	
TOR_RG-001	Swansea	32.50	29.78	30.92	1.58	4.9	
R_YR_VA03	4738 Steeles Ave. W.	21.80	18.86	20.71	1.09	5.0	
HY041	Tullamore	4.40	3.40	4.14	0.26	5.9	
HY038	East Humber at Mill Road	21.60	16.95	20.29	1.31	6.1	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-025	Ancaster	10.75	8.20	10.06	0.69	6.4	
R-MUN-MA-16	Fire Hall #94	2.00	1.66	1.86	0.14	7.0	
TOR_RG-024	Wilson	24.75	18.46	22.90	1.85	7.5	
HY027	G Ross Dam	12.80	10.56	11.71	1.09	8.5	
TOR_RG-015	Bering	38.75	35.79	35.46	3.29	8.5	
HY055	Restoration Services	27.40	19.57	24.95	2.45	8.9	
TOR_RG-004	Brown	35.75	26.55	31.96	3.79	10.6	
RG 31	East Brampton Res	5.25	4.43	4.65	0.60	11.4	
STN 08	Fire Station #116	6.20	6.35	5.49	0.71	11.5	
HY025	Etobicoke at QEW	60.60	50.98	53.53	7.07	11.7	
R-MUN-MA-07	Stornoway P.S.	2.00	1.30	1.76	0.24	12.0	
Mississauga RG	Mississauga	69.85	54.85	61.07	8.78	12.6	
TOR_RG-014	Richview	34.25	24.77	29.94	4.31	12.6	
TOR_RG-027	Mitchell Field	3.30	2.33	2.87	0.43	13.0	
TOR_RG-039	Mount Pleasant	15.25	10.69	13.13	2.12	13.9	
TOR_RG-021	Emery Yard	16.25	12.76	13.92	2.33	14.3	
RG 25	RESERVOIR - BECKETT SPROULE	5.00	4.30	4.01	0.99	19.8	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	0.25	---	---	---	---	C
Caledon East RG	Caledon East	1.02	---	---	---	---	MSTT
HY004	Bayly and Church	0.20	---	---	---	---	MSTT
HY009	Brock West Landfill	0.40	---	---	---	---	MSTT
HY011	Bruces Mill CA	0.60	---	---	---	---	MSTT
HY012	Caledon Pumping Station	1.00	---	---	---	---	MSTT
HY015	Claremont Shop	1.20	---	---	---	---	MSTT
HY030	Glen Haffy	0.60	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	0.00	---	---	---	---	MSTT
HY036	Kennedy Pump Station	1.20	---	---	---	---	MSTT
HY043	Little Rouge at 16th	0.80	---	---	---	---	MSTT
HY044	Milne Dam	1.00	---	---	---	---	MSTT
HY060	Stouffville Dam	0.00	---	---	---	---	MSTT
HY063	Transport Canada	0.20	---	---	---	---	MSTT
HY070	York Region Works Yard	1.20	---	---	---	---	MSTT
HY102	Petticoat Works Yard	0.20	---	---	---	---	MSTT
R-MUN-MA-05	Thornhill C.C.	1.52	---	---	---	---	MSTT

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
R-MUN-MA-11	Milliken Mills C.C.	0.75	---	---	---	---	MSTT
R-MUN-MA-12	Markham Museum	1.00	---	---	---	---	MSTT
R-MUN-MA-13	Roy H Crosby P.S.	1.20	---	---	---	---	MSTT
R-MUN-MA-14	8100 Warden Ave	1.20	---	---	---	---	MSTT
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	8.00	---	---	---	---	U
RG 27	RESERVOIR - WEST BRAMPTON	2.25	---	---	---	---	OAD
RG 34	MCVEAN SEWAGE PUMPING	1.25	---	---	---	---	U
RG 42	Caledon Reservoir	0.50	---	---	---	---	MSTT
R_ET_MA03	2401 Denison St.	1.00	---	---	---	---	MSTT
STN 03	Wolfdale Works Yard	20.80	---	---	---	---	O
TOR_RG-022	Fire Station 116	1.25	---	---	---	---	MSTT
TOR_RG-023	Bermondsey Yard	1.00	---	---	---	---	MSTT
TOR_RG-030	Pharmacy/401	1.00	---	---	---	---	MSTT
TOR_RG-031	Liamoreaux	1.25	---	---	---	---	MSTT
TOR_RG-033	Nashdene Yard	1.25	---	---	---	---	MSTT
TOR_RG-035	Morningsidede Yard	1.25	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-038	Fire Station 215	1.00	---	---	---	---	MSTT
TOR_RG-040	Denton	1.00	---	---	---	---	MSTT
TOR_RG-041	Poplar	1.00	---	---	---	---	MSTT
TOR_RG-042	Seminole	0.75	---	---	---	---	MSTT

Table 17. Summary of Individual RG Pairs for Event 1l

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-016	Kipling	5.50	10.71	7.69	-2.19	-39.8	
TOR_RG-022	Fire Station 116	3.50	7.91	4.55	-1.05	-30.0	
TOR_RG-007	Greenwood	5.75	9.66	7.24	-1.49	-25.9	
Copper Road RG	Copper Road	22.09	30.25	26.86	-4.77	-21.6	
HY064	TRCA Head Office	5.80	8.90	7.05	-1.25	-21.6	
HY070	York Region Works Yard	5.20	8.65	6.25	-1.05	-20.2	
HY041	Tullamore	14.20	16.37	16.58	-2.38	-16.8	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-023	Bermondsey Yard	4.25	7.70	4.96	-0.71	-16.7	
STN 08	Fire Station #116	14.40	19.34	16.40	-2.00	-13.9	
TOR_RG-002	Howard	5.75	8.25	6.55	-0.80	-13.9	
R-MUN-MA-14	8100 Warden Ave	4.00	6.97	4.52	-0.52	-13.0	
TOR_RG-006	Church	6.75	9.64	7.51	-0.76	-11.3	
TOR_RG-040	Denton	4.75	8.02	5.26	-0.51	-10.7	
R_ET_MA03	2401 Denison St.	3.60	5.98	3.96	-0.36	-10.0	
HY061	Sue Grange Farm	14.60	18.73	15.97	-1.37	-9.4	
TOR_RG-028	Cummer	4.50	7.91	4.92	-0.42	-9.3	
TOR_RG-034	Ellesmere Yard	3.00	6.29	3.27	-0.27	-9.0	
HY033	Heart Lake CA	60.00	64.25	64.90	-4.90	-8.2	
TOR_RG-004	Brown	7.75	10.44	8.37	-0.62	-8.0	
TOR_RG-041	Poplar	4.00	7.45	4.32	-0.32	-8.0	
RG 20	PEEL YORK ODOUR CONTROL	30.50	32.19	32.80	-2.30	-7.5	
TOR_RG-025	Ancaster	6.00	8.57	6.42	-0.42	-7.0	
TOR_RG-030	Pharmacy/401	3.25	6.60	3.45	-0.20	-6.2	
RG 28	TANK - SNELGROVE	56.50	67.55	59.19	-2.69	-4.8	
TOR_RG-038	Fire Station 215	5.50	9.59	5.76	-0.26	-4.7	
TOR_RG-012	Albion	12.75	13.27	13.34	-0.59	-4.6	
HY036	Kennedy Pump Station	3.60	6.10	3.75	-0.15	-4.2	
STN 06	Mississauga Valley Community Centre	2.40	3.22	2.50	-0.10	-4.2	
HY012	Caledon Pumping Station	2.60	4.61	2.70	-0.10	-3.8	
TOR_RG-035	Morningsidede Yard	5.25	9.21	5.44	-0.19	-3.6	
STN 05	Winding Trail	4.00	5.34	4.14	-0.14	-3.5	
TOR_RG-003	Central	6.50	8.49	6.71	-0.21	-3.2	
R-MUN-MA-18	Angus Glen C.C.	5.50	8.00	5.66	-0.16	-2.9	
RG 22	Bramalea	39.00	39.72	40.03	-1.03	-2.6	
R-MUN-MA-12	Markham Museum	5.00	7.06	5.12	-0.12	-2.4	
HY027	G Ross Dam	6.00	8.71	6.14	-0.14	-2.3	
HY011	Bruces Mill CA	4.20	7.46	4.29	-0.09	-2.1	
R-MUN-MA-05	Thornhill C.C.	5.33	8.16	5.44	-0.11	-2.1	
HY055	Restoration Services	18.80	17.77	19.17	-0.37	-2.0	
STN 14	Fire Station #104	3.80	4.29	3.87	-0.07	-1.8	
TOR_RG-020	Finch Yard	6.00	8.57	6.11	-0.11	-1.8	
HY015	Claremont Shop	1.60	2.99	1.62	-0.02	-1.3	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY009	Brock West Landfill	4.40	7.39	4.45	-0.05	-1.1	
STN 12	CVC Facility	2.00	2.59	2.02	-0.02	-1.0	
R_YR_VA04	2850 Rutherford Rd.	8.80	9.20	8.88	-0.08	-0.9	
TOR_RG-037	Edwards Gardens	6.00	8.84	6.05	-0.05	-0.8	
HY039	Kortright	18.00	16.88	18.08	-0.08	-0.4	
R-MUN-MA-13	Roy H Crosby P.S.	5.40	7.60	5.42	-0.02	-0.4	
RG 26	McLaughlin	18.50	18.36	18.57	-0.07	-0.4	
TOR_RG-033	Nashdene Yard	4.50	7.17	4.52	-0.02	-0.4	
HY069	York Pumping Station	4.60	8.79	4.61	-0.01	-0.2	
TOR_RG-014	Richview	13.25	13.04	13.27	-0.02	-0.2	
HY037	King and Albion-Vaughan	13.00	11.81	13.01	-0.01	-0.1	
HY030	Glen Haffy	5.20	8.34	5.20	0.00	0.0	
RG 42	Caledon Reservoir	2.75	4.72	2.75	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	5.40	11.31	5.40	0.00	0.0	
HY004	Bayly and Church	6.00	9.42	5.98	0.02	0.3	
HY038	East Humber at Mill Road	24.40	18.65	24.33	0.07	0.3	
HY021	Dufferin Reservoir	7.00	7.79	6.97	0.03	0.4	
STN 03	Wolfdale Works Yard	2.80	3.52	2.79	0.01	0.4	
TOR_RG-044	Fire Station 121	6.50	9.48	6.47	0.03	0.5	
HY060	Stouffville Dam	3.30	3.81	3.28	0.02	0.6	
HY063	Transport Canada	1.60	2.21	1.59	0.01	0.6	
TOR_RG-031	Liamoreaux	3.75	6.11	3.71	0.04	1.1	
HY025	Etobicoke at QEW	5.20	6.44	5.14	0.06	1.2	
R-MUN-MA-16	Fire Hall #94	5.00	7.11	4.94	0.06	1.2	
TOR_RG-001	Swansea	6.75	8.25	6.61	0.14	2.1	
TOR_RG-021	Emery Yard	9.50	10.07	9.30	0.20	2.1	
Caledon East RG	Caledon East	2.79	4.61	2.70	0.09	3.2	
RG 33	CASTLEMORE SEWAGE PUMPING	33.25	24.31	32.20	1.05	3.2	
R-MUN-MA-11	Milliken Mills C.C.	4.00	6.03	3.86	0.14	3.5	
TOR_RG-013	Martin Grove	20.00	18.24	19.29	0.71	3.6	
Mississauga RG	Mississauga	5.33	5.93	5.12	0.21	3.9	
RG 16	Hanlan	13.25	14.89	12.67	0.58	4.4	
HY044	Milne Dam	5.80	7.56	5.52	0.28	4.8	
TOR_RG-042	Seminole	3.75	6.51	3.57	0.18	4.8	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
HY102	Petticoat Works Yard	7.40	10.13	7.00	0.40	5.4	
R_ET_VA01	4630 Langstaff Rd.	16.40	14.24	15.51	0.89	5.4	
TOR_RG-019	Jane	7.75	9.09	7.33	0.42	5.4	
RG 39	Inglewood Pumping Stn	23.00	20.18	21.63	1.37	6.0	
TOR_RG-017	Castlefield	8.75	9.34	8.20	0.55	6.3	
TOR_RG-024	Wilson	10.25	10.26	9.58	0.67	6.5	
TOR_RG-039	Mount Pleasant	9.00	10.48	8.35	0.65	7.2	
TOR_RG-027	Mitchell Field	6.35	8.90	5.85	0.50	7.9	
RG 32	RESERVOIR - AIRPORT	52.75	35.79	48.47	4.28	8.1	
R_YR_VA03	4738 Steeles Ave. W.	12.80	11.64	11.76	1.04	8.1	
STN 13	Fire Station #105	25.00	21.02	22.85	2.15	8.6	
HY050	Morningside Works Yard	5.20	8.09	4.74	0.46	8.8	
STN 01	Fire Station #102	4.80	4.89	4.37	0.43	9.0	
TOR_RG-015	Bering	7.25	8.05	6.47	0.78	10.8	
R-MUN-MA-15	Rouge River C.C.	6.25	7.41	5.57	0.68	10.9	
HY016	Danforth and Coxwell	7.80	9.35	6.92	0.88	11.3	
TOR_RG-018	Thorncliffe	8.25	9.44	7.27	0.98	11.9	
HY003	Alex Duff Memorial Pool	7.80	8.63	6.85	0.95	12.2	
R_YR_MA03	7021 Leslie Street	5.60	7.61	4.90	0.70	12.5	
RG 31	East Brampton Res	91.75	67.64	79.95	11.80	12.9	
HY008	Brickworks	10.00	10.89	8.67	1.33	13.3	
HY046	Mississauga Works Yard	33.20	29.14	28.75	4.45	13.4	
R-MUN-MA-09	Lincoln Alexander P.S.	7.75	8.64	6.28	1.47	19.0	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	3.30	---	---	---	---	C
HY002	Albion Hills	12.90	---	---	---	---	OMFB
HY031	Goodwood Pumping Station	0.60	---	---	---	---	MSTT
HY043	Little Rouge at 16th	4.40	---	---	---	---	T
R-MUN-MA-07	Stornoway P.S.	1.60	---	---	---	---	S
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
RG 23	BRITANNIA LEACHATE PUMPING	15.50	---	---	---	---	O
RG 25	RESERVOIR - BECKETT SPROULE	49.50	---	---	---	---	O

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 27	RESERVOIR - WEST BRAMPTON	24.50	---	---	---	---	O
RG 29	RESERVOIR - NORTH BRAMPTON	74.50	---	---	---	---	O
RG 34	MCVEAN SEWAGE PUMPING	8.50	---	---	---	---	U
R_ET_NO01	65 Janet Ave.	33.60	---	---	---	---	OMFB
STN 10	Fire Station #114	0.20	---	---	---	---	MSTT
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND

Table 18. Summary of Individual RG Pairs for Event 1m

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
STN 10	Fire Station #114	4.00	9.75	5.74	-1.74	-43.5	
TOR_RG-022	Fire Station 116	2.50	6.56	3.19	-0.69	-27.6	
HY070	York Region Works Yard	2.00	4.87	2.48	-0.48	-24.0	
TOR_RG-016	Kipling	3.50	6.67	4.11	-0.61	-17.4	
R-MUN-MA-12	Markham Museum	1.60	4.05	1.86	-0.26	-16.2	
TOR_RG-007	Greenwood	3.50	6.29	3.97	-0.47	-13.4	
HY033	Heart Lake CA	4.80	9.29	5.41	-0.61	-12.7	
HY046	Mississauga Works Yard	4.60	10.06	5.17	-0.57	-12.4	
R-MUN-MA-18	Angus Glen C.C.	2.00	4.62	2.23	-0.23	-11.5	
RG 22	Bramalea	4.75	10.27	5.28	-0.53	-11.2	
R_ET_MA03	2401 Denison St.	1.60	3.63	1.76	-0.16	-10.0	
HY055	Restoration Services	3.00	6.18	3.28	-0.28	-9.3	
R-MUN-MA-13	Roy H Crosby P.S.	1.60	3.59	1.74	-0.14	-8.7	
TOR_RG-024	Wilson	4.00	7.70	4.33	-0.33	-8.3	
R_YR_VA03	4738 Steeles Ave. W.	4.20	8.18	4.53	-0.33	-7.9	
HY038	East Humber at Mill Road	2.40	5.88	2.58	-0.18	-7.5	
TOR_RG-002	Howard	4.25	7.54	4.57	-0.32	-7.5	
TOR_RG-030	Pharmacy/401	2.50	5.40	2.66	-0.16	-6.4	
RG 32	RESERVOIR - AIRPORT	4.50	8.52	4.78	-0.28	-6.2	
RG 27	RESERVOIR - WEST BRAMPTON	6.25	12.63	6.63	-0.38	-6.1	
RG 25	RESERVOIR - BECKETT SPROULE	5.75	11.49	6.09	-0.34	-5.9	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
TOR_RG-040	Denton	3.75	6.52	3.95	-0.20	-5.3	
HY008	Brickworks	4.20	6.85	4.42	-0.22	-5.2	
TOR_RG-031	Liamoreaux	2.00	4.36	2.10	-0.10	-5.0	
TOR_RG-020	Finch Yard	4.75	8.13	4.97	-0.22	-4.6	
STN 05	Winding Trail	5.80	9.36	6.06	-0.26	-4.5	
HY041	Tullamore	5.00	9.19	5.22	-0.22	-4.4	
TOR_RG-012	Albion	4.50	8.65	4.66	-0.16	-3.6	
STN 13	Fire Station #105	4.20	8.62	4.34	-0.14	-3.3	
TOR_RG-025	Ancaster	4.50	8.09	4.65	-0.15	-3.3	
TOR_RG-041	Poplar	1.50	2.70	1.55	-0.05	-3.3	
STN 01	Fire Station #102	3.00	4.44	3.09	-0.09	-3.0	
TOR_RG-003	Central	4.00	6.66	4.11	-0.11	-2.8	
RG 28	TANK - SNELGROVE	5.50	9.71	5.65	-0.15	-2.7	
HY061	Sue Grange Farm	5.40	8.78	5.54	-0.14	-2.6	
HY064	TRCA Head Office	5.20	8.39	5.33	-0.13	-2.5	
RG 16	Hanlan	6.50	12.10	6.64	-0.14	-2.2	
TOR_RG-044	Fire Station 121	4.00	7.32	4.09	-0.09	-2.2	
TOR_RG-023	Bermondsey Yard	4.25	7.26	4.34	-0.09	-2.1	
HY036	Kennedy Pump Station	2.00	4.22	2.04	-0.04	-2.0	
HY002	Albion Hills	5.10	11.64	5.19	-0.09	-1.8	
TOR_RG-013	Martin Grove	4.75	8.50	4.83	-0.08	-1.7	
HY037	King and Albion-Vaughan	3.40	8.31	3.45	-0.05	-1.5	
TOR_RG-017	Castlefield	5.50	9.31	5.58	-0.08	-1.5	
HY021	Dufferin Reservoir	3.50	6.29	3.55	-0.05	-1.4	
TOR_RG-037	Edwards Gardens	4.25	7.36	4.31	-0.06	-1.4	
TOR_RG-021	Emery Yard	5.00	8.59	5.06	-0.06	-1.2	
TOR_RG-015	Bering	5.75	9.61	5.81	-0.06	-1.0	
HY011	Bruces Mill CA	1.80	4.34	1.81	-0.01	-0.6	
TOR_RG-033	Nashdene Yard	1.75	3.62	1.76	-0.01	-0.6	
HY012	Caledon Pumping Station	5.80	10.99	5.81	-0.01	-0.2	
HY030	Glen Haffy	4.80	10.68	4.81	-0.01	-0.2	
HY069	York Pumping Station	2.80	6.23	2.80	0.00	0.0	
Mississauga RG	Mississauga	3.05	4.42	3.05	0.00	0.0	
R-MUN-MA-14	8100 Warden Ave	2.00	3.92	2.00	0.00	0.0	
R_YR_AU02	242 St John's Sideroad	2.00	4.45	2.00	0.00	0.0	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
STN 06	Mississauga Valley Community Centre	4.80	7.23	4.80	0.00	0.0	
RG 31	East Brampton Res	5.00	9.22	4.99	0.01	0.2	
RG 42	Caledon Reservoir	4.75	6.71	4.74	0.01	0.2	
Caledon East RG	Caledon East	5.84	10.99	5.81	0.03	0.5	
R_YR_MA03	7021 Leslie Street	3.20	5.66	3.18	0.02	0.6	
R_YR_VA04	2850 Rutherford Rd.	3.60	6.34	3.58	0.02	0.6	
HY102	Petticoat Works Yard	1.40	2.18	1.39	0.01	0.7	
TOR_RG-006	Church	3.50	5.49	3.47	0.03	0.9	
HY043	Little Rouge at 16th	1.60	3.33	1.58	0.02	1.3	
HY050	Morningside Works Yard	1.60	2.72	1.58	0.02	1.3	
RG 34	MCVEAN SEWAGE PUMPING	4.50	8.01	4.43	0.07	1.6	
TOR_RG-034	Ellesmere Yard	2.25	4.19	2.21	0.04	1.8	
HY003	Alex Duff Memorial Pool	4.40	6.92	4.31	0.09	2.0	
STN 14	Fire Station #104	2.40	3.34	2.35	0.05	2.1	
RG 39	Inglewood Pumping Stn	7.50	10.78	7.33	0.17	2.3	
TOR_RG-035	Morningsidede Yard	1.75	2.94	1.71	0.04	2.3	
TOR_RG-042	Seminole	2.50	4.37	2.44	0.06	2.4	
HY039	Kortright	3.20	5.87	3.12	0.08	2.5	
HY027	G Ross Dam	5.00	8.00	4.85	0.15	3.0	
TOR_RG-004	Brown	4.75	7.07	4.59	0.16	3.4	
STN 03	Wolfdale Works Yard	4.20	5.59	4.04	0.16	3.8	
HY044	Milne Dam	1.80	3.54	1.73	0.07	3.9	
TOR_RG-028	Cummer	3.50	6.18	3.36	0.14	4.0	
R-MUN-MA-16	Fire Hall #94	2.00	3.90	1.91	0.09	4.5	
TOR_RG-014	Richview	5.75	9.25	5.47	0.28	4.9	
Copper Road RG	Copper Road	6.29	11.17	5.90	0.39	6.2	
R_ET_VA01	4630 Langstaff Rd.	4.20	7.09	3.94	0.26	6.2	
TOR_RG-001	Swansea	5.50	8.51	5.16	0.34	6.2	
RG 20	PEEL YORK ODOUR CONTROL	5.25	9.59	4.92	0.33	6.3	
R_ET_NO01	65 Janet Ave.	3.00	6.10	2.81	0.19	6.3	
R-MUN-MA-11	Milliken Mills C.C.	2.00	3.80	1.86	0.14	7.0	
TOR_RG-018	Thorncliffe	5.25	7.60	4.87	0.38	7.2	
R-MUN-MA-05	Thornhill C.C.	3.81	5.97	3.53	0.28	7.3	
RG 26	McLaughlin	7.25	11.14	6.71	0.54	7.4	

Gauge ID	Name	G_i (mm)	R_i (mm)	R_i* (mm)	Diff* (mm)	Diff* (%)	Flag
RG 33	CASTLEMORE SEWAGE PUMPING	5.50	8.81	5.06	0.44	8.0	
STN 12	CVC Facility	10.80	13.61	9.82	0.98	9.1	
HY016	Danforth and Coxwell	4.60	6.54	4.13	0.47	10.2	
STN 08	Fire Station #116	7.00	11.37	6.28	0.72	10.3	
TOR_RG-039	Mount Pleasant	5.50	7.40	4.89	0.61	11.1	
HY025	Etobicoke at QEW	5.20	6.66	4.51	0.69	13.3	
RG 29	RESERVOIR - NORTH BRAMPTON	6.00	8.54	5.20	0.80	13.3	
R-MUN-MA-15	Rouge River C.C.	2.00	3.37	1.72	0.28	14.0	
TOR_RG-019	Jane	6.25	8.49	5.37	0.88	14.1	
RG 23	BRITANNIA LEACHATE PUMPING	6.00	7.29	5.00	1.00	16.7	
R-MUN-MA-09	Lincoln Alexander P.S.	3.00	4.60	2.39	0.61	20.3	
BOLTON SEWAGE PUMPING	BOLTON SEWAGE PUMPING	11.18	---	---	---	---	C
HY004	Bayly and Church	1.20	---	---	---	---	MSTT
HY009	Brock West Landfill	1.20	---	---	---	---	MSTT
HY015	Claremont Shop	1.20	---	---	---	---	MSTT
HY031	Goodwood Pumping Station	1.20	---	---	---	---	MSTT
HY060	Stouffville Dam	1.00	---	---	---	---	MSTT
HY063	Transport Canada	1.20	---	---	---	---	MSTT
R-MUN-MA-07	Stornoway P.S.	9.40	---	---	---	---	O
R-MUN-MA-21	Parkland P.S.	ND	---	---	---	---	ND
R-MUN-MA-22	11091 Warden Ave	ND	---	---	---	---	ND
TOR_RG-027	Mitchell Field	2.29	---	---	---	---	OAD
TOR_RG-036	Ashbridges Bay	ND	---	---	---	---	ND
TOR_RG-038	Fire Station 215	1.00	---	---	---	---	MSTT

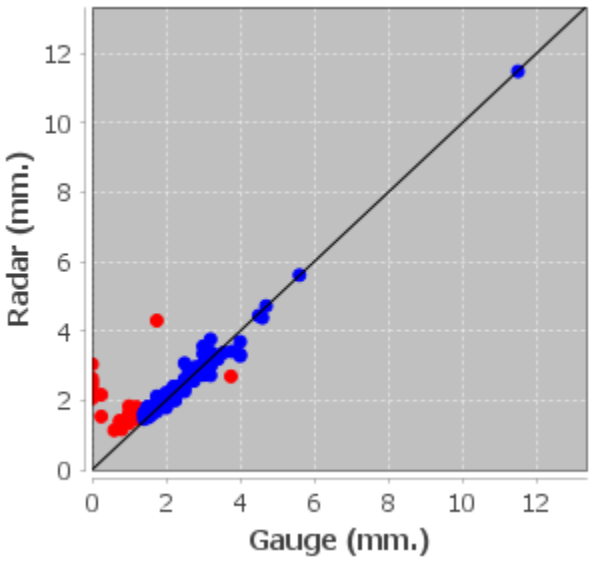


Figure 3. Scatter Plot of RG Pairs for Event 1a

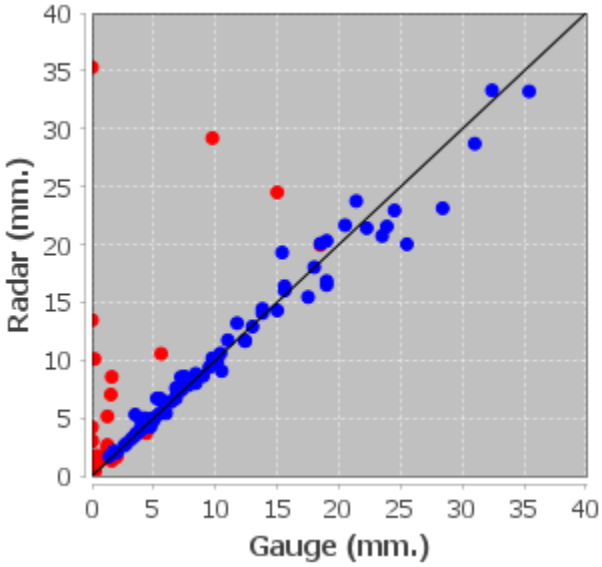


Figure 4. Scatter Plot of RG Pairs for Event 1b

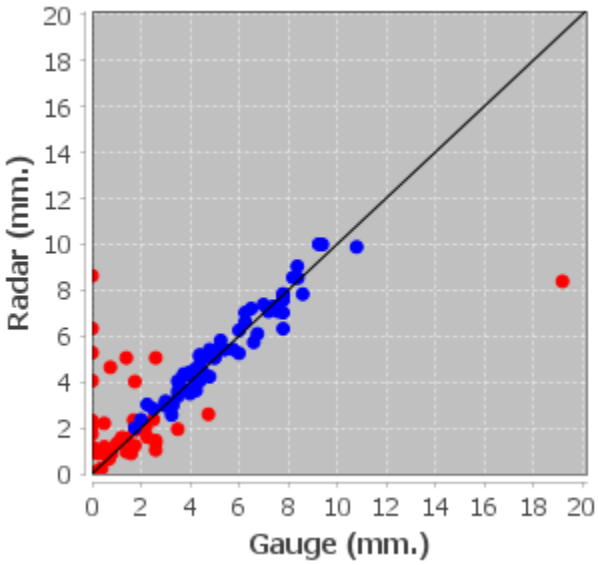


Figure 5. Scatter Plot of RG Pairs for Event 1c

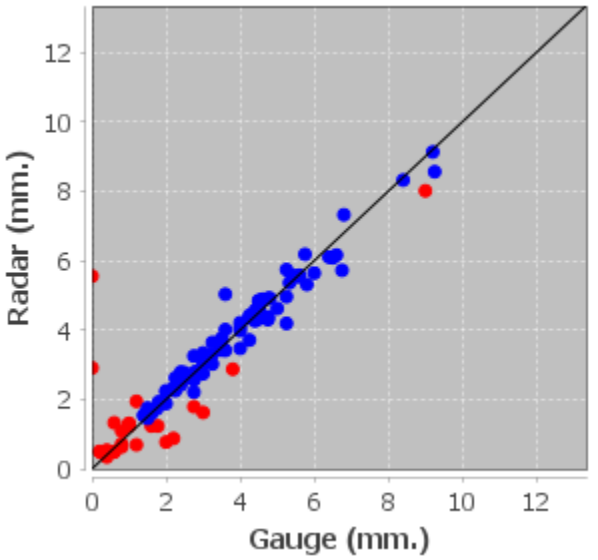


Figure 6. Scatter Plot of RG Pairs for Event 1d

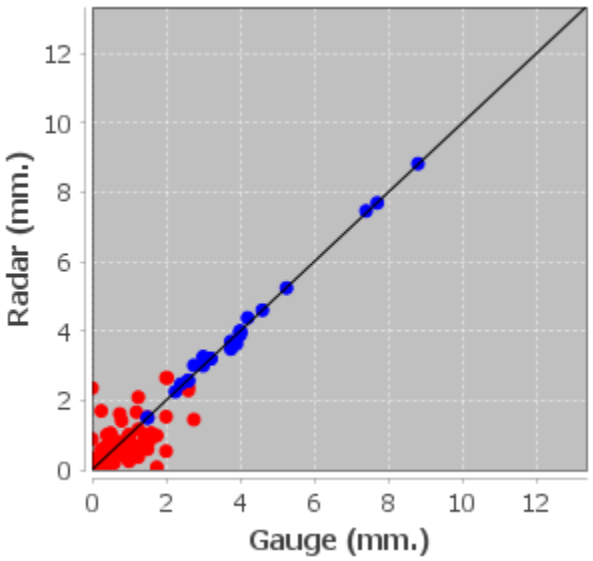


Figure 7. Scatter Plot of RG Pairs for Event 1e

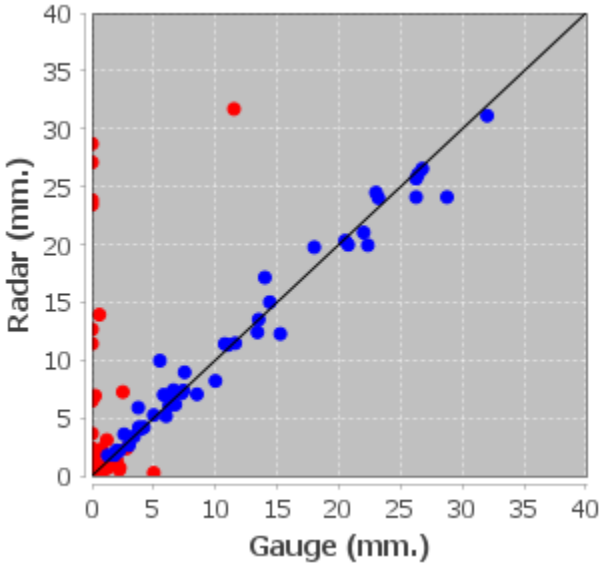


Figure 8. Scatter Plot of RG Pairs for Event 1f

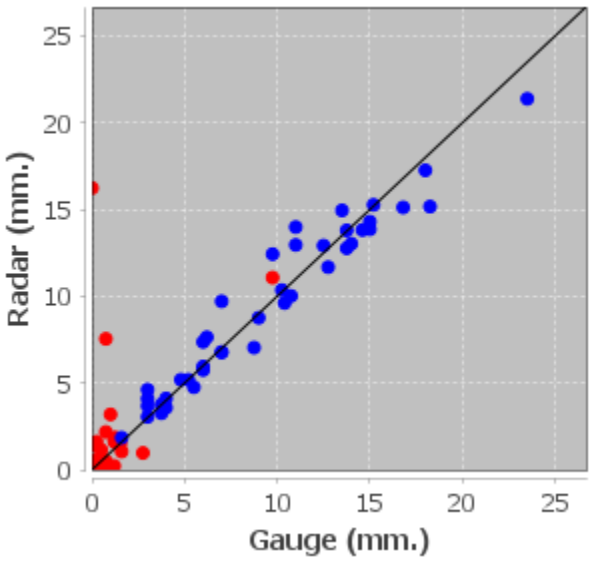


Figure 9. Scatter Plot of RG Pairs for Event 1g

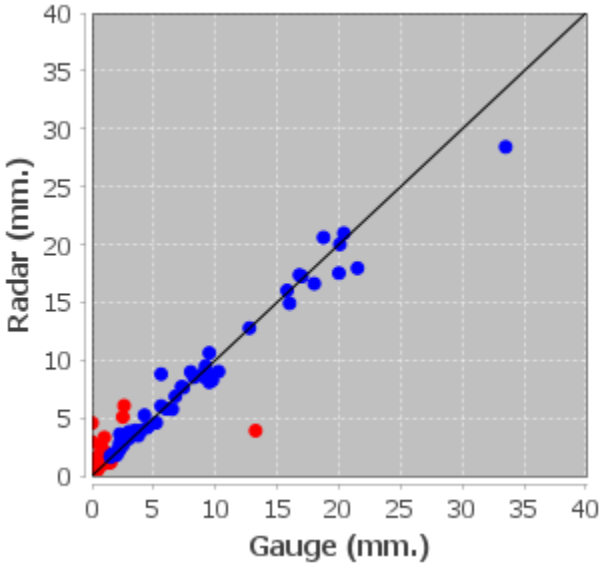


Figure 10. Scatter Plot of RG Pairs for Event 1h

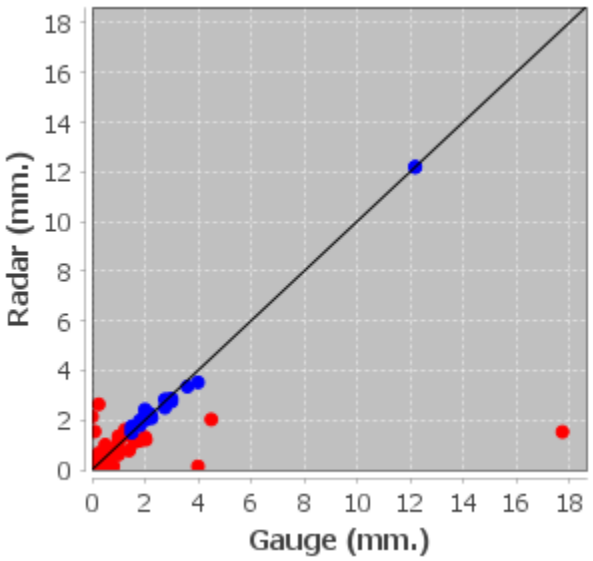


Figure 11. Scatter Plot of RG Pairs for Event 1i

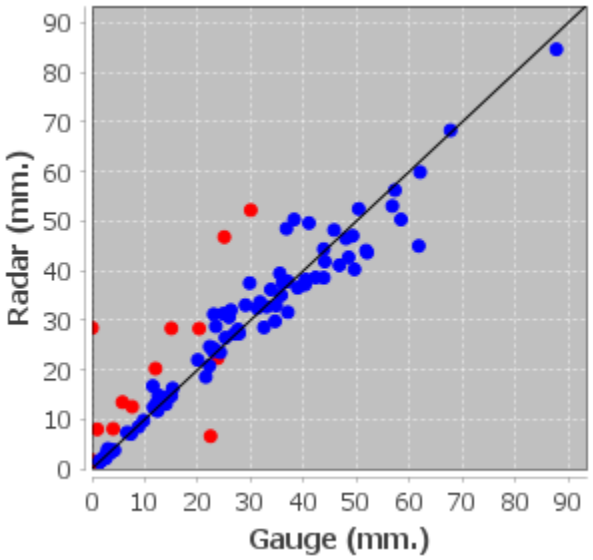


Figure 12. Scatter Plot of RG Pairs for Event 1j

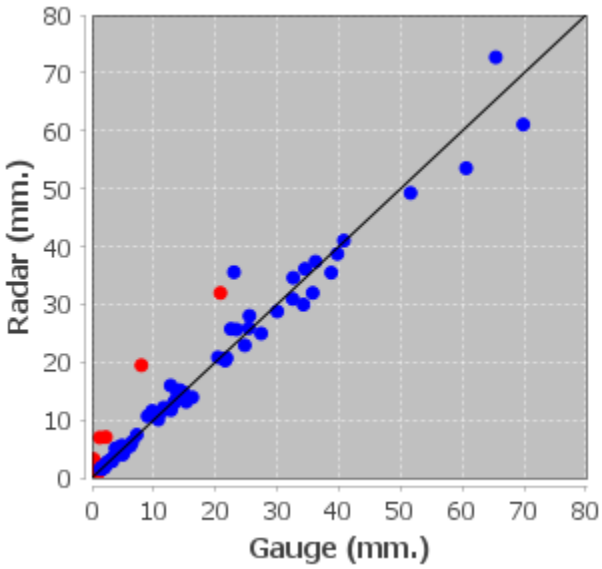


Figure 13. Scatter Plot of RG Pairs for Event 1k

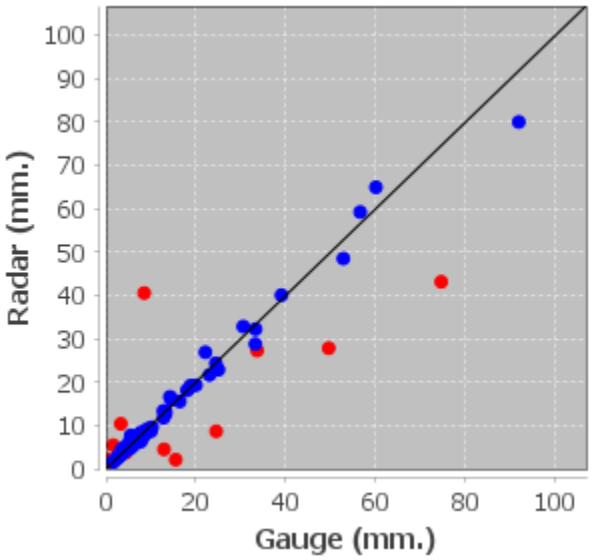


Figure 14. Scatter Plot of RG Pairs for Event 1l

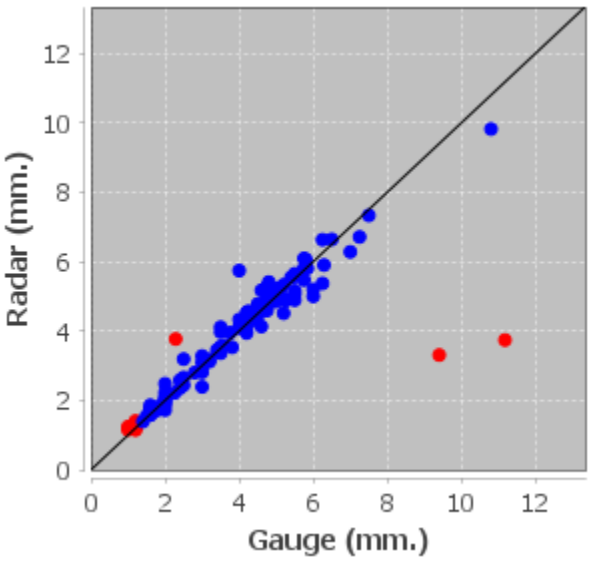


Figure 15. Scatter Plot of RG Pairs for Event 1m

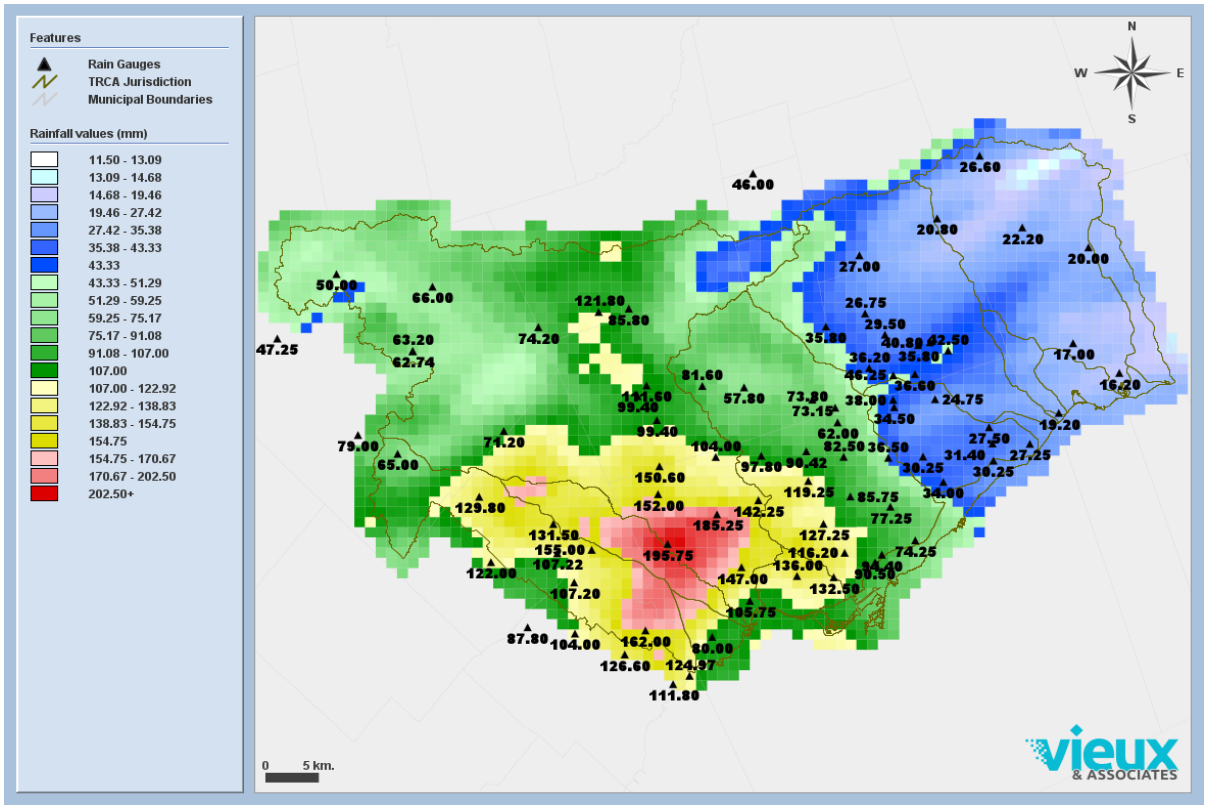


Figure 16. GARR Storm Total for Event 1

Appendices

Appendix A - Gauge Performance Exclusion Table
Appendix B - Gauge Statistical Criteria Exclusion Table
Appendix C - Event 1 (2013-07-08) CDPs

Appendix A - Gauge Performance Exclusion Table

Reason	Explanation
Clog (C)	Gauge appeared to be clogged
Zero (Z)	Gauge did not report any rainfall while radar rainfall estimates reported significant rainfall
Stop (S)	Gauge appeared to stop reporting rainfall while radar rainfall estimates reported significant rainfall
Over (O)	Gauge appeared to significantly over-report rainfall as compared to radar rainfall estimates and surrounding gauges (e.g. anomalously high rainfall values caused by field calibration, data transmission error, or switch malfunctions)
Under (U)	Gauge appeared to significantly under-report as compared to radar rainfall estimates and surrounding Gauges (e.g. half-tipper)
Sync (SY)	Gauge appeared to be reporting out-of-sync with the radar rainfall estimates
Frozen/Melt (F/M)	Gauge not reporting properly due to frozen or melting precipitation
Other (T)	Combination of multiple reasons
No Data (ND)	Gauge reported "no data" for a significant amount of time

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
HY002					
HY003					
HY004					
HY008					
HY009					
HY011					
HY012					
HY015					
HY016					
HY021					
HY025					
HY027					
HY030					
HY031					
HY033					
HY036					
HY037					
HY038					
HY039					
HY041					
HY043		S	O		
HY044					
HY046					
HY050					
HY055					
HY060					
HY061					
HY063					

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
HY064					
HY069					
HY070					
HY102					
BOLTON SEWAGE PUMPING		C	C	C	C
Caledon East RG					
Copper Road RG					
Mississauga RG					
RG 16		S	Z		
RG 20					
RG 22					
RG 23	O	T	T	T	O
RG 25					
RG 26					
RG 27	S	S			
RG 28					
RG 29					
RG 31					
RG 32	Z	Z	Z	Z	Z
RG 33					
RG 34	Z	Z	Z		
RG 39					
RG 42					
STN 01					
STN 03	Z	Z	Z	Z	
STN 05					

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
STN 06					
STN 08					
STN 10					
STN 12					
STN 13		U			
STN 14	Z				
TOR_RG-001					
TOR_RG-002		Z	Z		
TOR_RG-003			Z		
TOR_RG-004					
TOR_RG-006					
TOR_RG-007					
TOR_RG-012					
TOR_RG-013					
TOR_RG-014	Z				
TOR_RG-015		S	Z		
TOR_RG-016					
TOR_RG-017					
TOR_RG-018	S				
TOR_RG-019					
TOR_RG-020	Z	Z	S		
TOR_RG-021					
TOR_RG-022					
TOR_RG-023					
TOR_RG-024					
TOR_RG-025					
TOR_RG-027					
TOR_RG-028					

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
TOR_RG-030					
TOR_RG-031					
TOR_RG-033					
TOR_RG-034					
TOR_RG-035					
TOR_RG-036	ND	ND	ND	ND	ND
TOR_RG-037					
TOR_RG-038					
TOR_RG-039					
TOR_RG-040					
TOR_RG-041					
TOR_RG-042					
TOR_RG-044					
R_ET_MA03					
R_ET_NO01					
R_ET_VA01					
R_YR_AU02					
R_YR_MA03					
R_YR_VA03					
R_YR_VA04					
R-MUN-MA-05					
R-MUN-MA-07					
R-MUN-MA-09					
R-MUN-MA-11					
R-MUN-MA-12		S	S		
R-MUN-MA-13					
R-MUN-MA-14					
R-MUN-MA-15					

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
R-MUN-MA-16					
R-MUN-MA-18					
R-MUN-MA-21	ND	ND	ND	ND	ND
R-MUN-MA-22	ND	ND	ND	ND	ND

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
HY002					
HY003					
HY004					
HY008					
HY009					
HY011					
HY012					
HY015					
HY016					
HY021					
HY025					S
HY027					
HY030					
HY031					
HY033					
HY036					
HY037					
HY038					
HY039					
HY041					
HY043					
HY044					
HY046					
HY050					
HY055					
HY060					
HY061					
HY063					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
HY064					
HY069					S
HY070					
HY102					
BOLTON SEWAGE PUMPING	C			C	C
Caledon East RG					
Copper Road RG					
Mississauga RG					
RG 16					
RG 20	Z				
RG 22					
RG 23	O		O	O	U
RG 25					
RG 26					
RG 27					
RG 28	Z				
RG 29	U	S	S		
RG 31	Z				
RG 32	Z	Z	Z	O	
RG 33					S
RG 34	Z	T	U		T
RG 39					
RG 42					
STN 01					
STN 03			Z	Z	O
STN 05					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
STN 06					
STN 08					
STN 10					
STN 12					
STN 13					
STN 14			S		
TOR_RG-001					
TOR_RG-002					
TOR_RG-003	Z				
TOR_RG-004	Z				
TOR_RG-006					
TOR_RG-007					
TOR_RG-012					
TOR_RG-013					
TOR_RG-014					
TOR_RG-015					
TOR_RG-016					
TOR_RG-017					
TOR_RG-018					
TOR_RG-019					S
TOR_RG-020					
TOR_RG-021					S
TOR_RG-022					
TOR_RG-023					
TOR_RG-024					
TOR_RG-025					
TOR_RG-027					
TOR_RG-028					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
TOR_RG-030					
TOR_RG-031					
TOR_RG-033					
TOR_RG-034					
TOR_RG-035					
TOR_RG-036	ND	ND	ND	ND	ND
TOR_RG-037					
TOR_RG-038					
TOR_RG-039					
TOR_RG-040					
TOR_RG-041					
TOR_RG-042					
TOR_RG-044					
R_ET_MA03					
R_ET_NO01					
R_ET_VA01					
R_YR_AU02					
R_YR_MA03					
R_YR_VA03					
R_YR_VA04					
R-MUN-MA-05					
R-MUN-MA-07					
R-MUN-MA-09				O	
R-MUN-MA-11					
R-MUN-MA-12					
R-MUN-MA-13					
R-MUN-MA-14					
R-MUN-MA-15					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
R-MUN-MA-16					
R-MUN-MA-18					
R-MUN-MA-21	ND	ND	ND	ND	ND
R-MUN-MA-22	ND	ND	ND	ND	ND

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
HY002			
HY003			
HY004			
HY008			
HY009			
HY011			
HY012			
HY015			
HY016			
HY021			
HY025			
HY027			
HY030			
HY031			
HY033			
HY036			
HY037			
HY038			
HY039			
HY041			
HY043		T	
HY044			
HY046			
HY050			
HY055			
HY060			
HY061			
HY063			
HY064			

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
HY069			
HY070			
HY102			
BOLTON SEWAGE PUMPING	C	C	C
Caledon East RG			
Copper Road RG			
Mississauga RG			
RG 16			
RG 20			
RG 22			
RG 23	U	O	
RG 25		O	
RG 26			
RG 27		O	
RG 28			
RG 29		O	
RG 31			
RG 32			
RG 33			
RG 34	U	U	
RG 39			
RG 42			
STN 01			
STN 03	O		
STN 05			
STN 06			
STN 08			
STN 10			
STN 12			

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
STN 13			
STN 14			
TOR_RG-001			
TOR_RG-002			
TOR_RG-003			
TOR_RG-004			
TOR_RG-006			
TOR_RG-007			
TOR_RG-012			
TOR_RG-013			
TOR_RG-014			
TOR_RG-015			
TOR_RG-016			
TOR_RG-017			
TOR_RG-018			
TOR_RG-019			
TOR_RG-020			
TOR_RG-021			
TOR_RG-022			
TOR_RG-023			
TOR_RG-024			
TOR_RG-025			
TOR_RG-027			
TOR_RG-028			
TOR_RG-030			
TOR_RG-031			
TOR_RG-033			
TOR_RG-034			
TOR_RG-035			

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
TOR_RG-036	ND	ND	ND
TOR_RG-037			
TOR_RG-038			
TOR_RG-039			
TOR_RG-040			
TOR_RG-041			
TOR_RG-042			
TOR_RG-044			
R_ET_MA03			
R_ET_NO01			
R_ET_VA01			
R_YR_AU02			
R_YR_MA03			
R_YR_VA03			
R_YR_VA04			
R-MUN-MA-05			
R-MUN-MA-07		S	O
R-MUN-MA-09			
R-MUN-MA-11			
R-MUN-MA-12			
R-MUN-MA-13			
R-MUN-MA-14			
R-MUN-MA-15			
R-MUN-MA-16			
R-MUN-MA-18			
R-MUN-MA-21	ND	ND	ND
R-MUN-MA-22	ND	ND	ND

Appendix B - Gauge Statistical Criteria Exclusion Table

Reason	Explanation
Minimum Storm Total Threshold (MSTT)	The radar or gauge cumulative sum during the event or sub-event period was less than MSTT
Outlier Based on Mean Field Bias (OMFB)	The RG pair bias (G/R) was greater than three standard deviations from the mean bias (e.g. G>>R)
Outlier Based on Average Difference (OAD)	The RG pair average difference ((G-R)/G)) was greater than three standard deviations from the mean average difference (e.g. G<<R)

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
HY002			MSTT		
HY003	MSTT	MSTT			MSTT
HY004		MSTT	MSTT		MSTT
HY008		MSTT			MSTT
HY009	MSTT		MSTT	MSTT	MSTT
HY011	MSTT		MSTT	MSTT	
HY012			MSTT	MSTT	MSTT
HY015				MSTT	MSTT
HY016		MSTT			MSTT
HY021			MSTT		
HY025					MSTT
HY027					MSTT
HY030				MSTT	
HY031	MSTT			MSTT	
HY033		MSTT	MSTT	OMFB	MSTT
HY036					MSTT
HY037			MSTT	MSTT	MSTT
HY038		OMFB	MSTT	MSTT	MSTT
HY039					
HY041			MSTT	MSTT	MSTT
HY043	MSTT			MSTT	MSTT
HY044	MSTT				MSTT
HY046					MSTT
HY050		MSTT			MSTT
HY055					
HY060	MSTT		MSTT	MSTT	
HY061			MSTT	MSTT	MSTT

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
HY063	MSTT			MSTT	
HY064					MSTT
HY069	MSTT			MSTT	
HY070	MSTT		MSTT		
HY102		MSTT	MSTT		MSTT
BOLTON SEWAGE PUMPING					
Caledon East RG			MSTT	MSTT	MSTT
Copper Road RG					MSTT
Mississauga RG		MSTT			MSTT
RG 16					
RG 20					MSTT
RG 22					MSTT
RG 23					
RG 25					MSTT
RG 26					MSTT
RG 27			MSTT		MSTT
RG 28		MSTT	MSTT	MSTT	
RG 29		MSTT	MSTT	MSTT	
RG 31			MSTT		MSTT
RG 32					
RG 33		MSTT	MSTT		
RG 34					MSTT
RG 39			MSTT	OMFB	
RG 42			MSTT	MSTT	
STN 01					MSTT

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
STN 03					MSTT
STN 05					MSTT
STN 06					MSTT
STN 08					MSTT
STN 10					MSTT
STN 12					MSTT
STN 13			OAD		MSTT
STN 14		MSTT			MSTT
TOR_RG-001					MSTT
TOR_RG-002	MSTT				MSTT
TOR_RG-003		MSTT			MSTT
TOR_RG-004	MSTT	MSTT			MSTT
TOR_RG-006		MSTT			MSTT
TOR_RG-007		MSTT			MSTT
TOR_RG-012					MSTT
TOR_RG-013					MSTT
TOR_RG-014					
TOR_RG-015					MSTT
TOR_RG-016					MSTT
TOR_RG-017					MSTT
TOR_RG-018		MSTT			MSTT
TOR_RG-019					MSTT
TOR_RG-020					MSTT
TOR_RG-021					MSTT
TOR_RG-022					
TOR_RG-023		MSTT			MSTT
TOR_RG-024					

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
TOR_RG-025					MSTT
TOR_RG-027					MSTT
TOR_RG-028					MSTT
TOR_RG-030	MSTT		MSTT		MSTT
TOR_RG-031					MSTT
TOR_RG-033	MSTT				MSTT
TOR_RG-034	MSTT				MSTT
TOR_RG-035	MSTT	MSTT			MSTT
TOR_RG-036					
TOR_RG-037	MSTT		MSTT		MSTT
TOR_RG-038		MSTT	MSTT		MSTT
TOR_RG-039	MSTT		OMFB		MSTT
TOR_RG-040		MSTT			MSTT
TOR_RG-041		MSTT			MSTT
TOR_RG-042		MSTT			MSTT
TOR_RG-044					MSTT
R_ET_MA03					MSTT
R_ET_NO01				MSTT	MSTT
R_ET_VA01			MSTT		
R_YR_AU02	MSTT		MSTT	MSTT	
R_YR_MA03	MSTT				MSTT
R_YR_VA03					MSTT
R_YR_VA04			MSTT		
R-MUN-MA-05					MSTT
R-MUN-MA-07	MSTT				MSTT
R-MUN-MA-09	MSTT		MSTT		
R-MUN-MA-11					MSTT

Event #	E1a	E1b	E1c	E1d	E1e
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-05 03:05	2013-07-05 10:20	2013-07-05 12:50	2013-07-06 00:05	2013-07-07 03:35
End Time (EST)	2013-07-05 10:15	2013-07-05 12:45	2013-07-06 00:00	2013-07-07 03:30	2013-07-07 13:00
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
R-MUN-MA-12	MSTT				MSTT
R-MUN-MA-13					MSTT
R-MUN-MA-14	MSTT				MSTT
R-MUN-MA-15					MSTT
R-MUN-MA-16	MSTT				MSTT
R-MUN-MA-18	MSTT		MSTT		
R-MUN-MA-21					
R-MUN-MA-22					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
HY002	MSTT	MSTT	MSTT	MSTT	
HY003				MSTT	
HY004		MSTT	MSTT	MSTT	MSTT
HY008				MSTT	
HY009		MSTT	MSTT	MSTT	MSTT
HY011	MSTT	MSTT	MSTT	MSTT	
HY012	MSTT	MSTT	MSTT		
HY015	MSTT	MSTT	MSTT	MSTT	MSTT
HY016				MSTT	
HY021	MSTT	MSTT	MSTT	MSTT	
HY025	MSTT			MSTT	
HY027	MSTT		MSTT	MSTT	
HY030	MSTT	MSTT	MSTT	MSTT	
HY031		MSTT	MSTT	MSTT	MSTT
HY033				MSTT	
HY036	MSTT	MSTT	MSTT	MSTT	
HY037		MSTT	MSTT		
HY038	MSTT	MSTT	MSTT	MSTT	
HY039	MSTT	MSTT	MSTT	MSTT	
HY041	MSTT		MSTT		
HY043	MSTT	MSTT	MSTT	MSTT	MSTT
HY044	MSTT	MSTT	MSTT	MSTT	
HY046		MSTT	MSTT	MSTT	
HY050				MSTT	MSTT
HY055	MSTT	MSTT	MSTT	MSTT	
HY060	MSTT	MSTT	MSTT	MSTT	
HY061					

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
HY063		MSTT	MSTT	MSTT	MSTT
HY064			MSTT	MSTT	
HY069	MSTT	MSTT	MSTT	MSTT	
HY070		MSTT	MSTT	MSTT	
HY102		MSTT	MSTT	MSTT	MSTT
BOLTON SEWAGE PUMPING		MSTT	MSTT		
Caledon East RG	MSTT	MSTT	MSTT		
Copper Road RG		MSTT	MSTT		
Mississauga RG	MSTT	MSTT		MSTT	
RG 16	MSTT	MSTT			
RG 20		MSTT		MSTT	
RG 22		MSTT		MSTT	
RG 23		MSTT			
RG 25		MSTT			
RG 26		MSTT			
RG 27		MSTT			
RG 28		MSTT			
RG 29					
RG 31				MSTT	
RG 32					
RG 33					
RG 34				MSTT	
RG 39	MSTT		MSTT	MSTT	
RG 42	MSTT	MSTT	MSTT		
STN 01	MSTT	MSTT		MSTT	MSTT

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
STN 03	MSTT	MSTT			
STN 05	MSTT	MSTT			
STN 06	MSTT	MSTT			
STN 08		MSTT			
STN 10	MSTT	MSTT			
STN 12	MSTT	MSTT			
STN 13				MSTT	
STN 14	MSTT	MSTT		MSTT	
TOR_RG-001	MSTT			MSTT	
TOR_RG-002	MSTT			MSTT	
TOR_RG-003				MSTT	
TOR_RG-004				MSTT	
TOR_RG-006				MSTT	
TOR_RG-007				MSTT	
TOR_RG-012				MSTT	
TOR_RG-013				MSTT	
TOR_RG-014					
TOR_RG-015	MSTT			MSTT	
TOR_RG-016	MSTT			MSTT	OAD
TOR_RG-017				MSTT	
TOR_RG-018				MSTT	
TOR_RG-019			MSTT	MSTT	
TOR_RG-020	MSTT		MSTT	MSTT	
TOR_RG-021				MSTT	
TOR_RG-022	OAD	MSTT		MSTT	
TOR_RG-023				MSTT	
TOR_RG-024				MSTT	

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
TOR_RG-025				MSTT	
TOR_RG-027		MSTT	MSTT	MSTT	
TOR_RG-028	MSTT	MSTT	MSTT	MSTT	
TOR_RG-030		MSTT		MSTT	
TOR_RG-031	MSTT	MSTT	MSTT	MSTT	
TOR_RG-033	MSTT	MSTT	MSTT	MSTT	
TOR_RG-034		MSTT		MSTT	
TOR_RG-035		MSTT		MSTT	
TOR_RG-036					
TOR_RG-037				MSTT	
TOR_RG-038			MSTT	MSTT	MSTT
TOR_RG-039				MSTT	
TOR_RG-040	MSTT			MSTT	
TOR_RG-041				MSTT	MSTT
TOR_RG-042				MSTT	OAD
TOR_RG-044				MSTT	
R_ET_MA03	MSTT	MSTT	MSTT	MSTT	
R_ET_NO01	MSTT	MSTT	MSTT		
R_ET_VA01	MSTT		MSTT	MSTT	
R_YR_AU02		MSTT	MSTT	MSTT	
R_YR_MA03	MSTT	MSTT	MSTT	MSTT	
R_YR_VA03			MSTT	MSTT	
R_YR_VA04	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-05	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-07	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-09	MSTT	MSTT	MSTT		
R-MUN-MA-11	MSTT	MSTT	MSTT	MSTT	

Event #	E1f	E1g	E1h	E1i	E1j
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-07 13:05	2013-07-07 16:05	2013-07-07 17:20	2013-07-07 19:50	2013-07-08 09:05
End Time (EST)	2013-07-07 16:00	2013-07-07 17:15	2013-07-07 19:45	2013-07-08 09:00	2013-07-08 16:45
Source	KBUF LII	KBUF LII	KBUF LII	KBUF LII	KBUF LII
R-MUN-MA-12	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-13	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-14	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-15	MSTT	MSTT	MSTT	MSTT	MSTT
R-MUN-MA-16	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-18	MSTT	MSTT	MSTT	MSTT	
R-MUN-MA-21					
R-MUN-MA-22					

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
Source	KBUF LII	KBUF LII	KBUF LII
HY002		OMFB	
HY003			
HY004	MSTT		MSTT
HY008			
HY009	MSTT		MSTT
HY011	MSTT		
HY012	MSTT		
HY015	MSTT		MSTT
HY016			
HY021			
HY025			
HY027			
HY030	MSTT		
HY031	MSTT	MSTT	MSTT
HY033			
HY036	MSTT		
HY037			
HY038			
HY039			
HY041			
HY043	MSTT		
HY044	MSTT		
HY046			
HY050			
HY055			
HY060	MSTT		MSTT
HY061			
HY063	MSTT		MSTT

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
Source	KBUF LII	KBUF LII	KBUF LII
HY064			
HY069			
HY070	MSTT		
HY102	MSTT		
BOLTON SEWAGE PUMPING			
Caledon East RG	MSTT		
Copper Road RG			
Mississauga RG			
RG 16			
RG 20			
RG 22			
RG 23			
RG 25			
RG 26			
RG 27	OAD		
RG 28			
RG 29			
RG 31			
RG 32			
RG 33			
RG 34			
RG 39			
RG 42	MSTT		
STN 01			
STN 03			
STN 05			
STN 06			
STN 08			

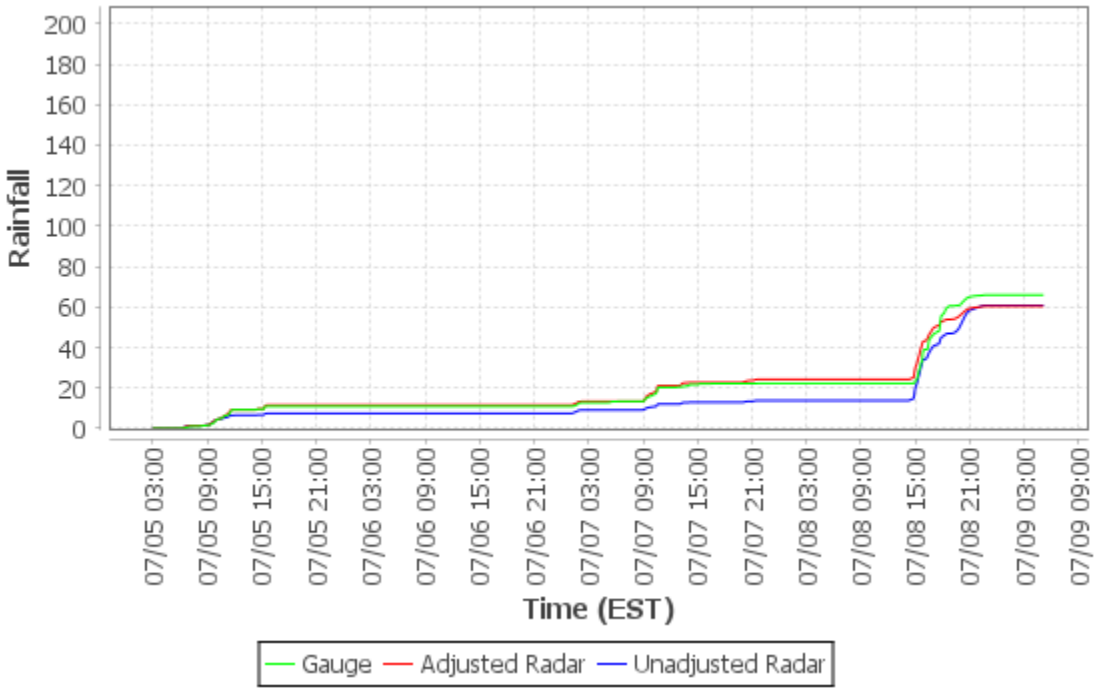
Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
Source	KBUF LII	KBUF LII	KBUF LII
STN 10		MSTT	
STN 12			
STN 13			
STN 14			
TOR_RG-001			
TOR_RG-002			
TOR_RG-003			
TOR_RG-004			
TOR_RG-006			
TOR_RG-007			
TOR_RG-012			
TOR_RG-013			
TOR_RG-014			
TOR_RG-015			
TOR_RG-016			
TOR_RG-017			
TOR_RG-018			
TOR_RG-019			
TOR_RG-020			
TOR_RG-021			
TOR_RG-022	MSTT		
TOR_RG-023	MSTT		
TOR_RG-024			
TOR_RG-025			
TOR_RG-027			OAD
TOR_RG-028			
TOR_RG-030	MSTT		
TOR_RG-031	MSTT		

Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
Source	KBUF LII	KBUF LII	KBUF LII
TOR_RG-033	MSTT		
TOR_RG-034			
TOR_RG-035	MSTT		
TOR_RG-036			
TOR_RG-037			
TOR_RG-038	MSTT		MSTT
TOR_RG-039			
TOR_RG-040	MSTT		
TOR_RG-041	MSTT		
TOR_RG-042	MSTT		
TOR_RG-044			
R_ET_MA03	MSTT		
R_ET_NO01		OMFB	
R_ET_VA01			
R_YR_AU02			
R_YR_MA03			
R_YR_VA03			
R_YR_VA04			
R-MUN-MA-05	MSTT		
R-MUN-MA-07			
R-MUN-MA-09			
R-MUN-MA-11	MSTT		
R-MUN-MA-12	MSTT		
R-MUN-MA-13	MSTT		
R-MUN-MA-14	MSTT		
R-MUN-MA-15			
R-MUN-MA-16			
R-MUN-MA-18			

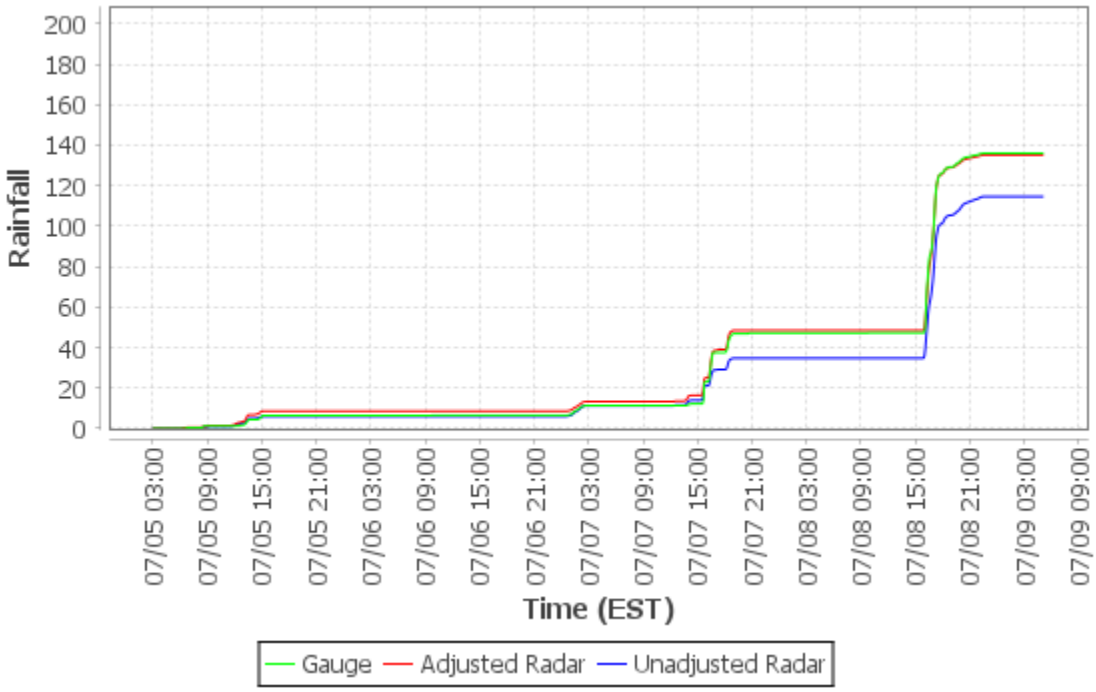
Event #	E1k	E1l	E1m
Event Date	**2013-07-08**	**2013-07-08**	**2013-07-08**
Start Time (EST)	2013-07-08 16:50	2013-07-08 17:35	2013-07-08 19:50
End Time (EST)	2013-07-08 17:30	2013-07-08 19:45	2013-07-09 05:00
Source	KBUF LII	KBUF LII	KBUF LII
R-MUN-MA-21			
R-MUN-MA-22			

Appendix C - Event 1 (2013-07-08) CDPs

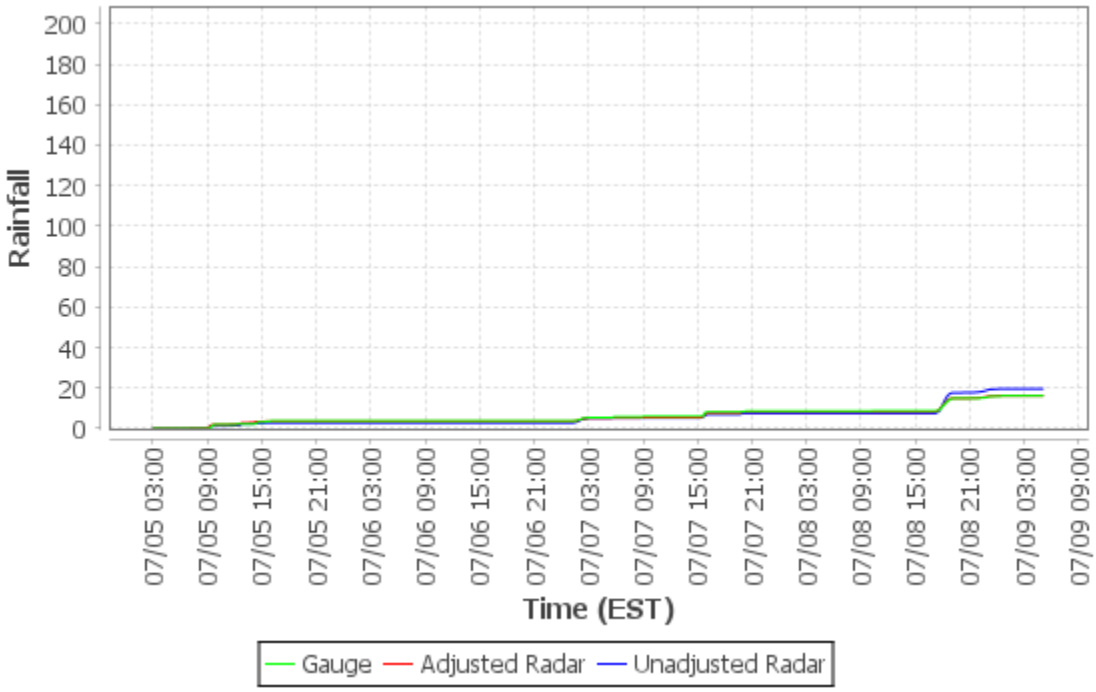
Cumulative Distribution Plot - Albion Hills (HY002)



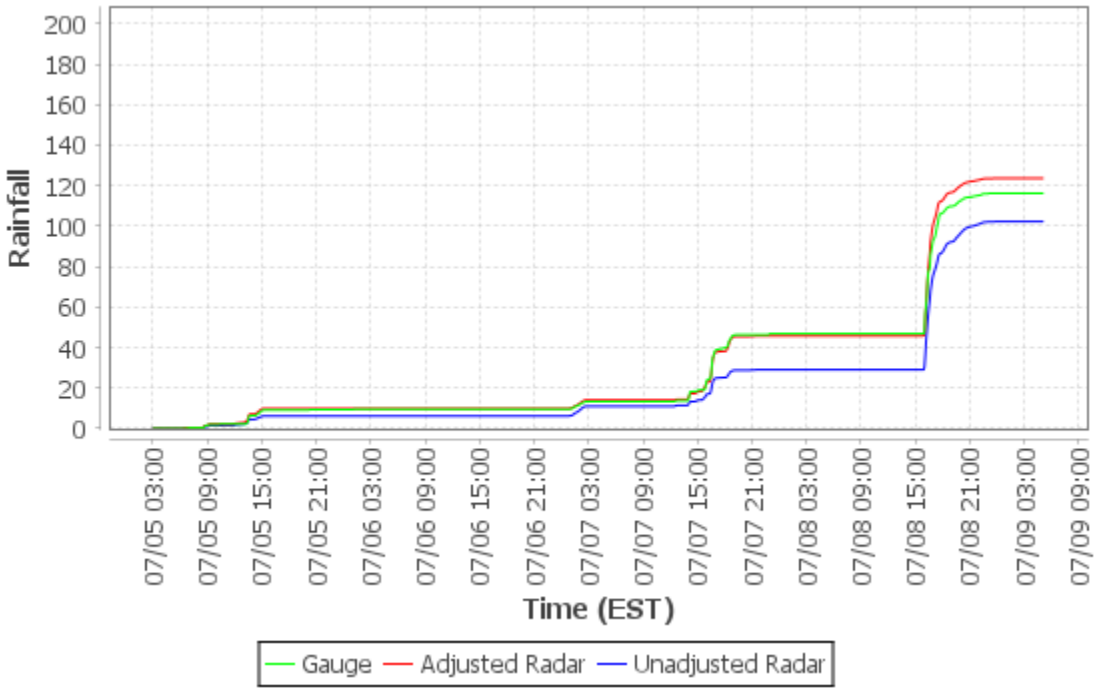
Cumulative Distribution Plot - Alex Duff Memorial Pool (HY003)



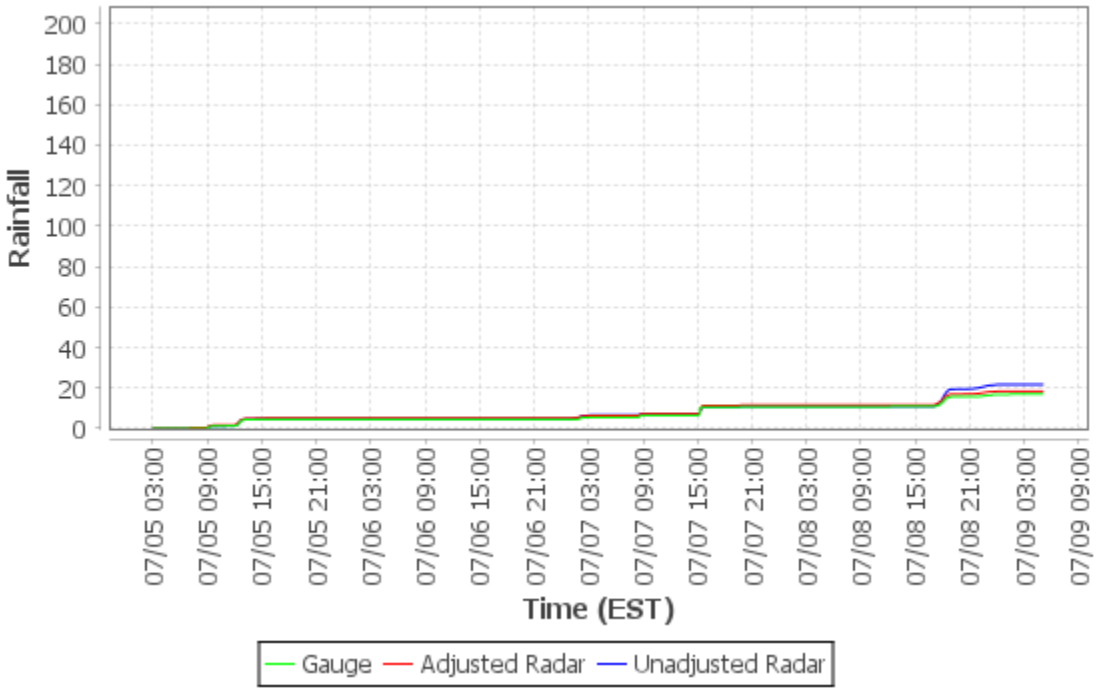
Cumulative Distribution Plot - Bayly and Church (HY004)



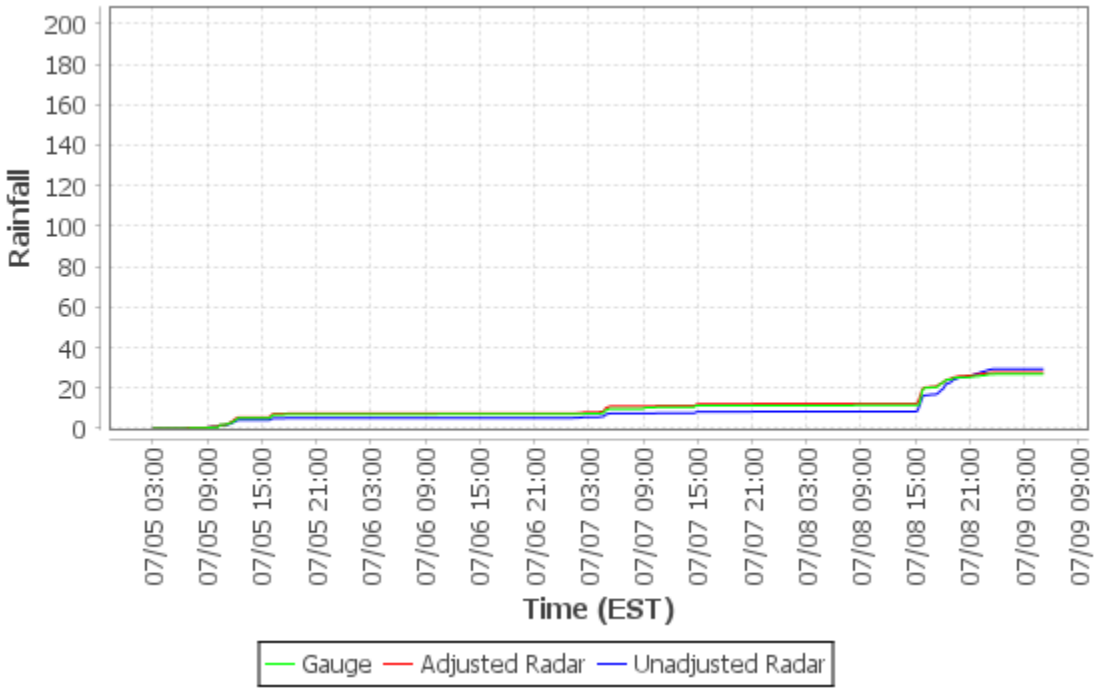
Cumulative Distribution Plot - Brickworks (HY008)



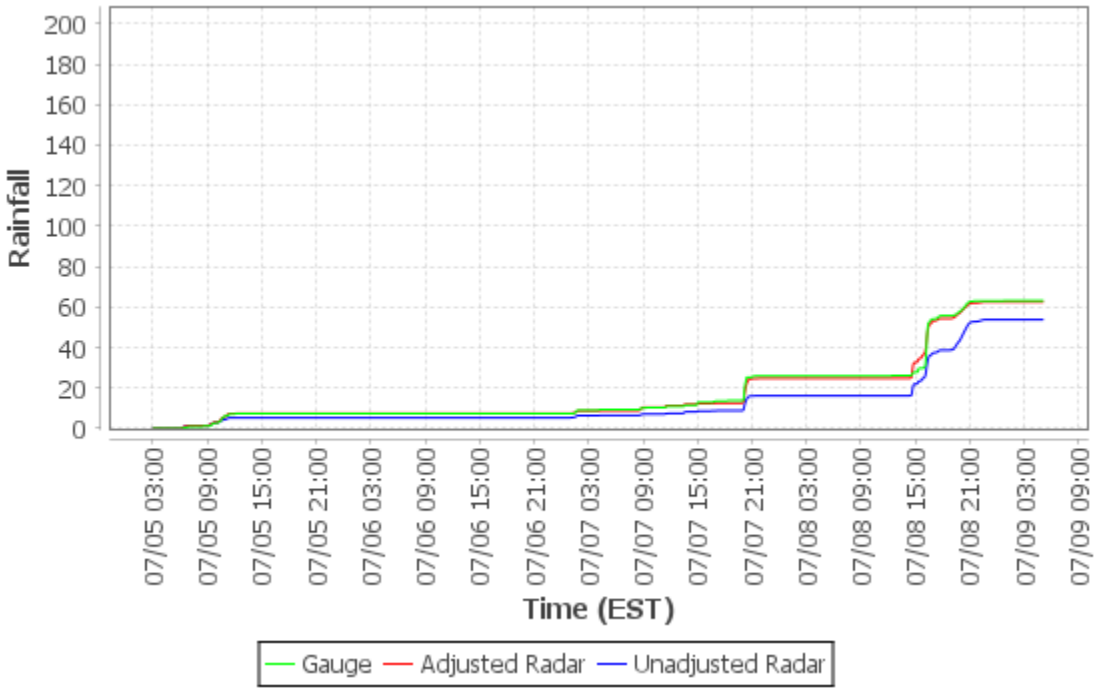
Cumulative Distribution Plot - Brock West Landfill (HY009)



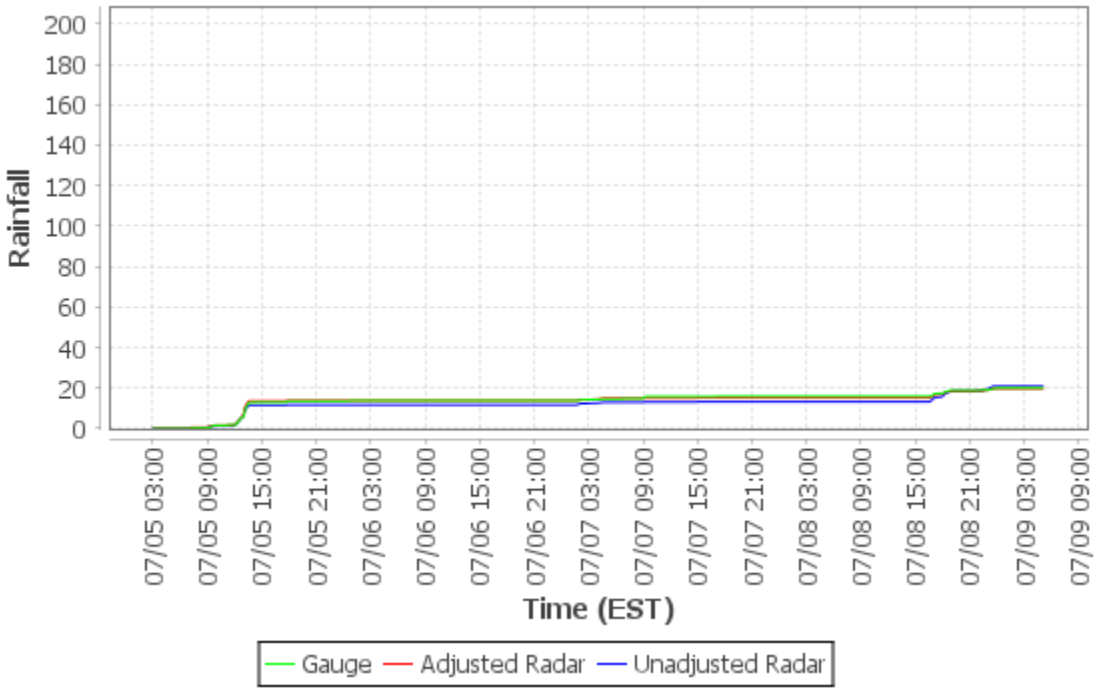
Cumulative Distribution Plot - Bruces Mill CA (HY011)



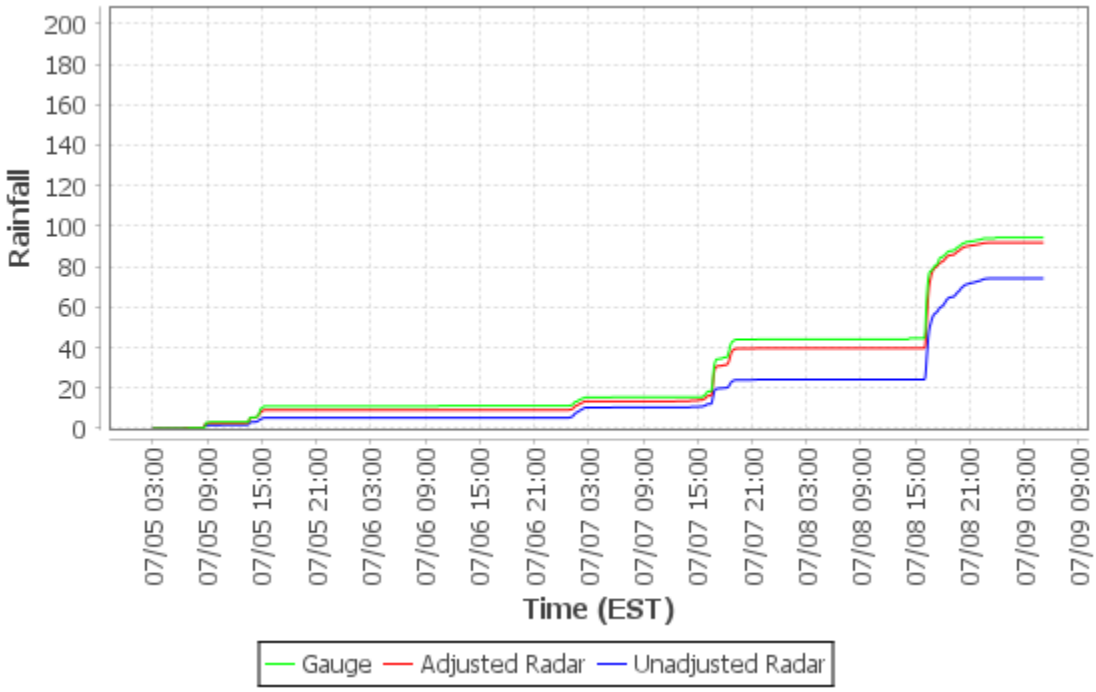
Cumulative Distribution Plot - Caledon Pumping Station (HY012)



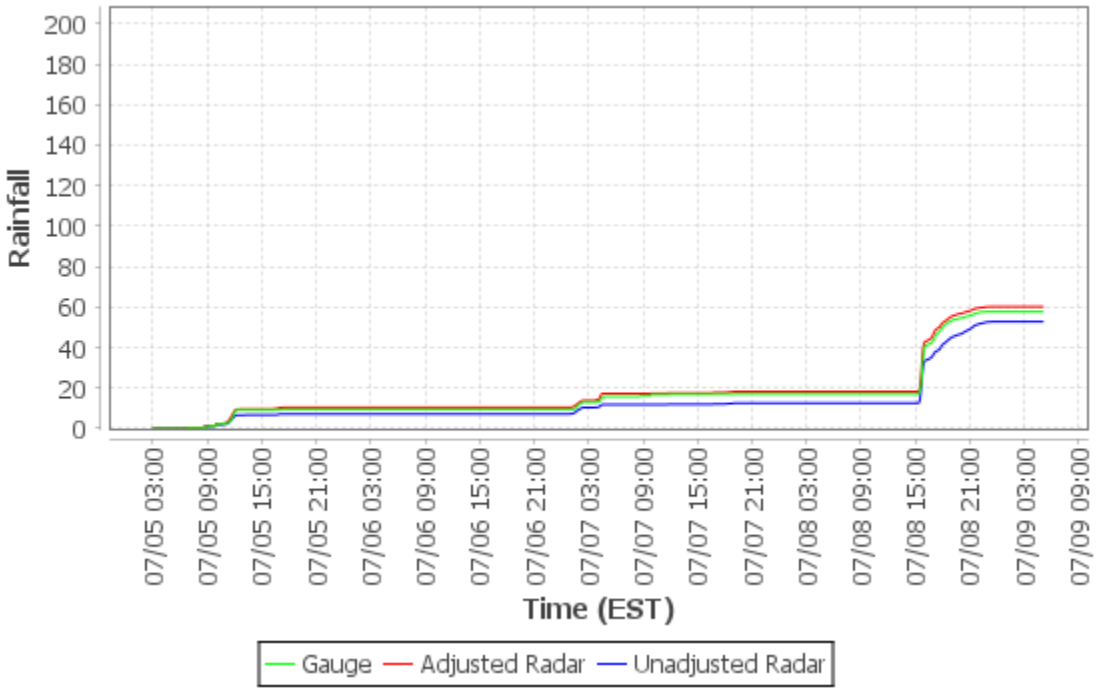
Cumulative Distribution Plot - Claremont Shop (HY015)



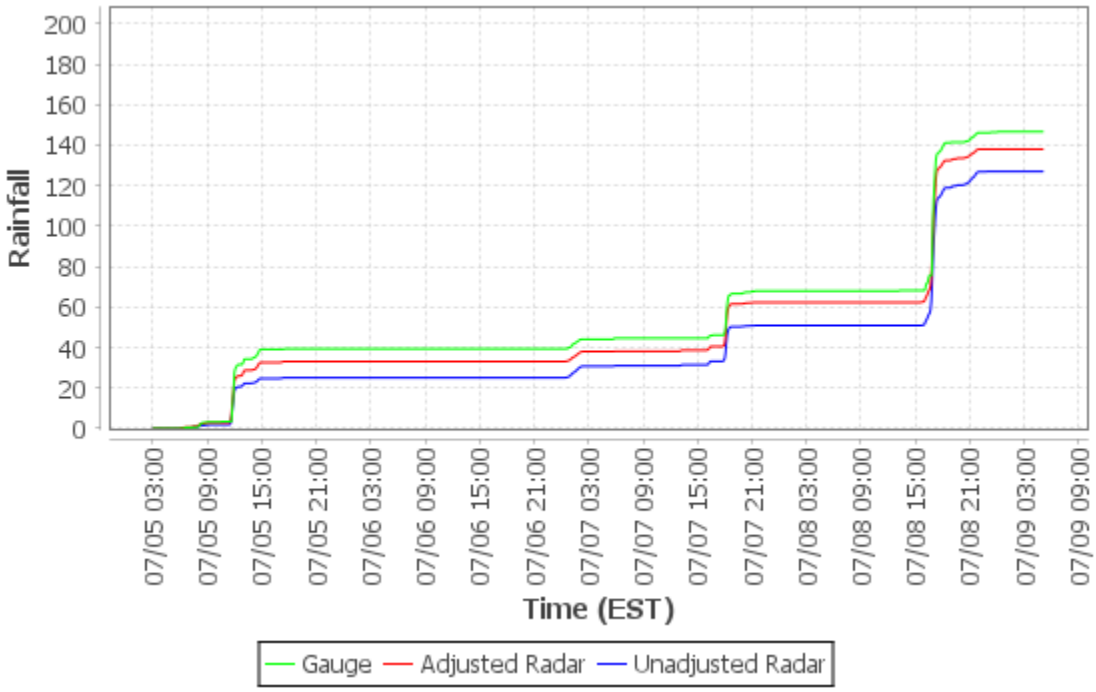
Cumulative Distribution Plot - Danforth and Coxwell (HY016)



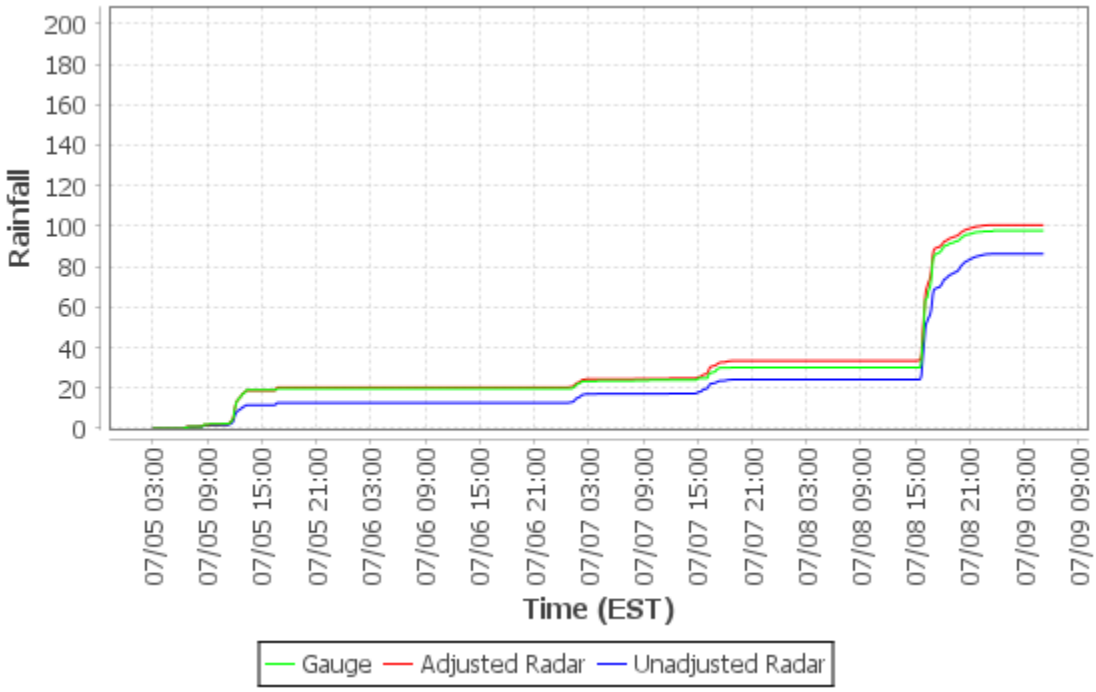
Cumulative Distribution Plot - Dufferin Reservoir (HY021)



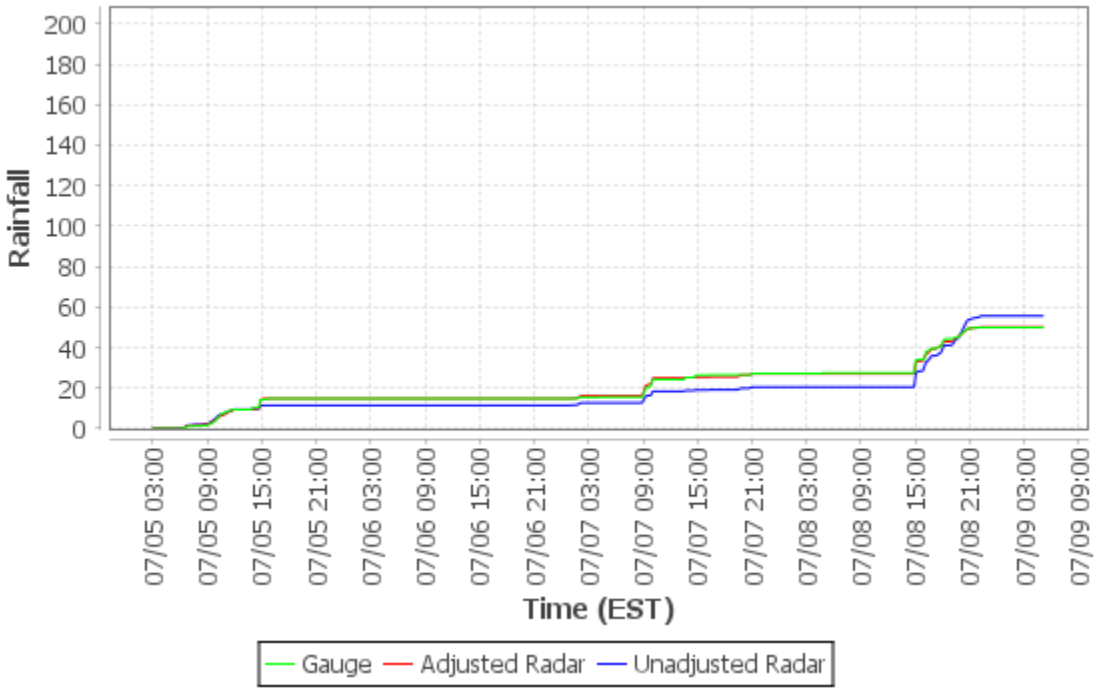
Cumulative Distribution Plot - Etobicoke at QEW (HY025)



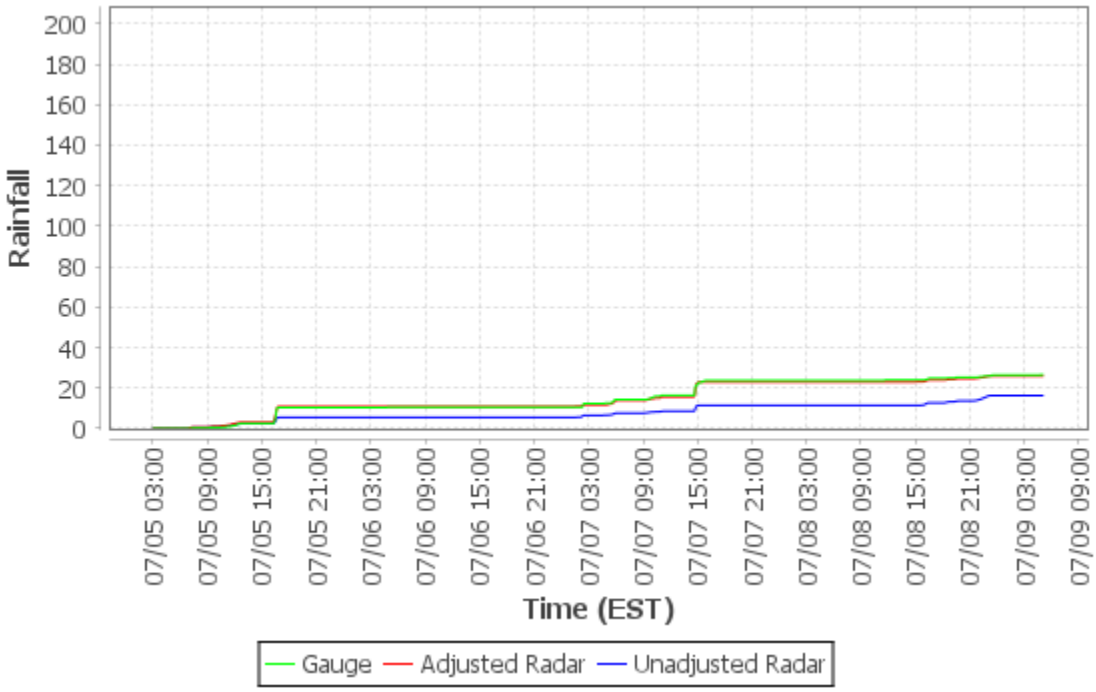
Cumulative Distribution Plot - G Ross Dam (HY027)



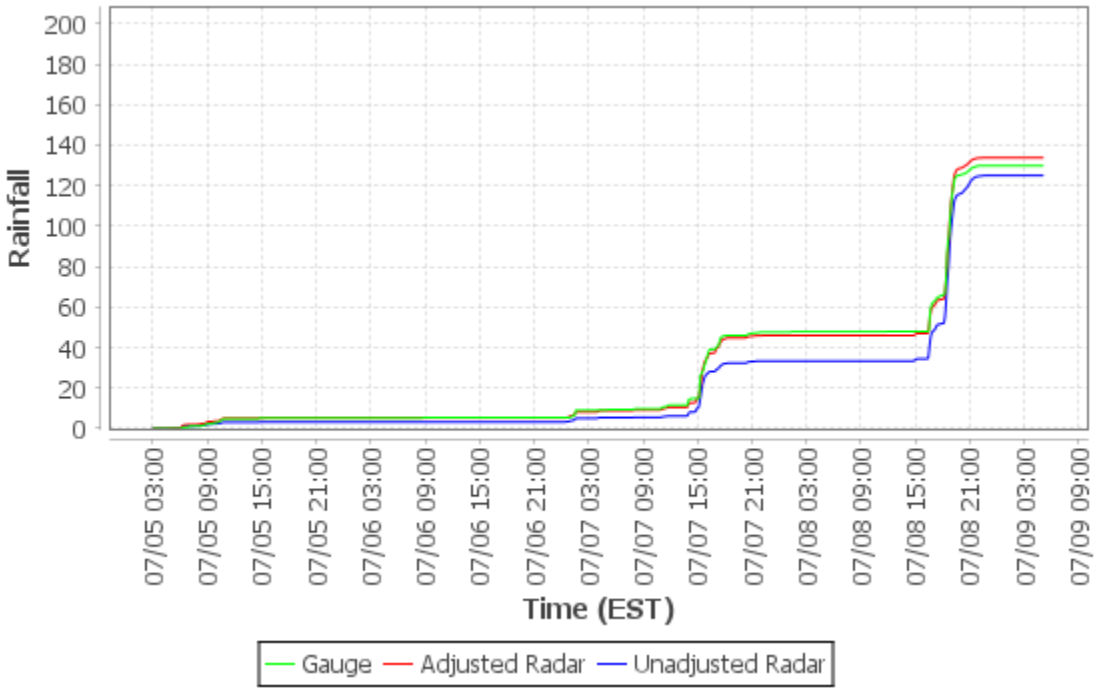
Cumulative Distribution Plot - Glen Haffy (HY030)



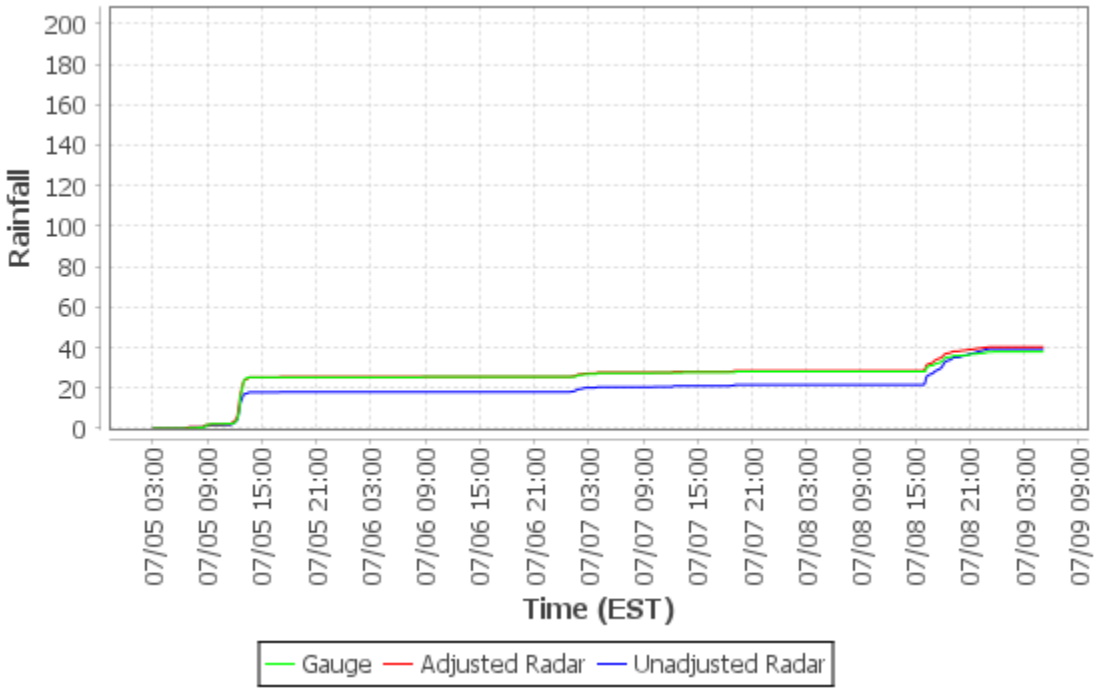
Cumulative Distribution Plot - Goodwood Pumping Station (HY031)



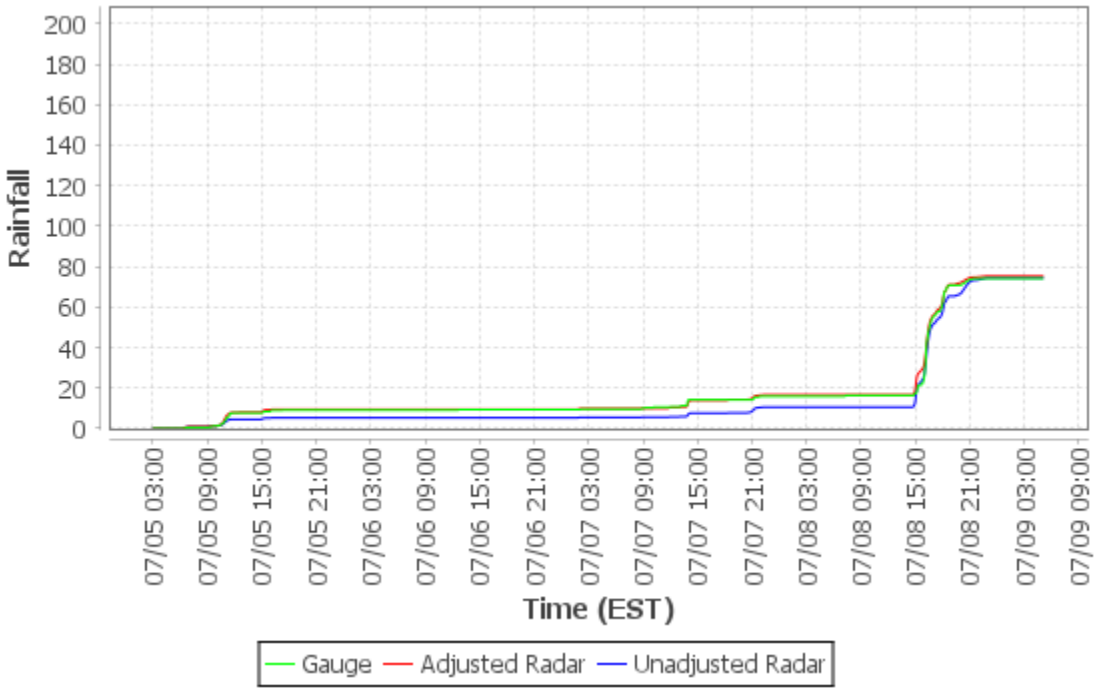
Cumulative Distribution Plot - Heart Lake CA (HY033)



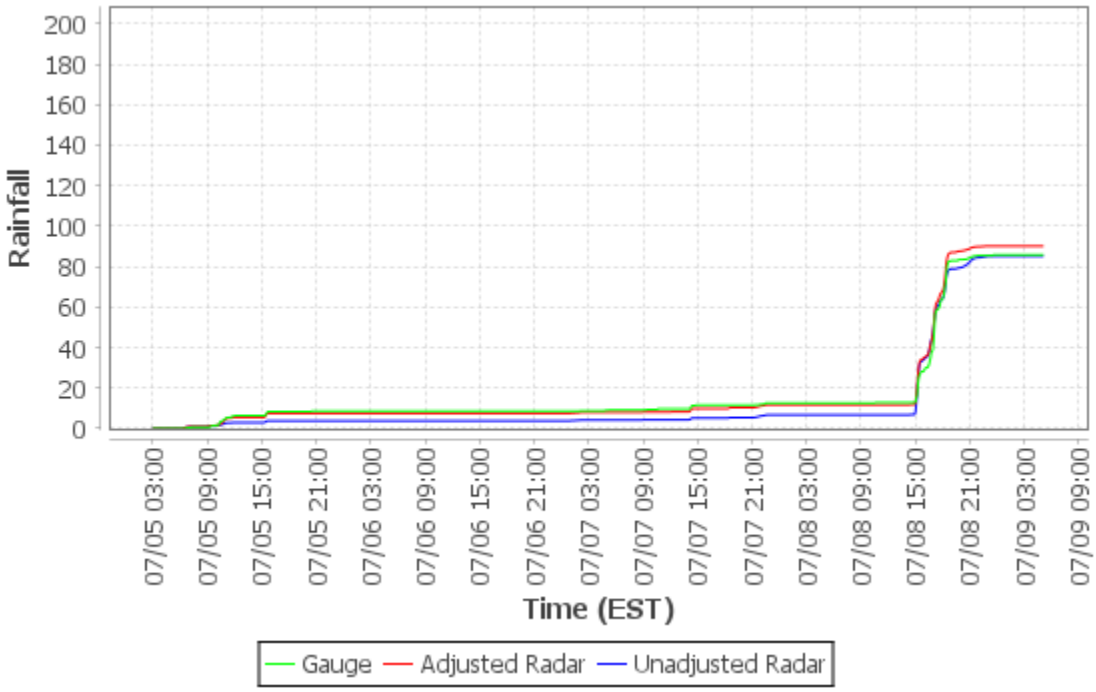
Cumulative Distribution Plot - Kennedy Pump Station (HY036)



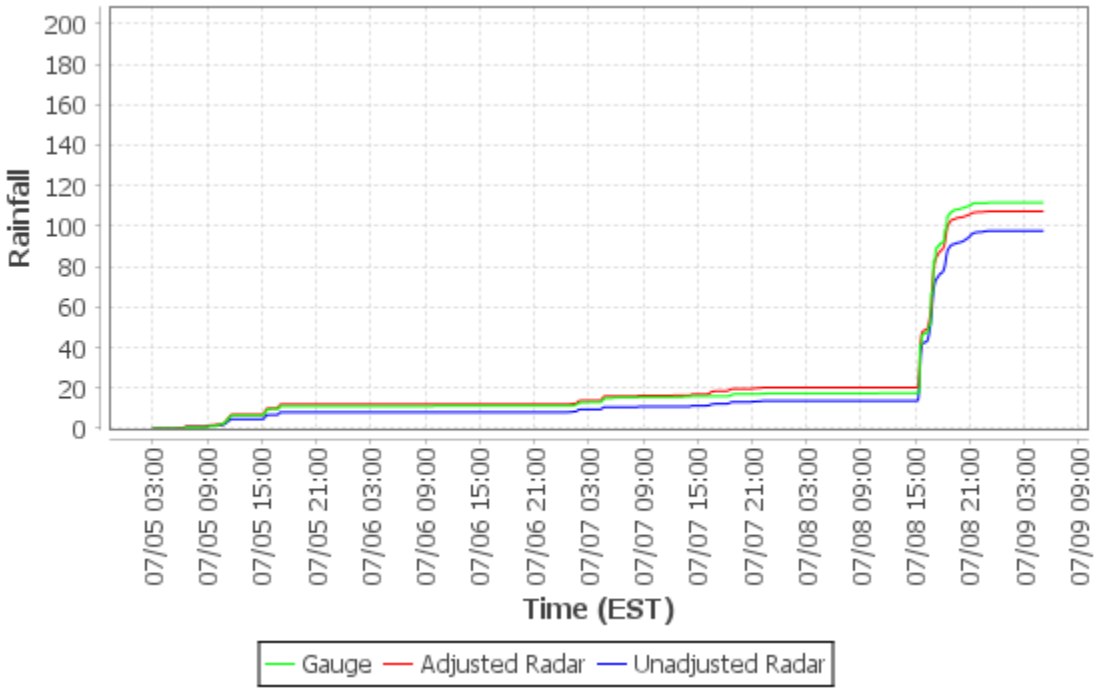
Cumulative Distribution Plot - King and Albion-Vaughan (HY037)



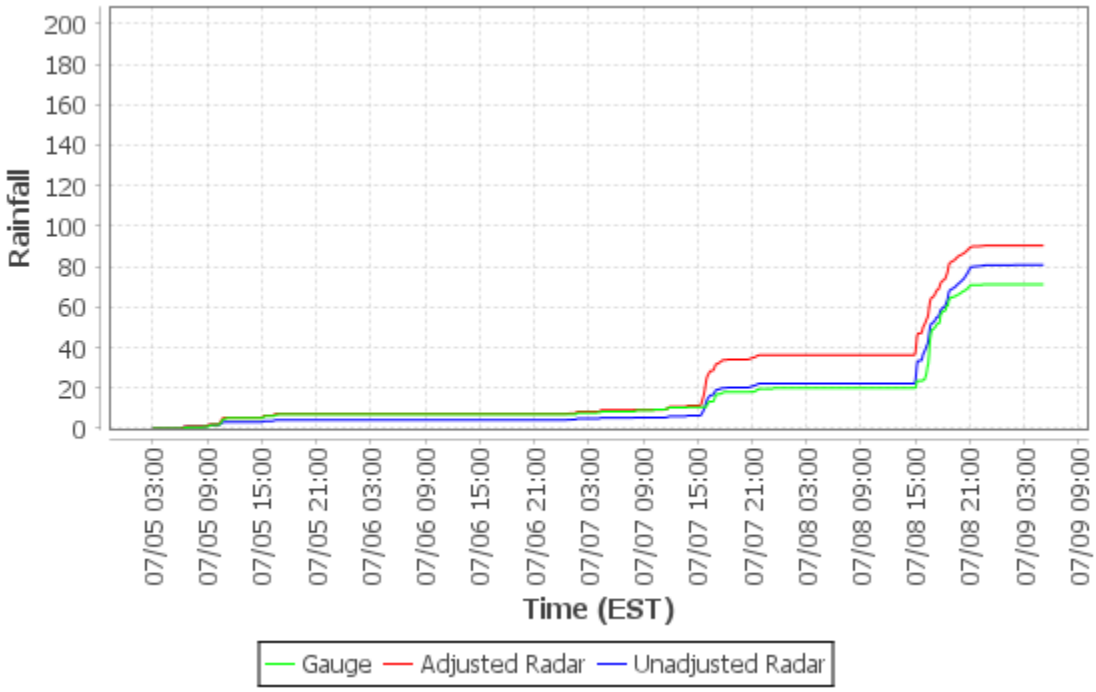
Cumulative Distribution Plot - East Humber at Mill Road (HY038)



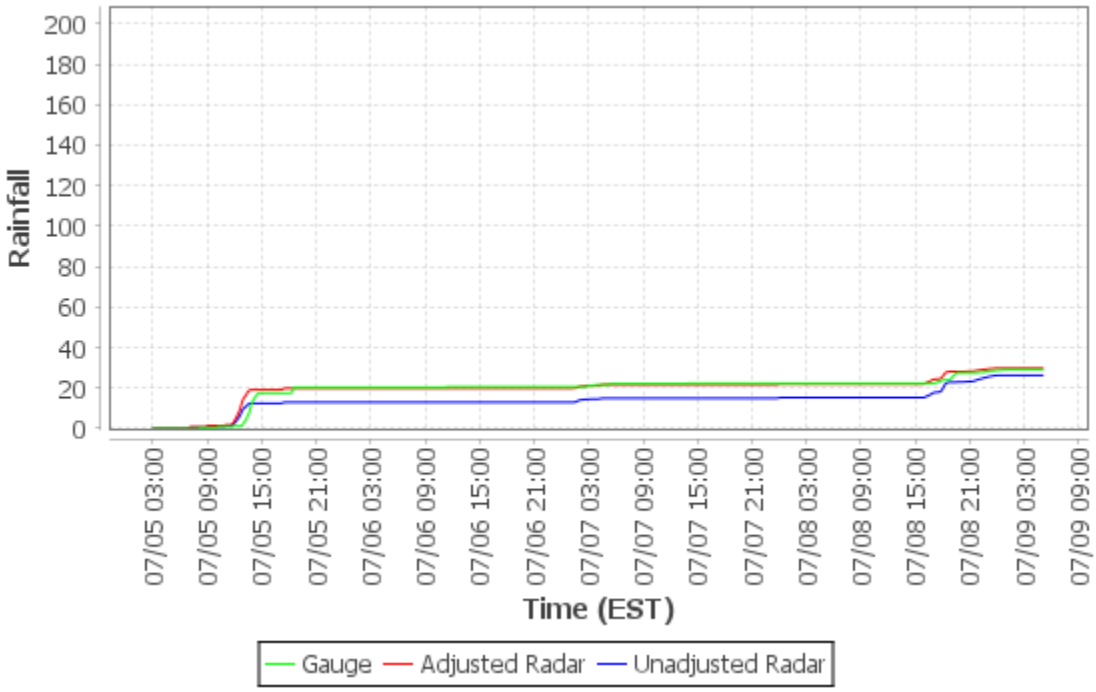
Cumulative Distribution Plot - Kortright (HY039)



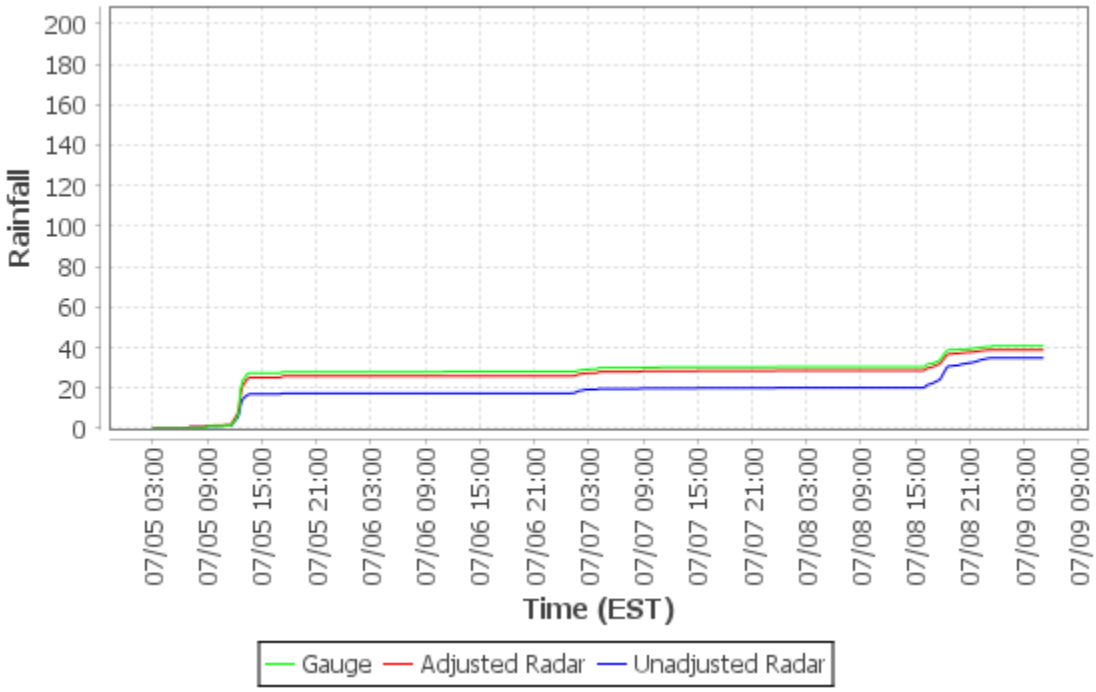
Cumulative Distribution Plot - Tullamore (HY041)



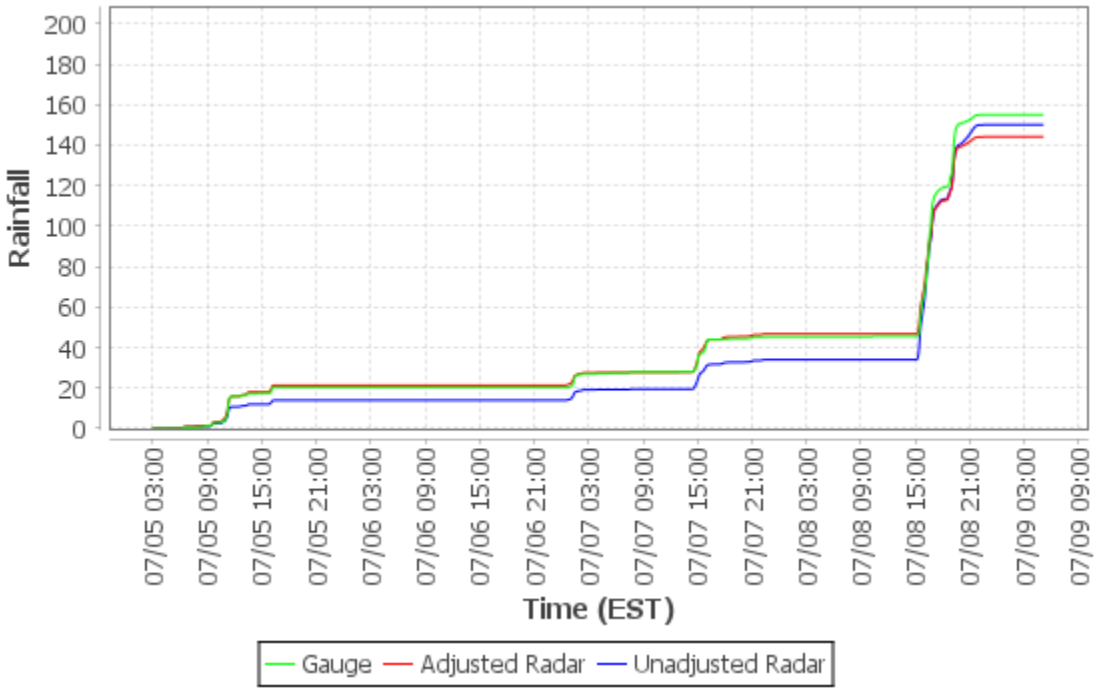
Cumulative Distribution Plot - Little Rouge at 16th (HY043)



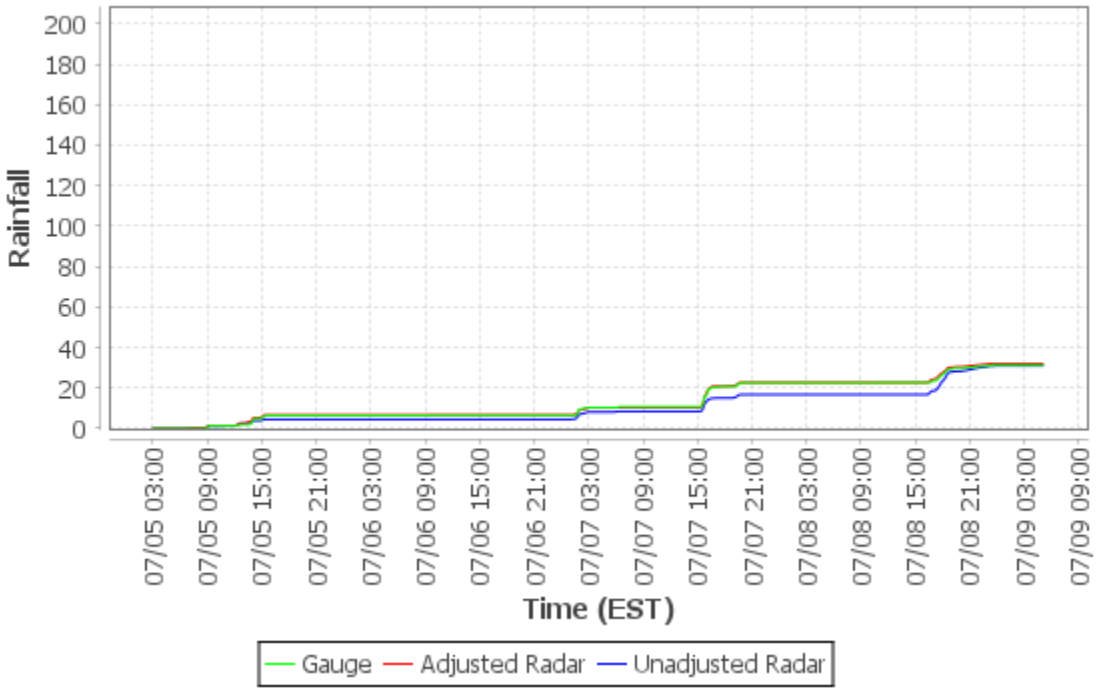
Cumulative Distribution Plot - Milne Dam (HY044)



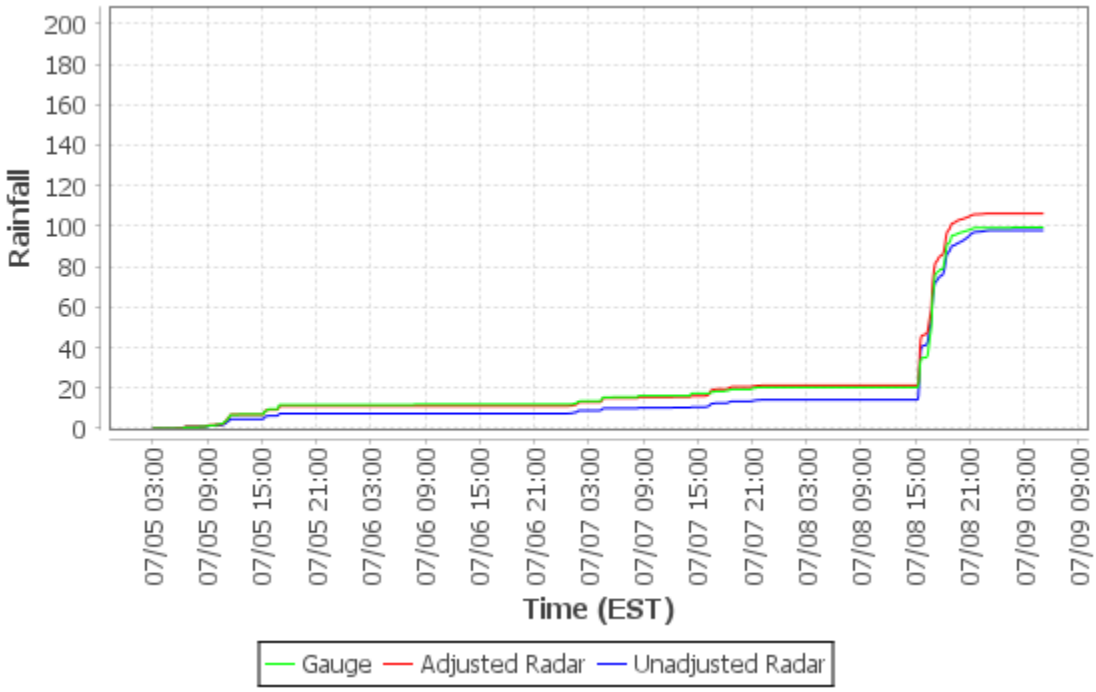
Cumulative Distribution Plot - Mississauga Works Yard (HY046)



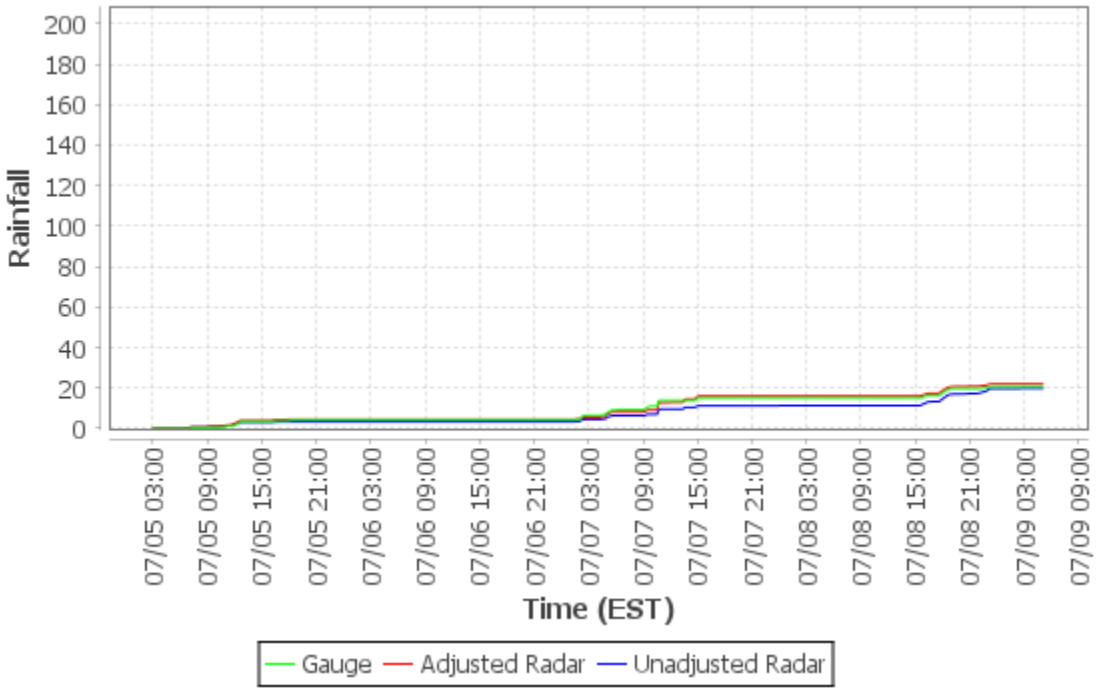
Cumulative Distribution Plot - Morningside Works Yard (HY050)



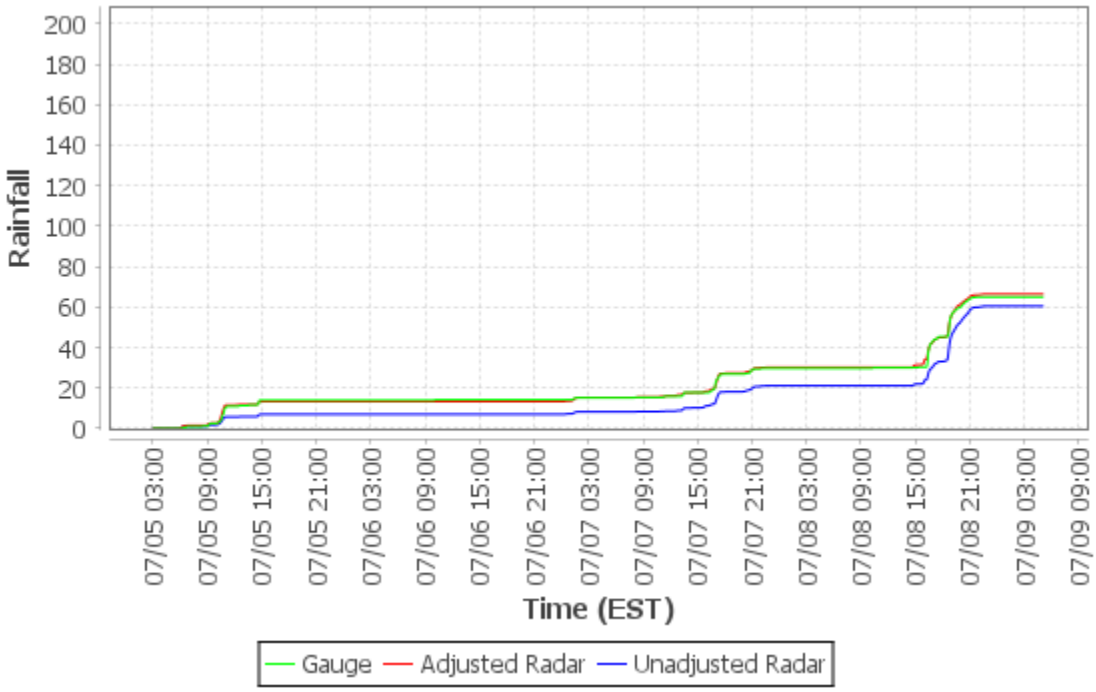
Cumulative Distribution Plot - Restoration Services (HY055)



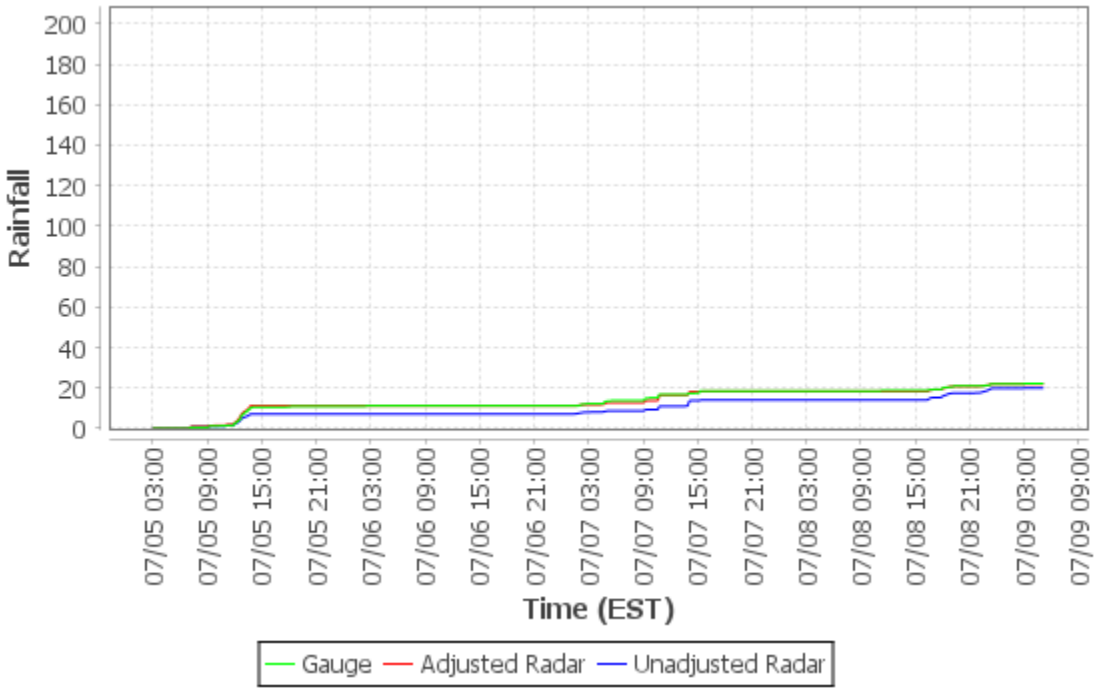
Cumulative Distribution Plot - Stouffville Dam (HY060)



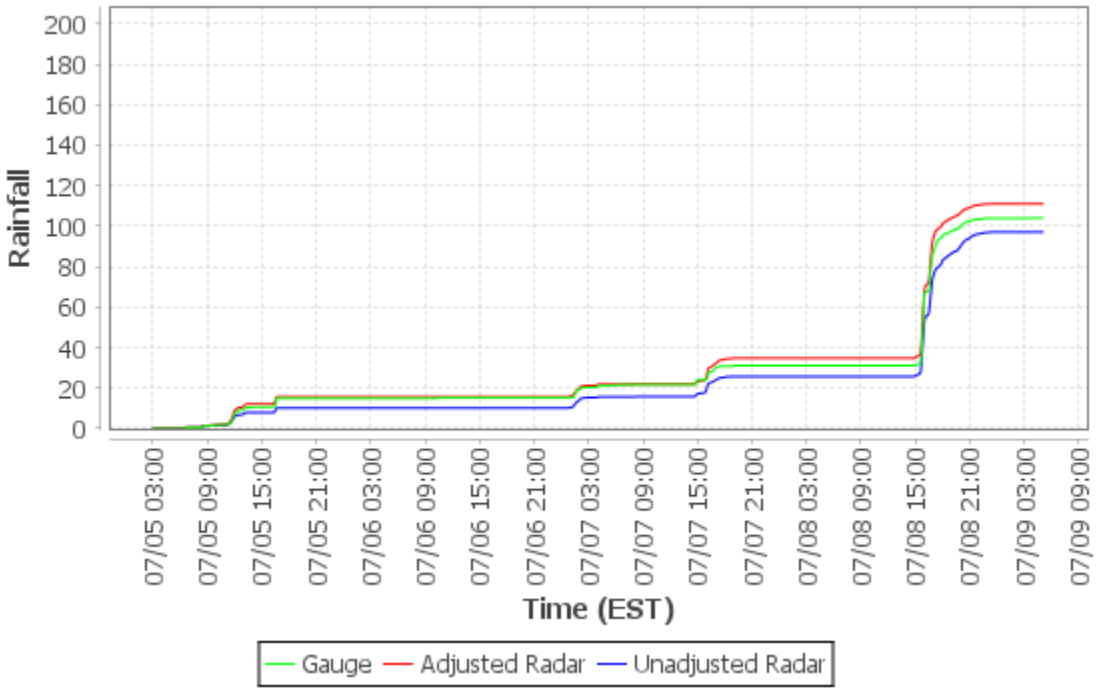
Cumulative Distribution Plot - Sue Grange Farm (HY061)



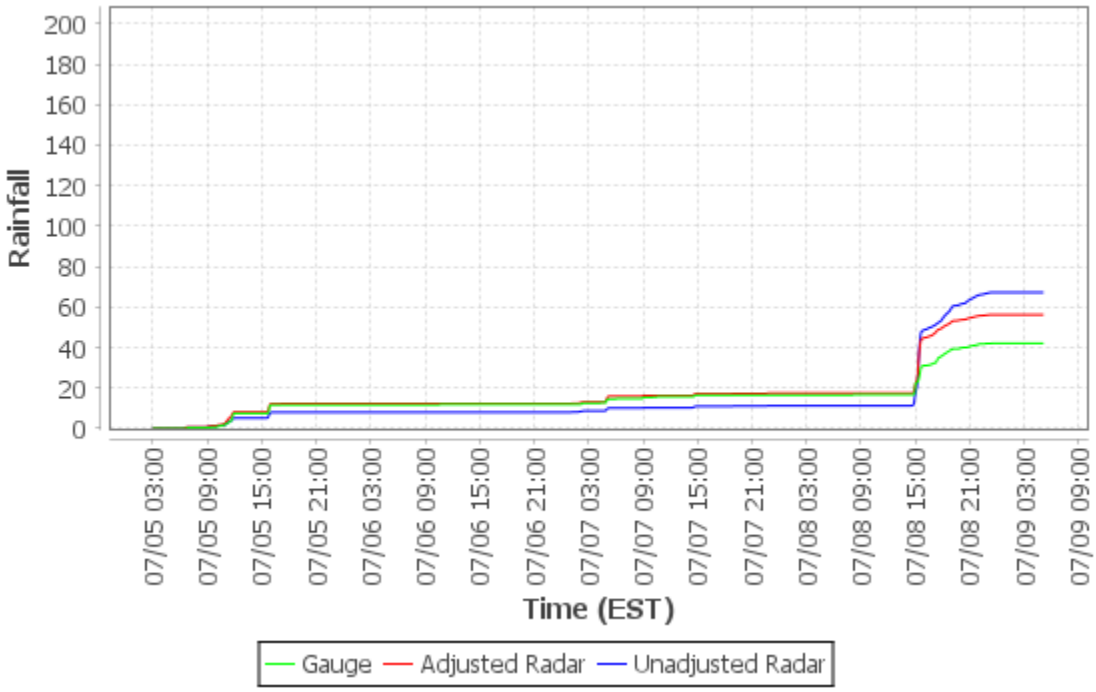
Cumulative Distribution Plot - Transport Canada (HY063)



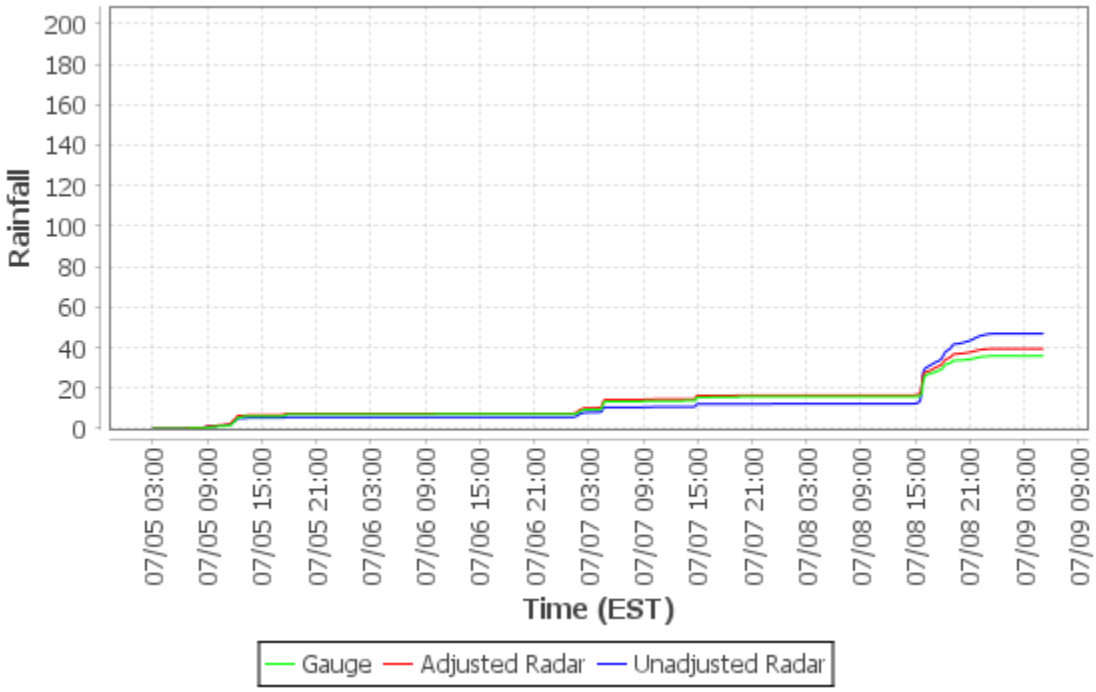
Cumulative Distribution Plot - TRCA Head Office (HY064)



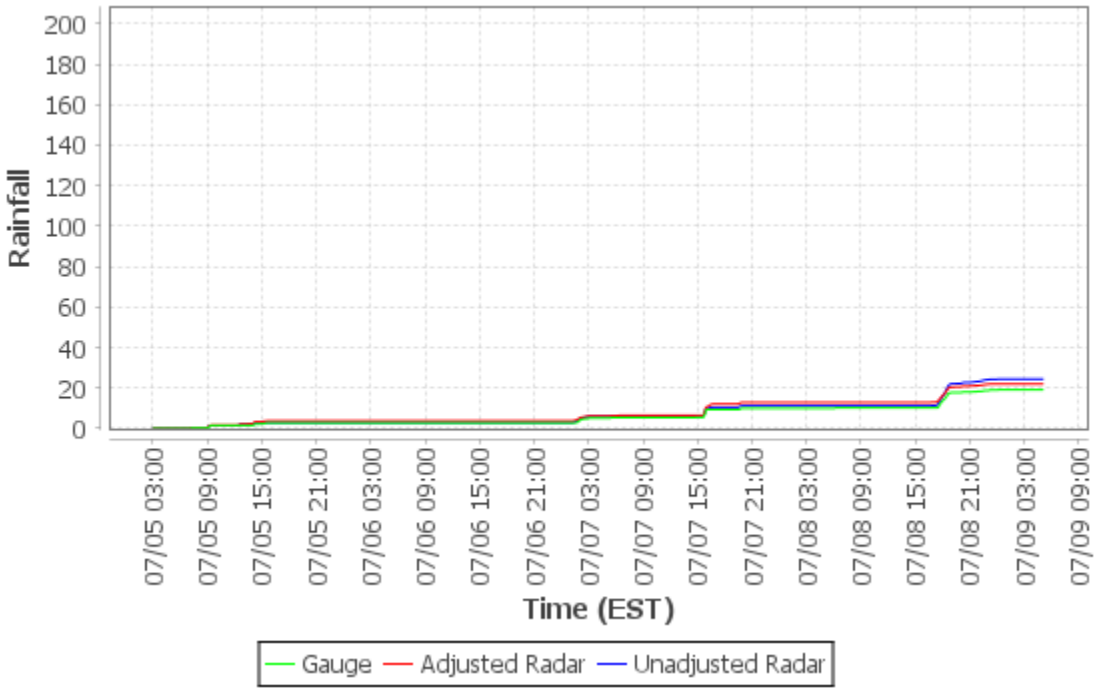
Cumulative Distribution Plot - York Pumping Station (HY069)



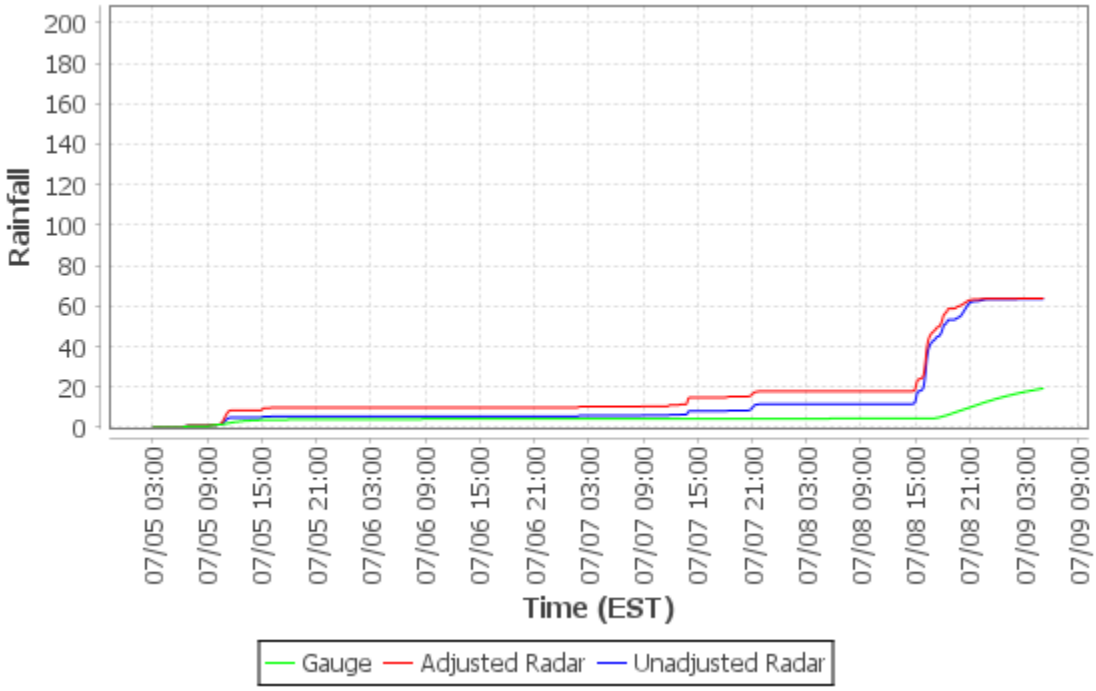
Cumulative Distribution Plot - York Region Works Yard (HY070)



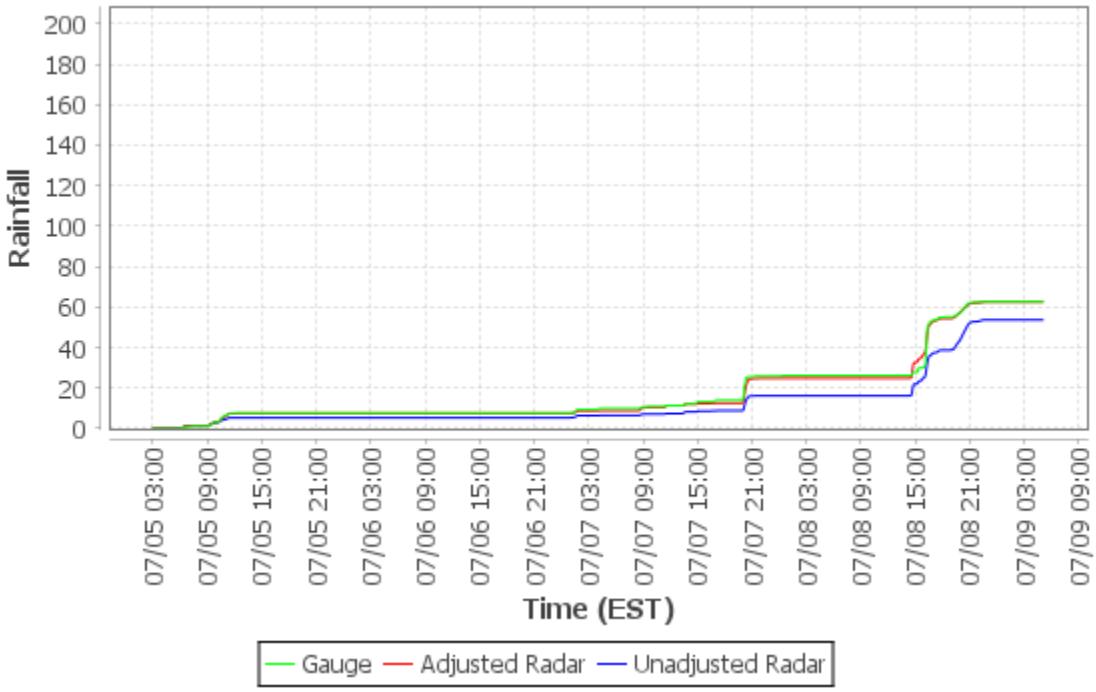
Cumulative Distribution Plot - Petticoat Works Yard (HY102)



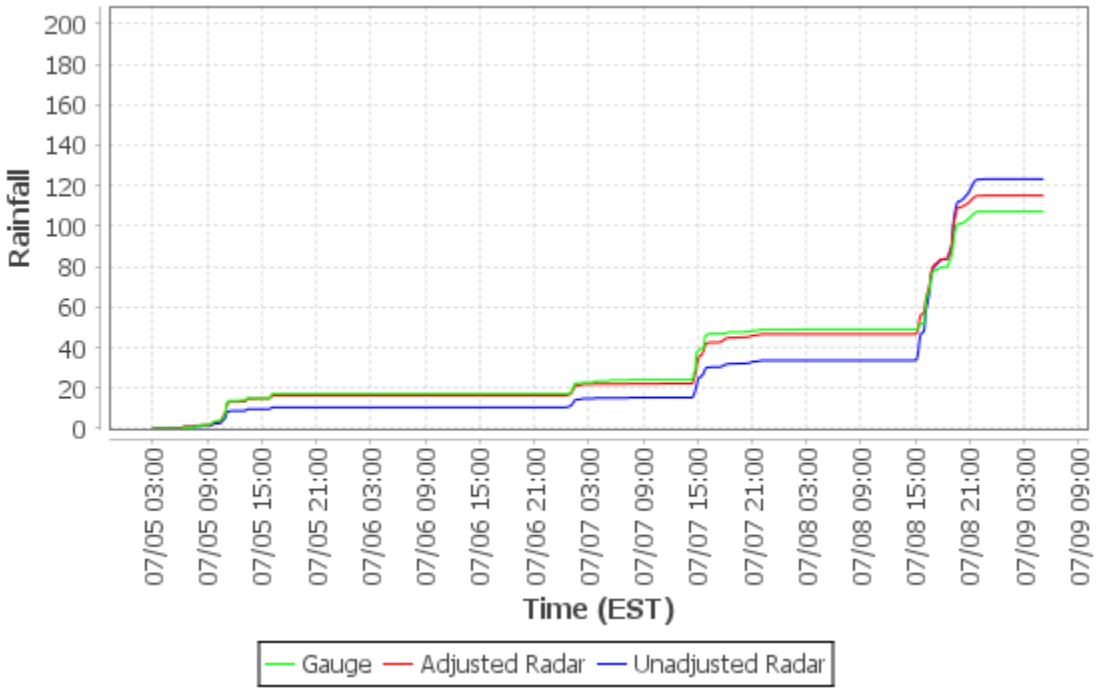
Cumulative Distribution Plot - BOLTON SEWAGE PUMPING (BOLTON SEWAGE PUMPING)



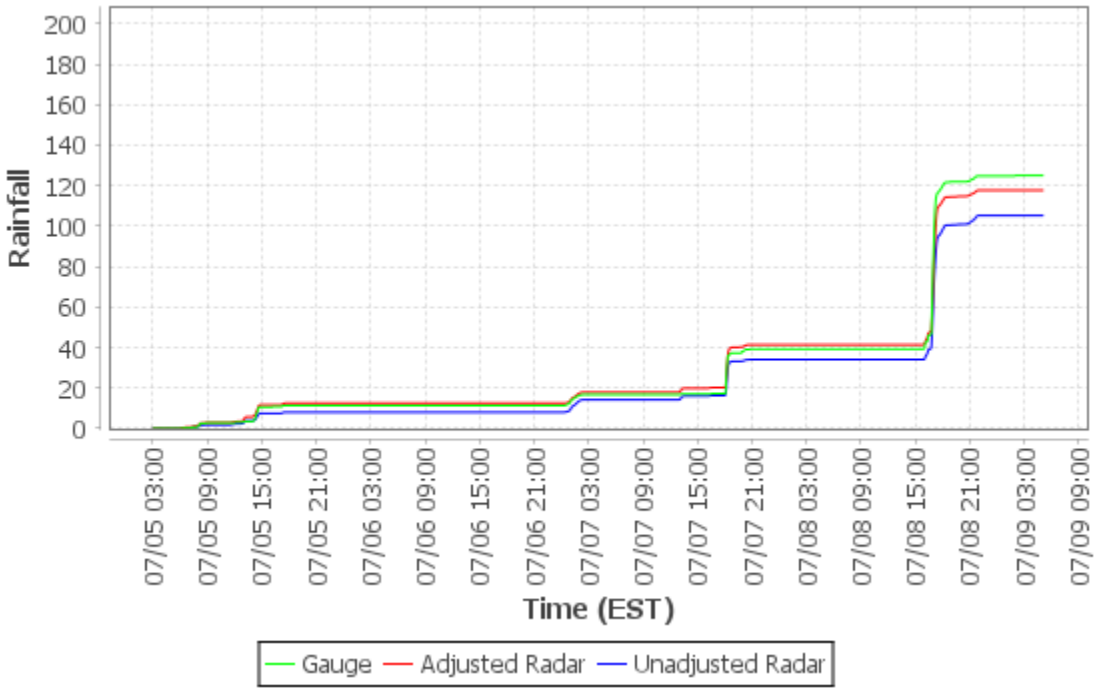
Cumulative Distribution Plot - Caledon East (Caledon East RG)



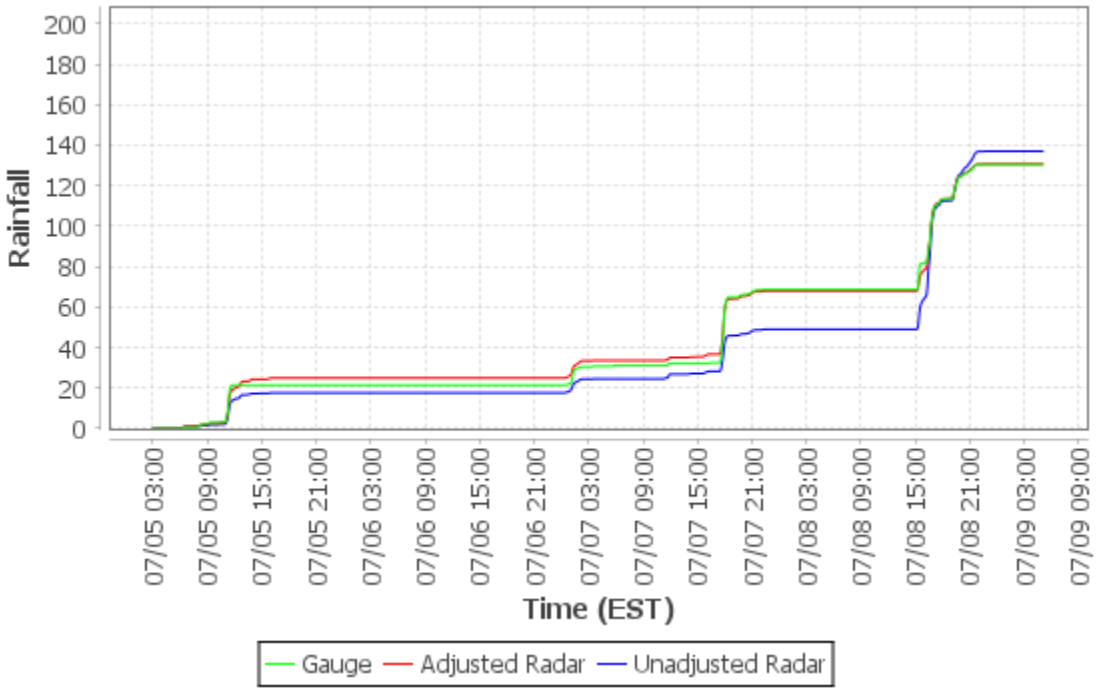
Cumulative Distribution Plot - Copper Road (Copper Road RG)



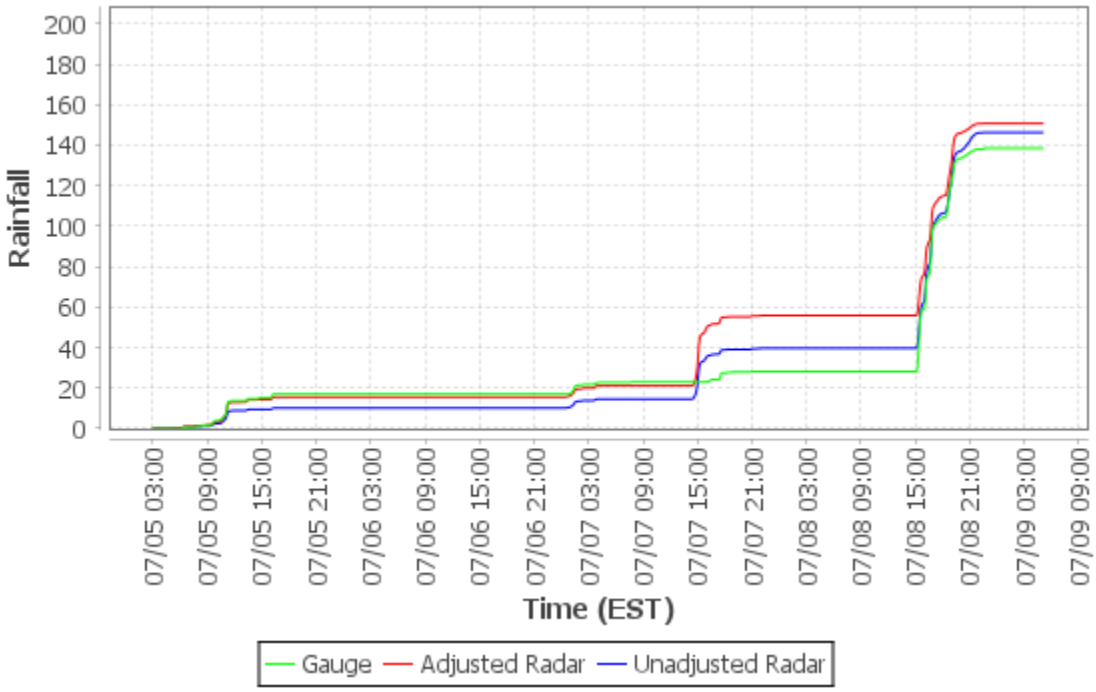
Cumulative Distribution Plot - Mississauga (Mississauga RG)



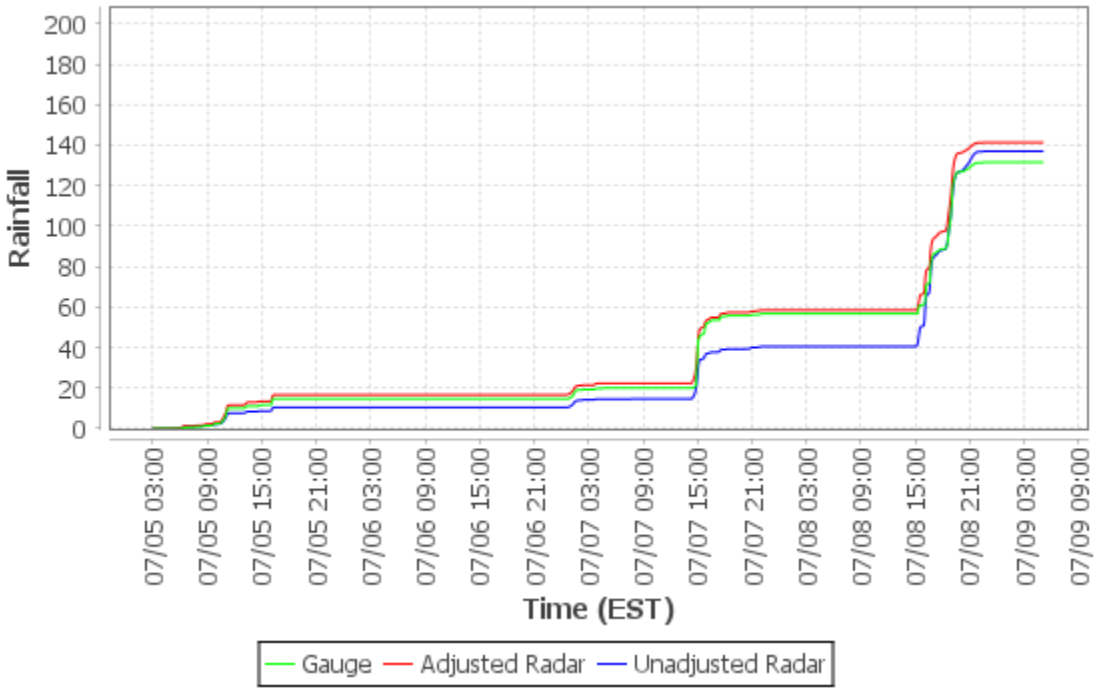
Cumulative Distribution Plot - Hanlan (RG 16)



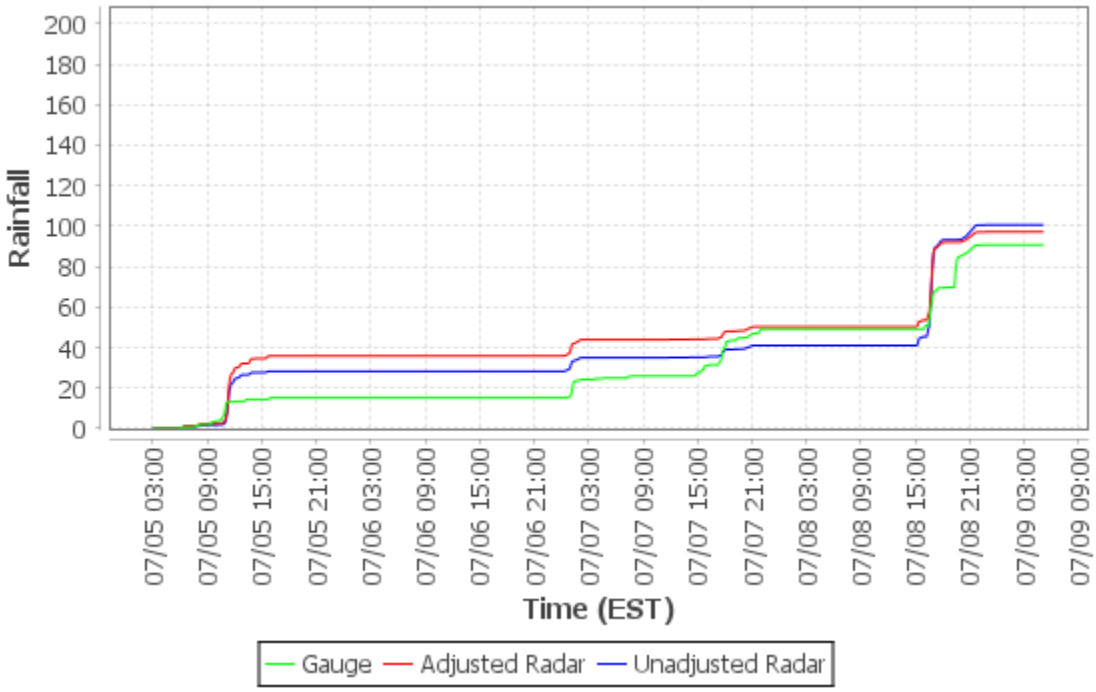
Cumulative Distribution Plot - PEEL YORK ODOUR CONTROL (RG 20)



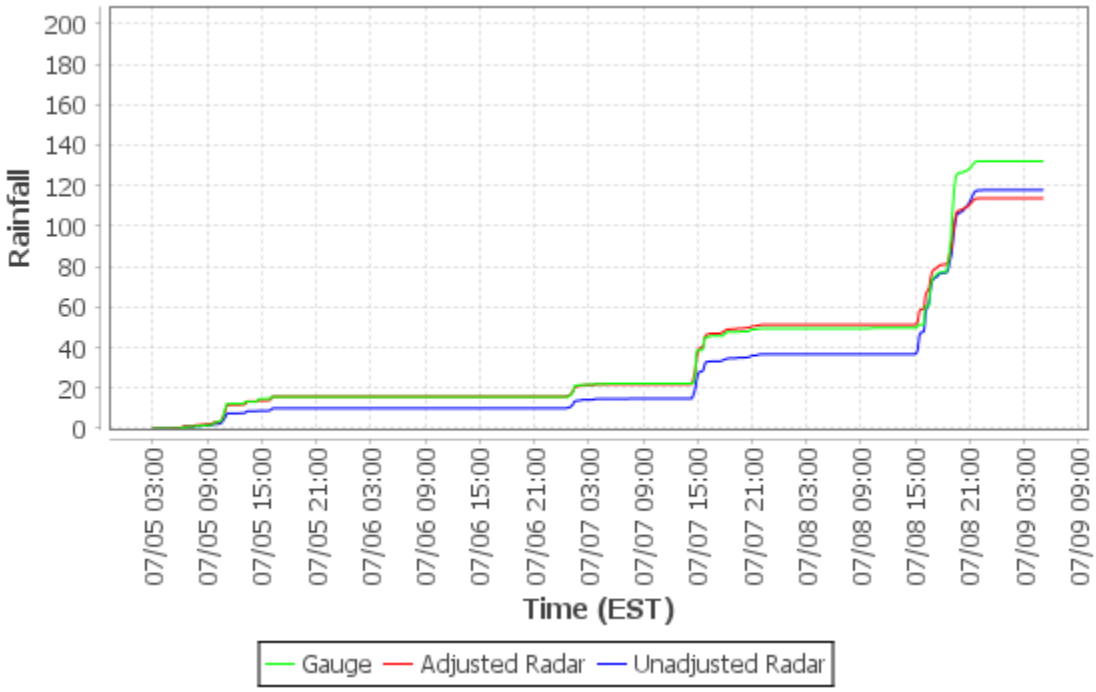
Cumulative Distribution Plot - Bramalea (RG 22)



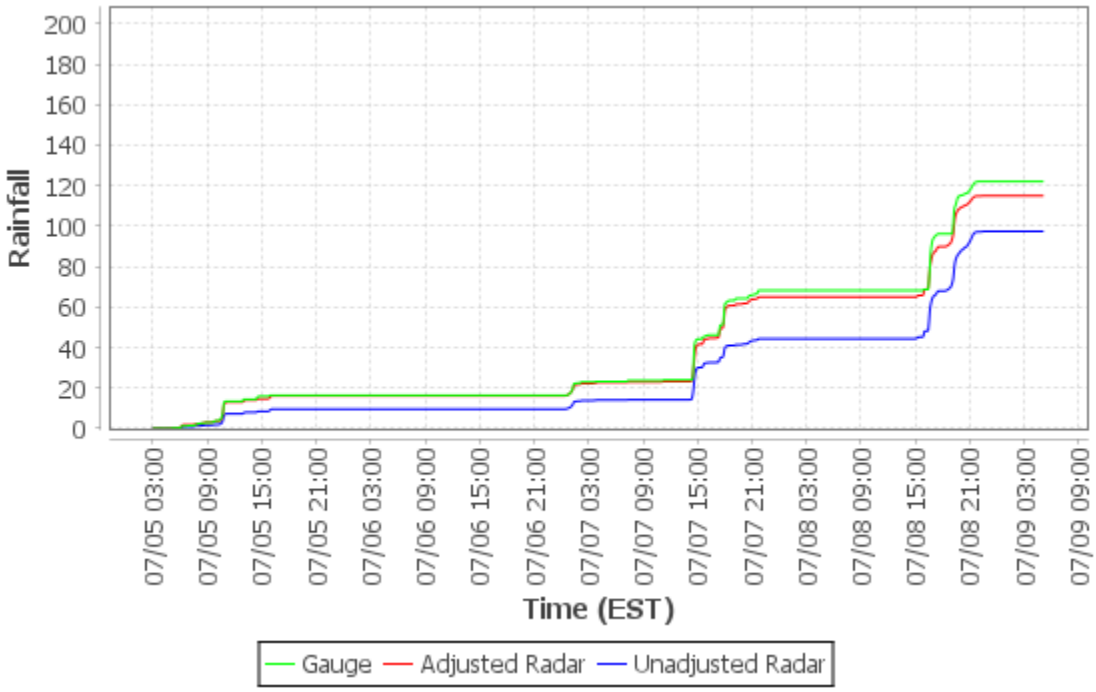
Cumulative Distribution Plot - BRITANNIA LEACHATE PUMPING (RG 23)



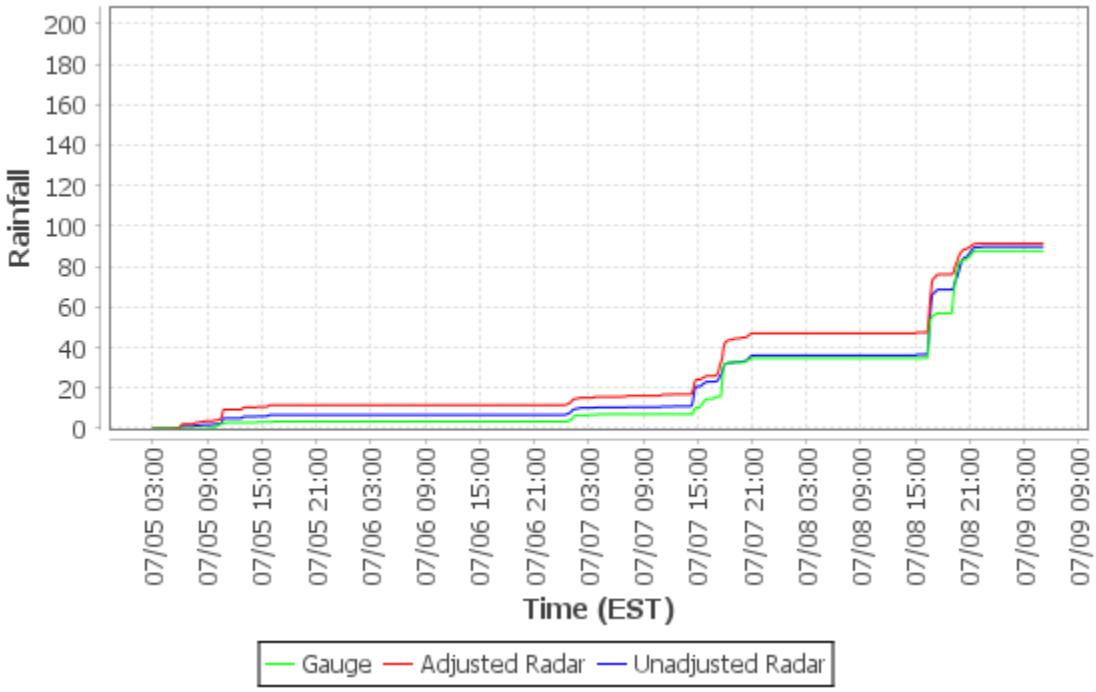
Cumulative Distribution Plot - RESERVOIR - BECKETT SPROULE (RG 25)



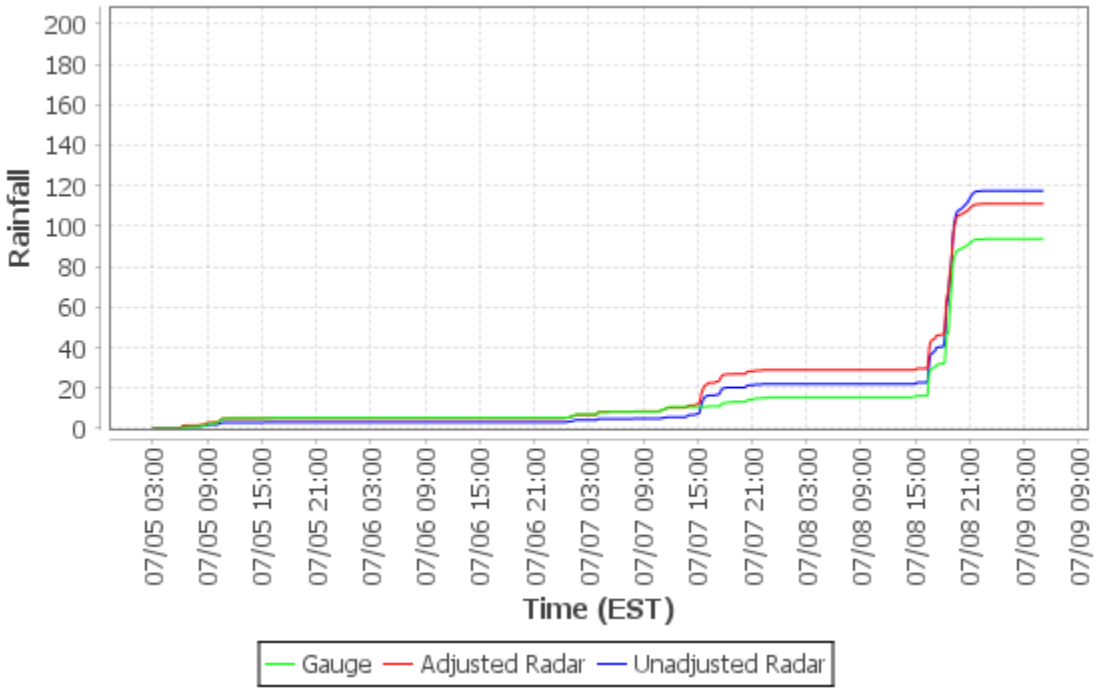
Cumulative Distribution Plot - McLaughlin (RG 26)



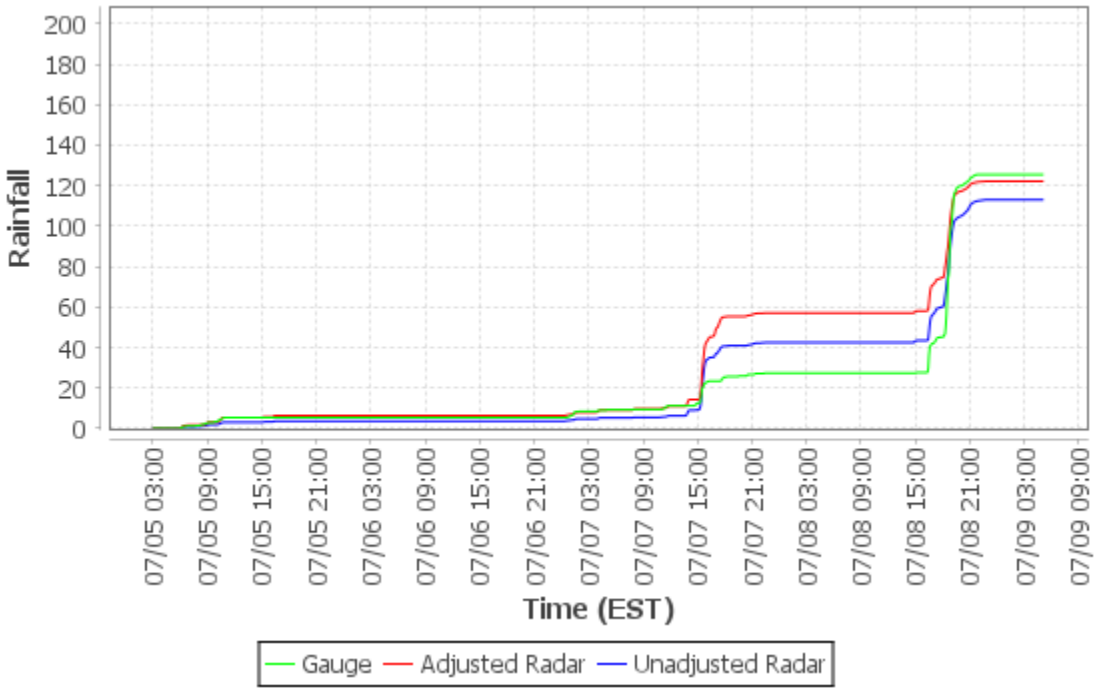
Cumulative Distribution Plot - RESERVOIR - WEST BRAMPTON (RG 27)



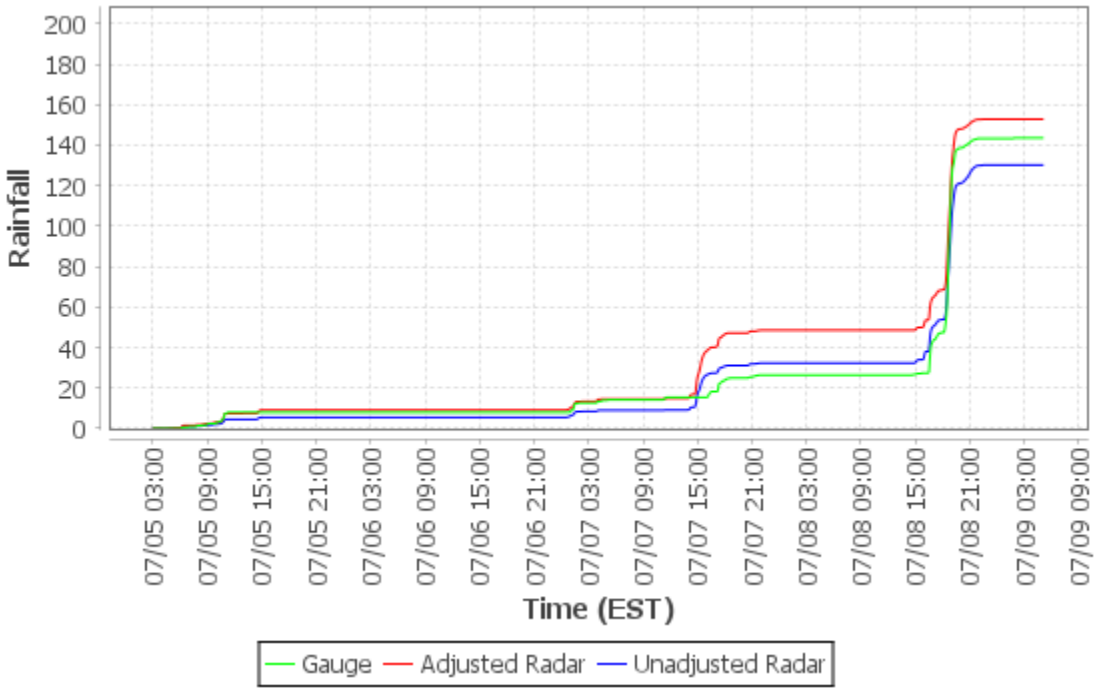
Cumulative Distribution Plot - TANK - SNELGROVE (RG 28)



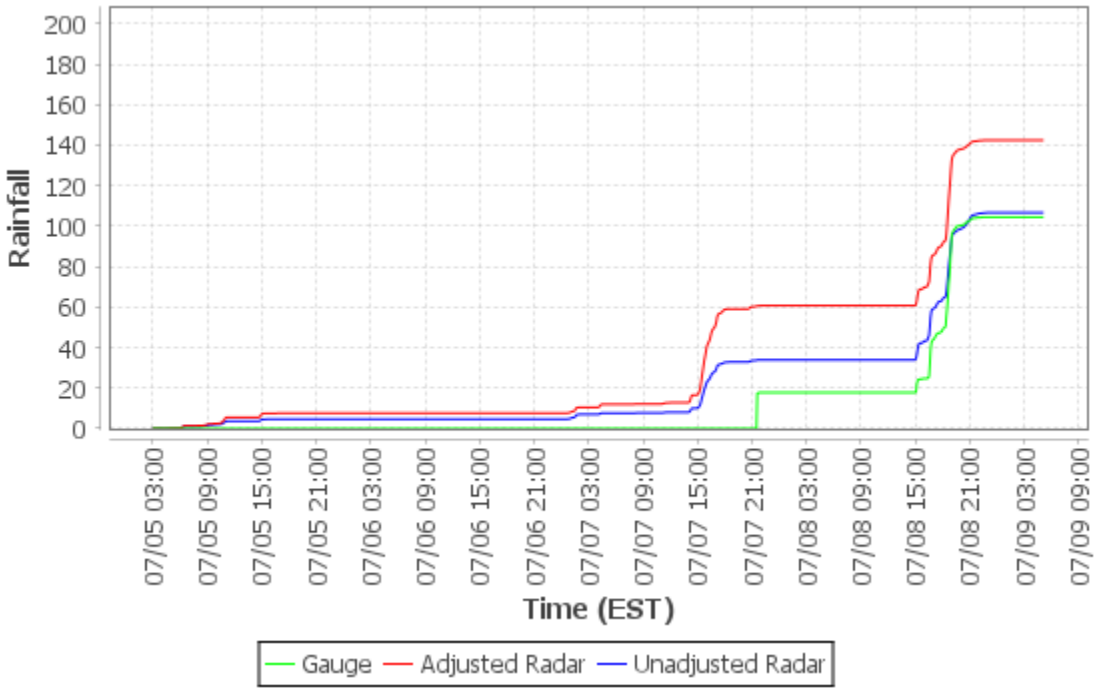
Cumulative Distribution Plot - RESERVOIR - NORTH BRAMPTON (RG 29)



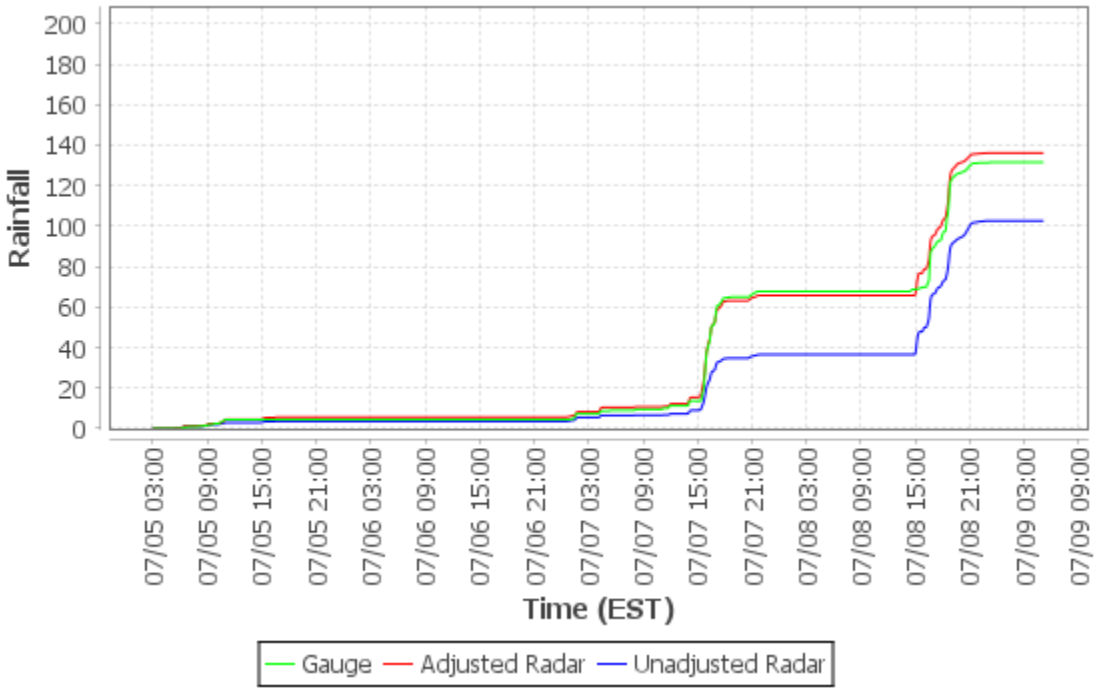
Cumulative Distribution Plot - East Brampton Res (RG 31)



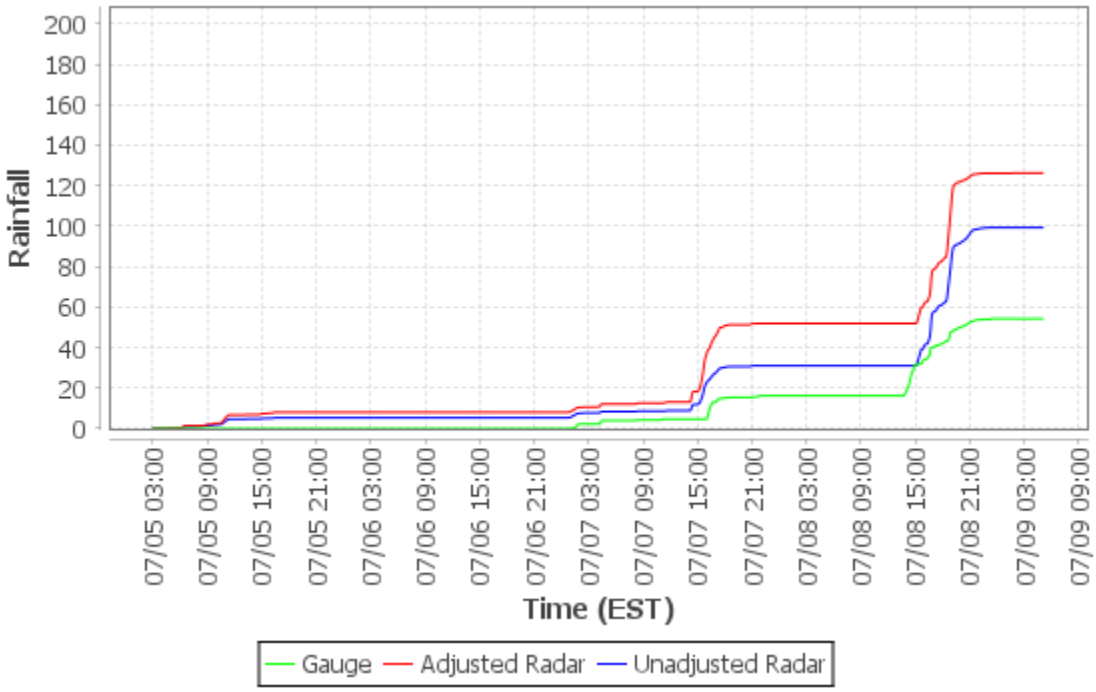
Cumulative Distribution Plot - RESERVOIR - AIRPORT (RG 32)



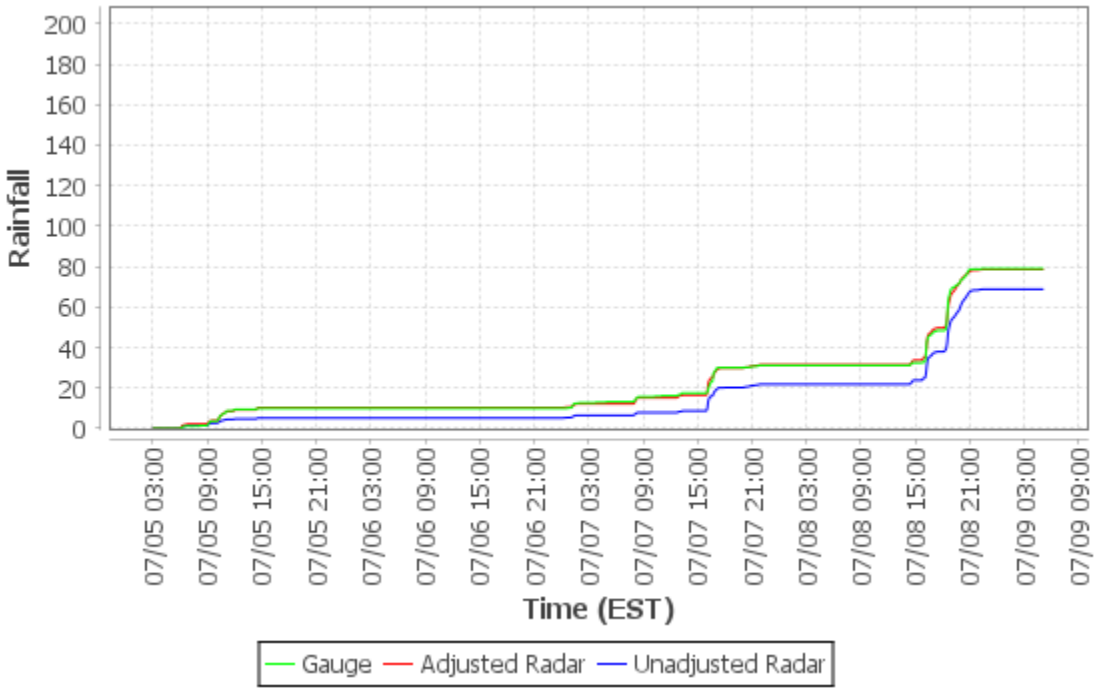
Cumulative Distribution Plot - CASTLEMORE SEWAGE PUMPING (RG 33)



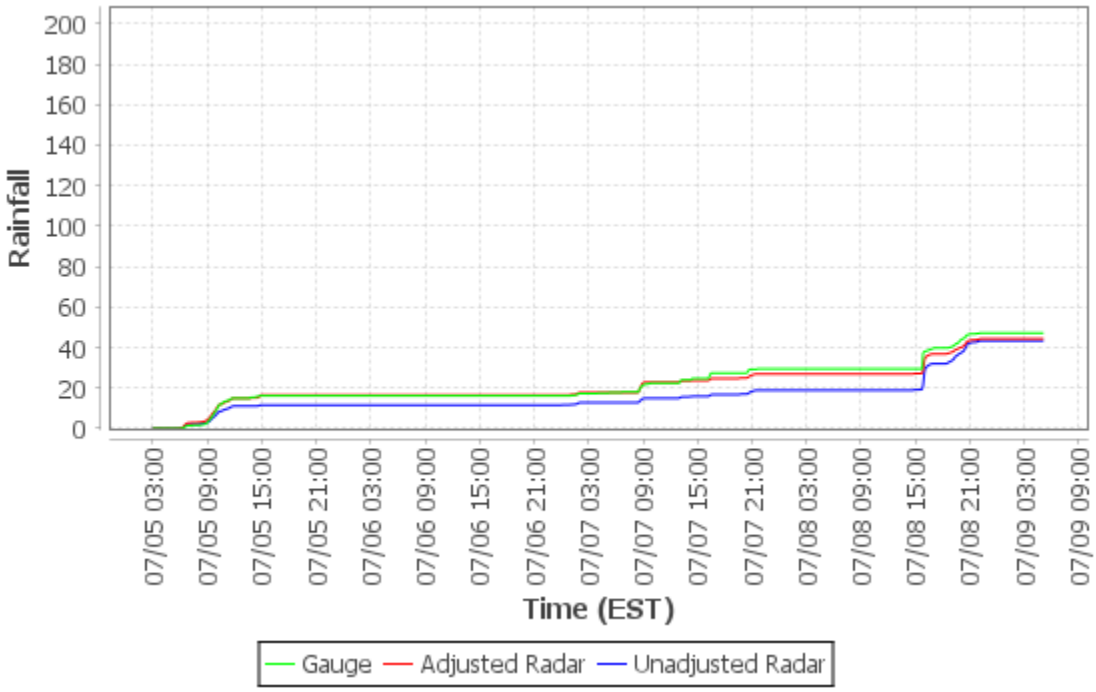
Cumulative Distribution Plot - MCVEAN SEWAGE PUMPING (RG 34)



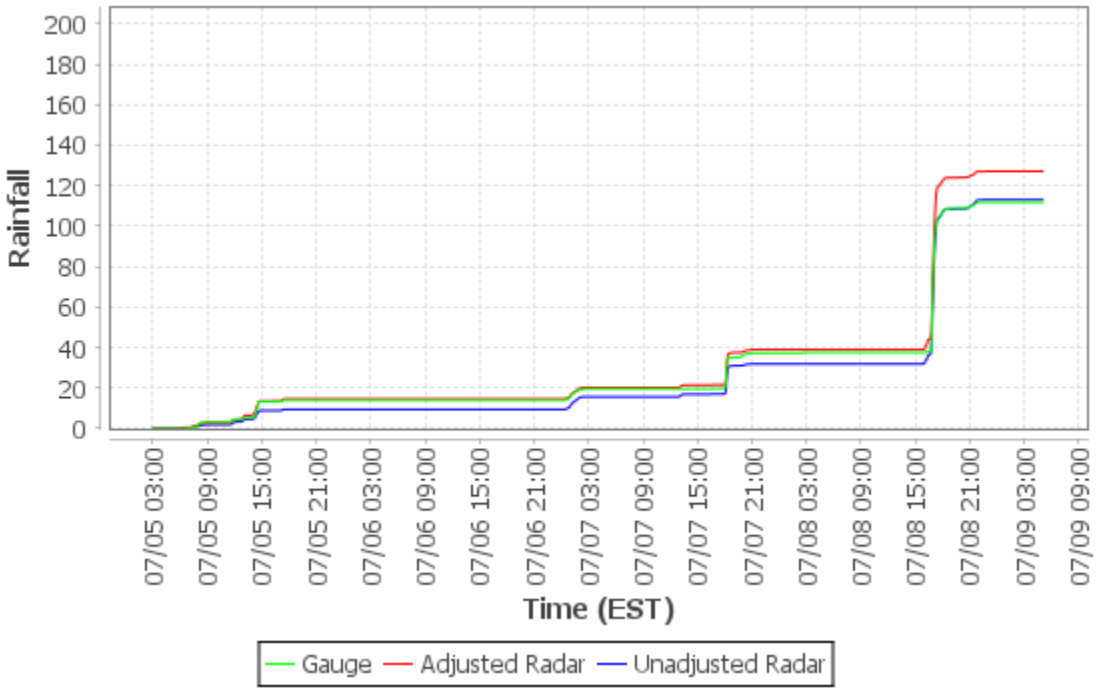
Cumulative Distribution Plot - Inglewood Pumping Stn (RG 39)



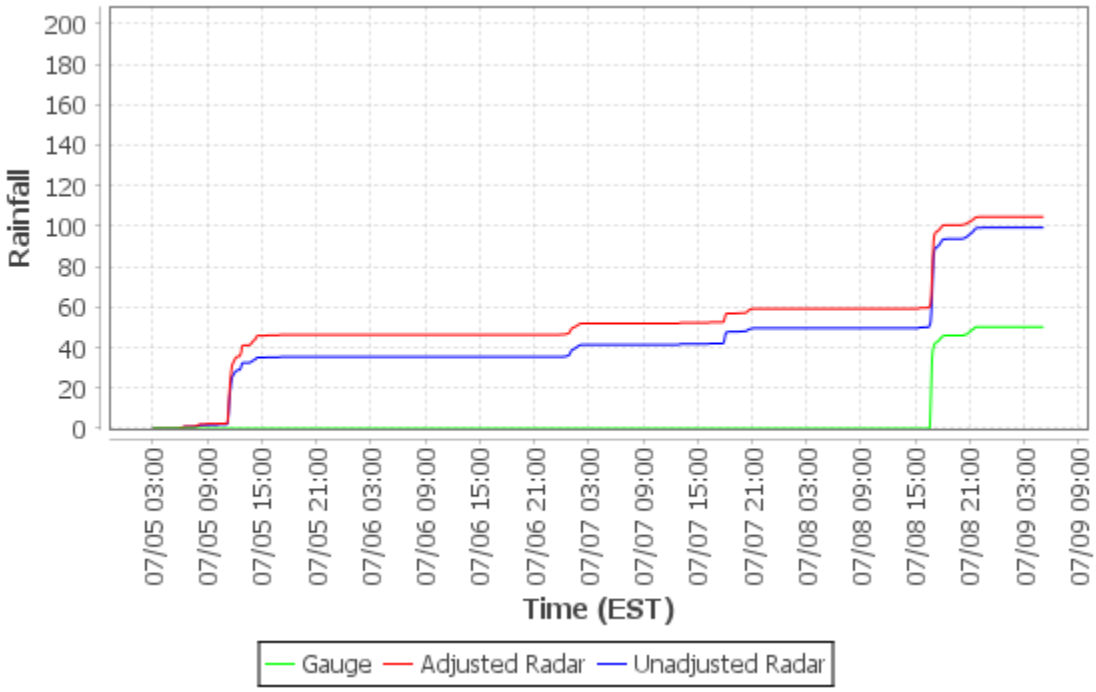
Cumulative Distribution Plot - Caledon Reservoir (RG 42)



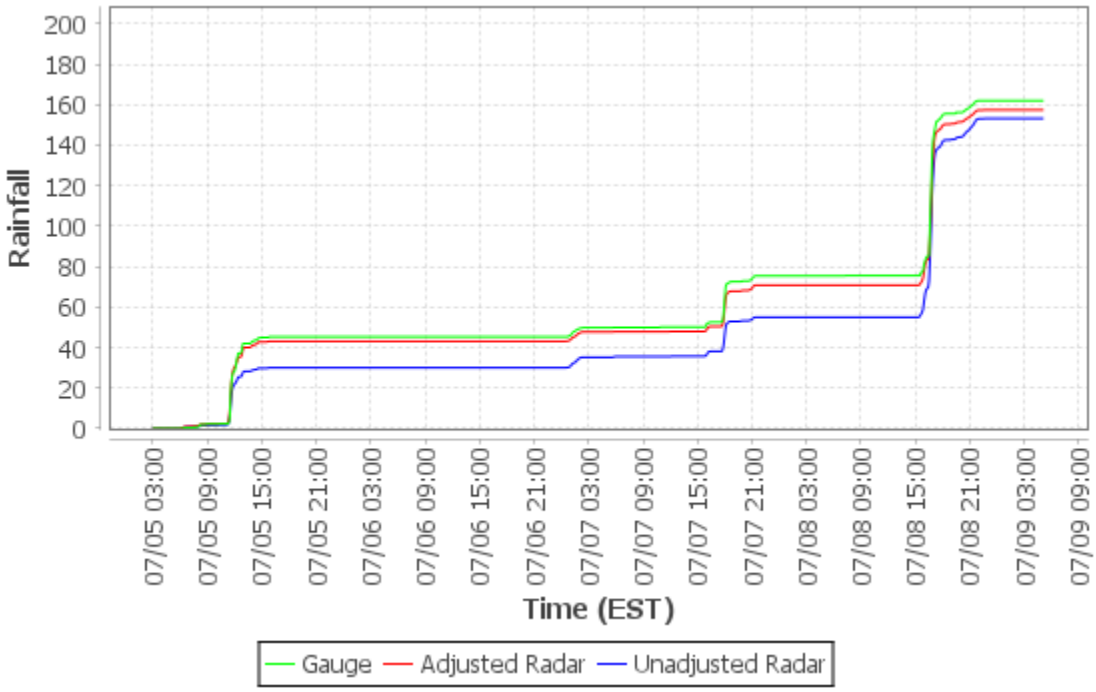
Cumulative Distribution Plot - Fire Station #102 (STN 01)



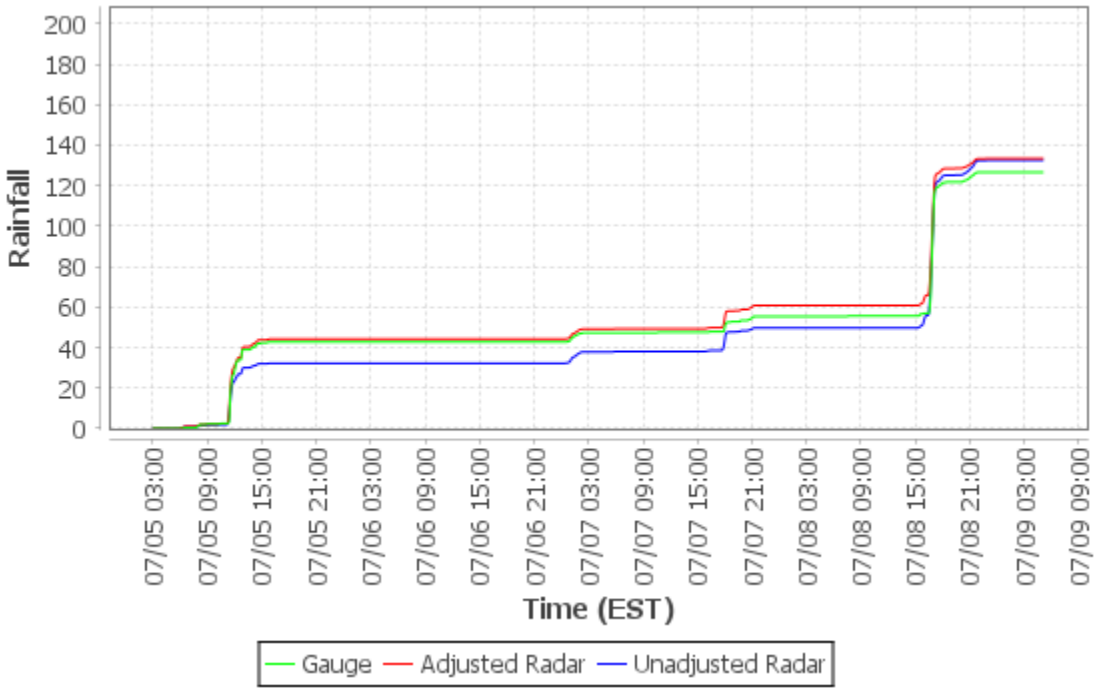
Cumulative Distribution Plot - Wolfdale Works Yard (STN 03)



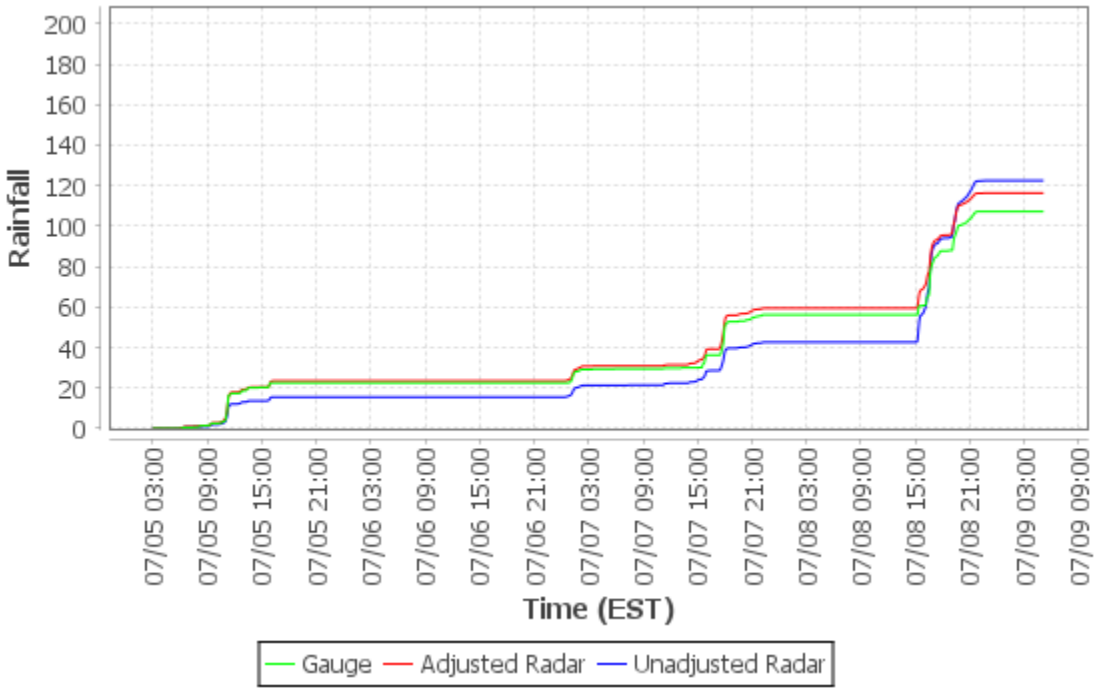
Cumulative Distribution Plot - Winding Trail (STN 05)



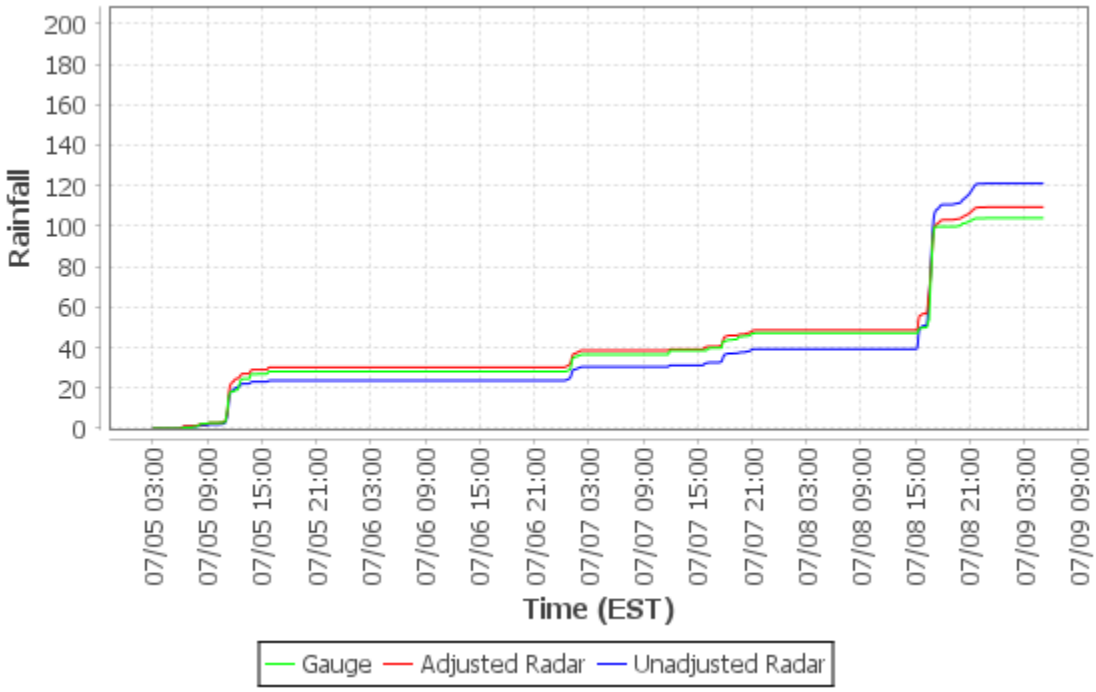
Cumulative Distribution Plot - Mississauga Valley Community Centre (STN 06)



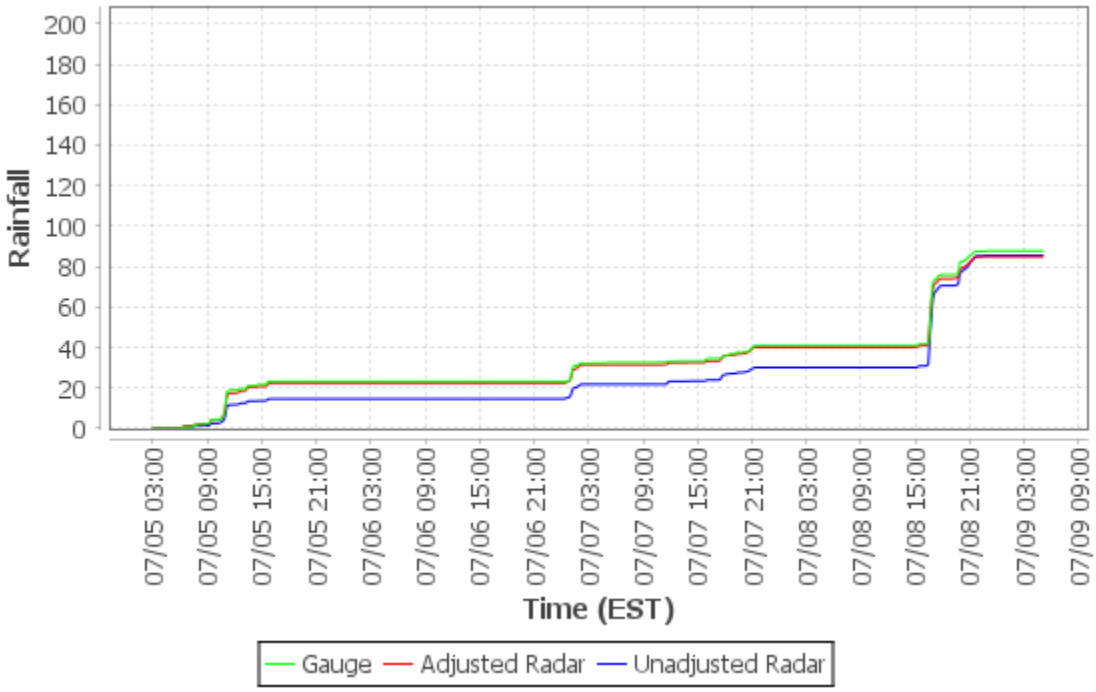
Cumulative Distribution Plot - Fire Station #116 (STN 08)



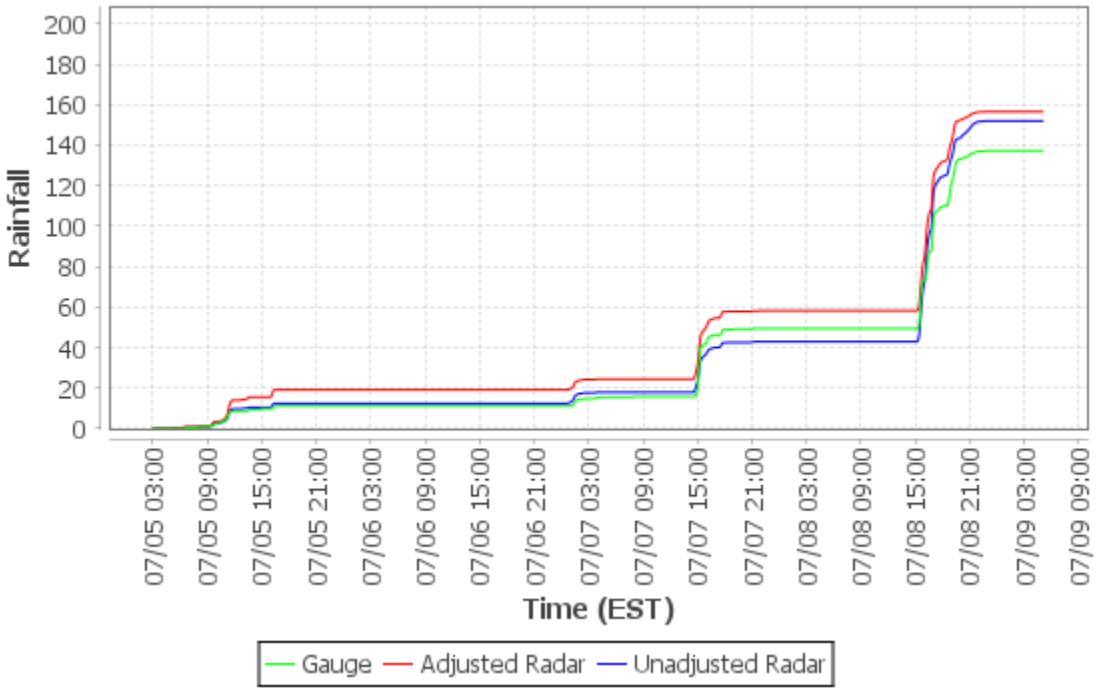
Cumulative Distribution Plot - Fire Station #114 (STN 10)



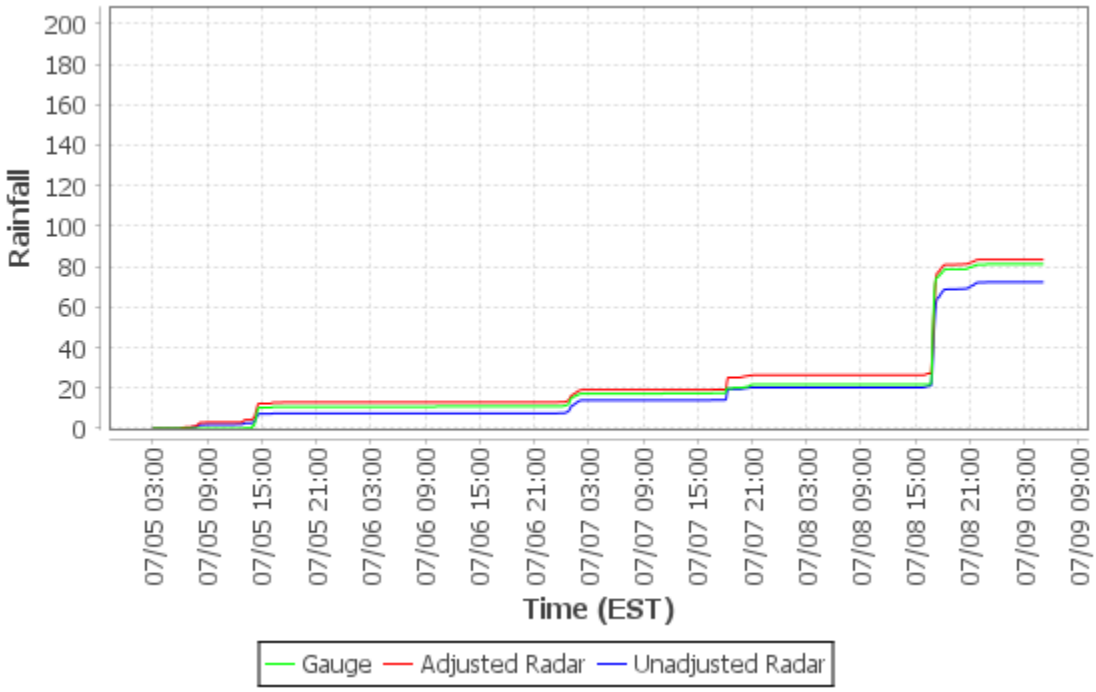
Cumulative Distribution Plot - CVC Facility (STN 12)



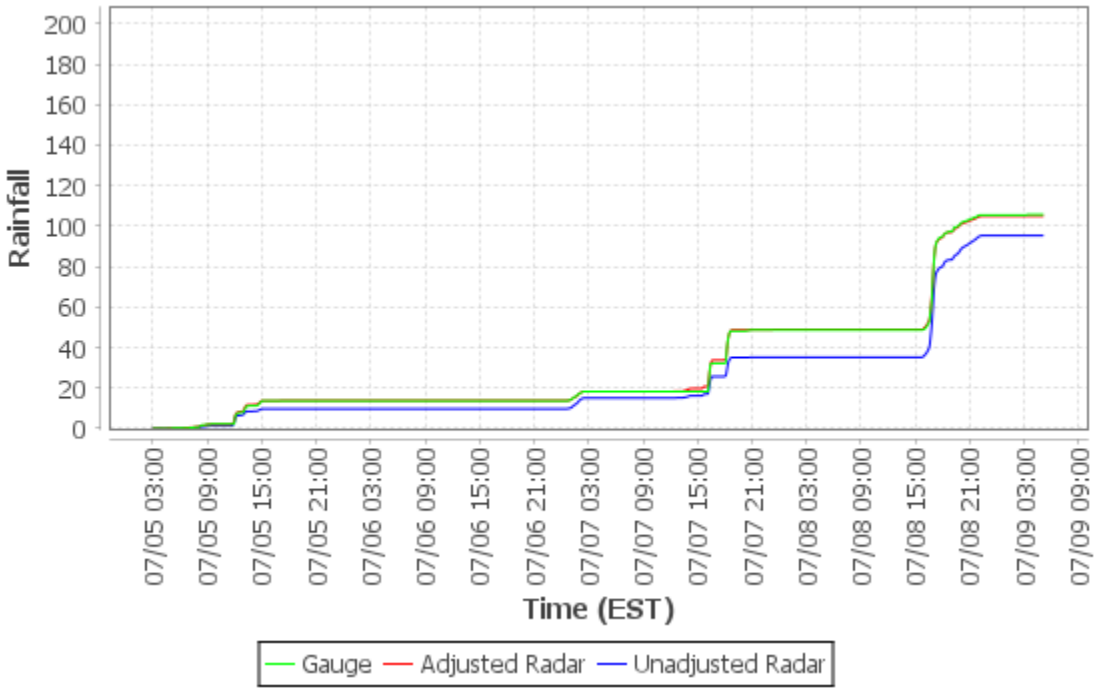
Cumulative Distribution Plot - Fire Station #105 (STN 13)



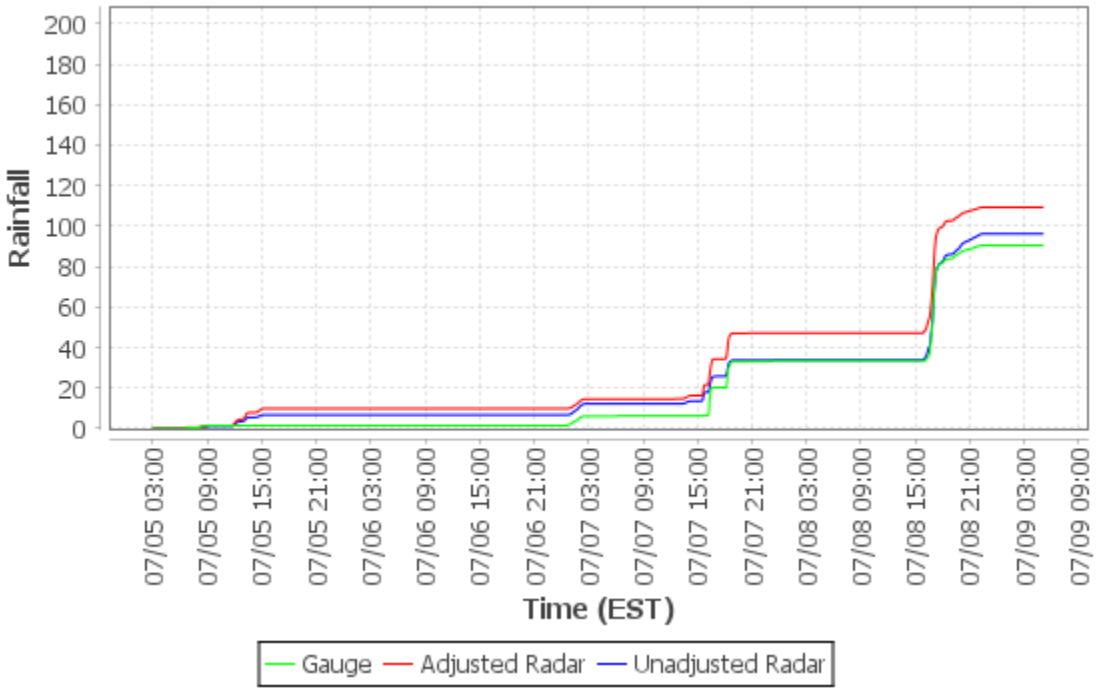
Cumulative Distribution Plot - Fire Station #104 (STN 14)



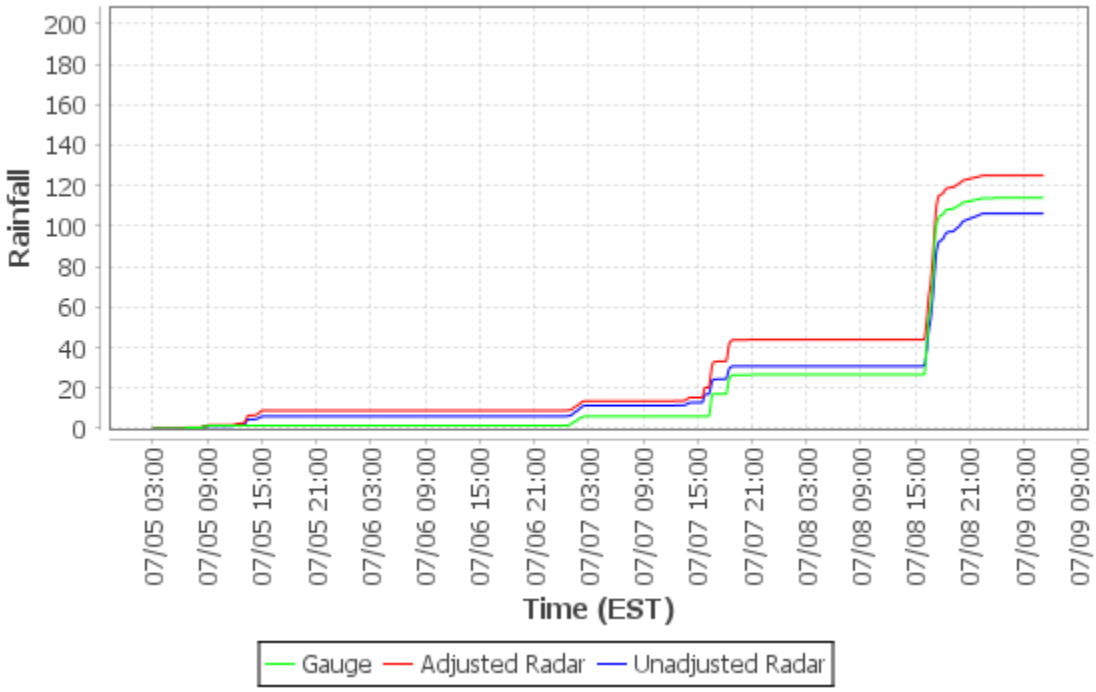
Cumulative Distribution Plot - Swansea (TOR_RG-001)



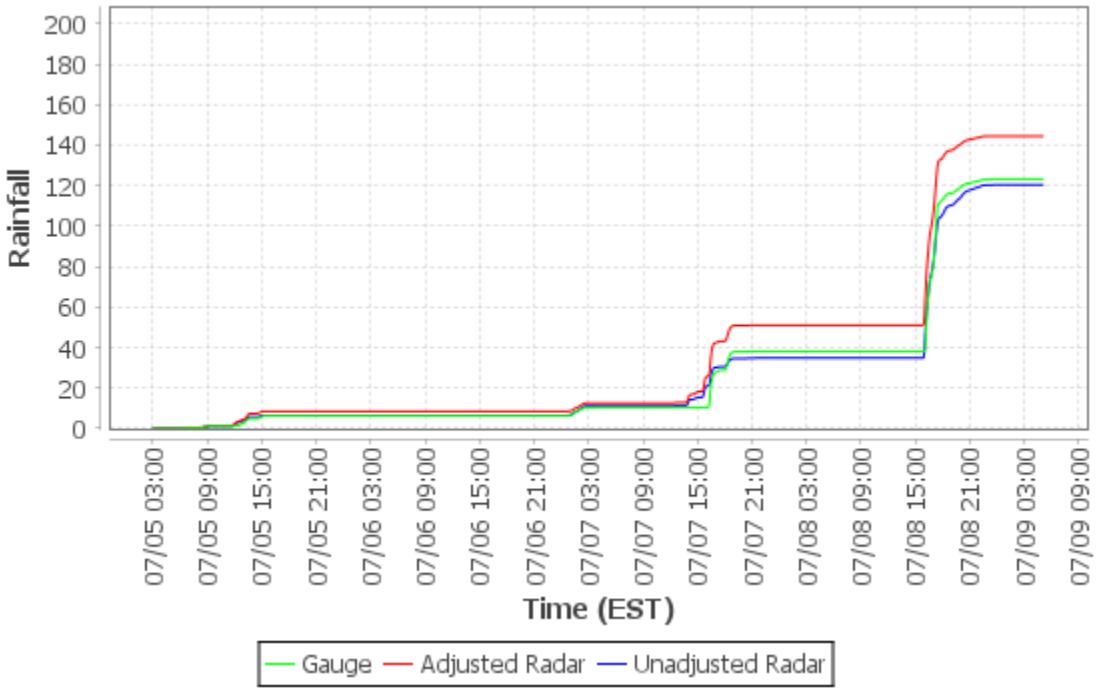
Cumulative Distribution Plot - Howard (TOR_RG-002)



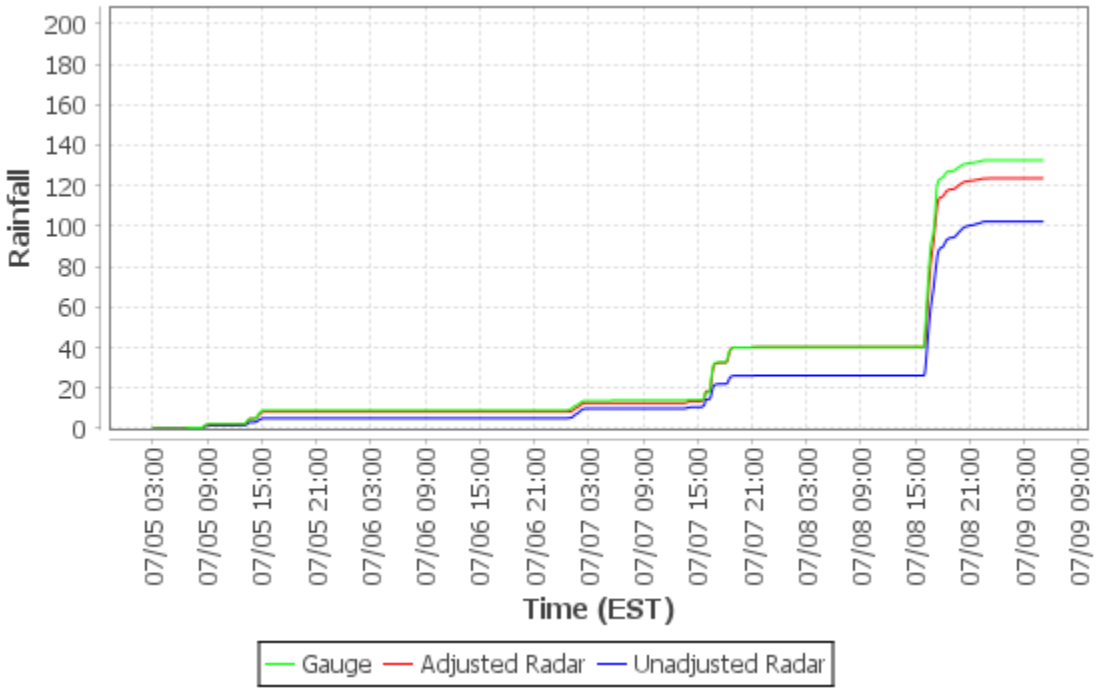
Cumulative Distribution Plot - Central (TOR_RG-003)



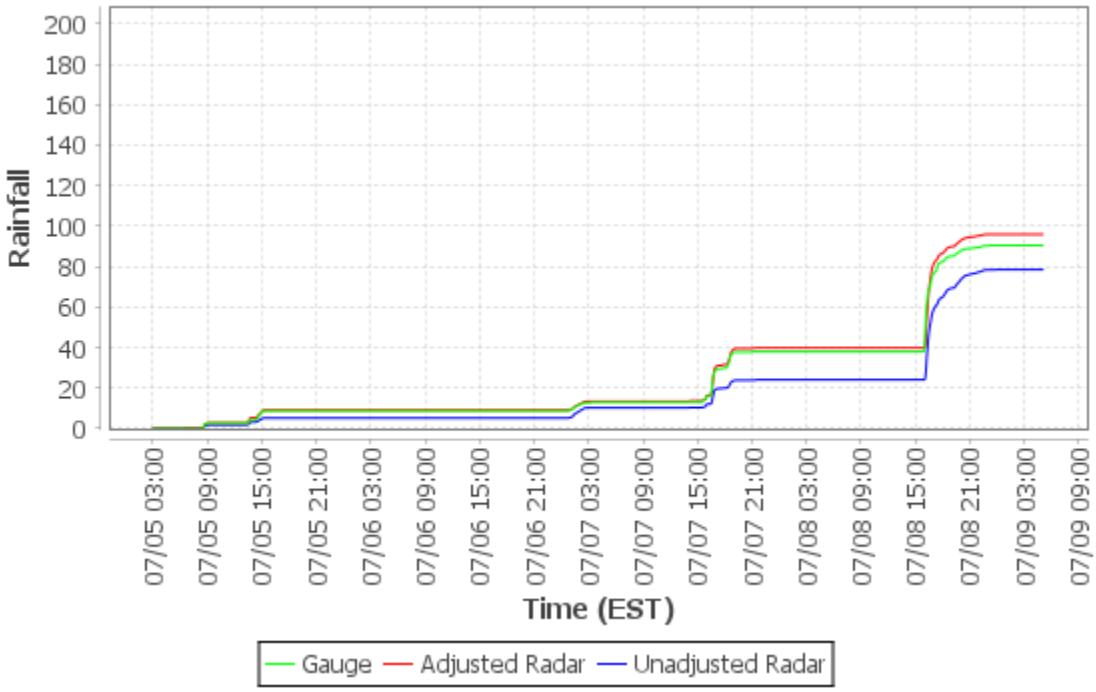
Cumulative Distribution Plot - Brown (TOR_RG-004)



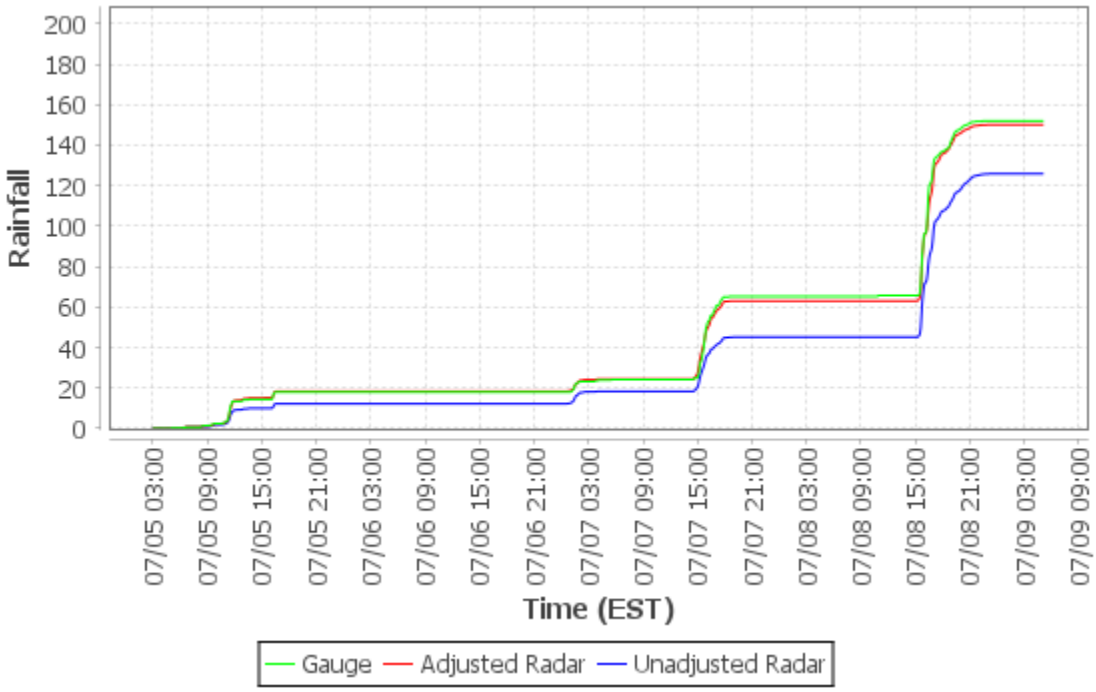
Cumulative Distribution Plot - Church (TOR_RG-006)



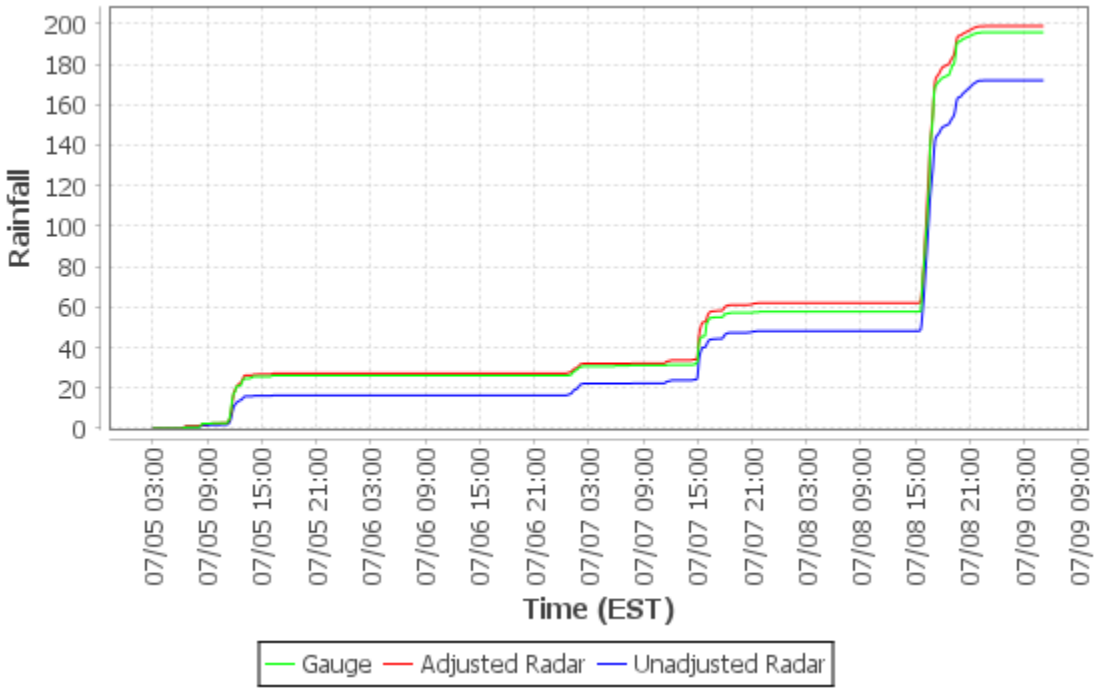
Cumulative Distribution Plot - Greenwood (TOR_RG-007)



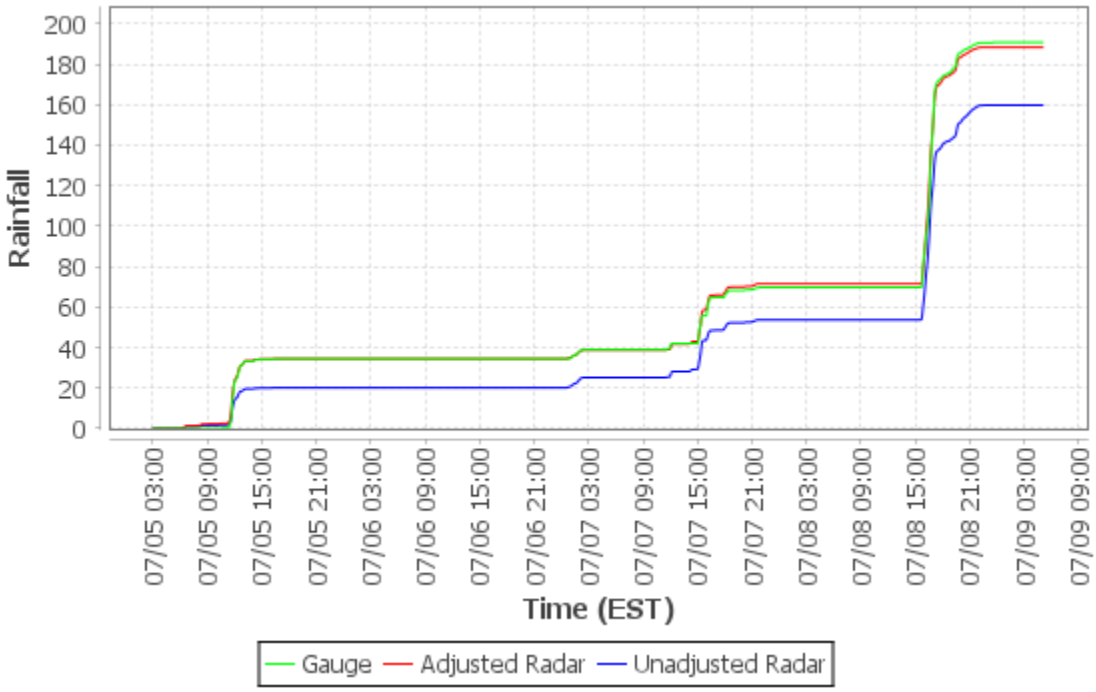
Cumulative Distribution Plot - Albion (TOR_RG-012)



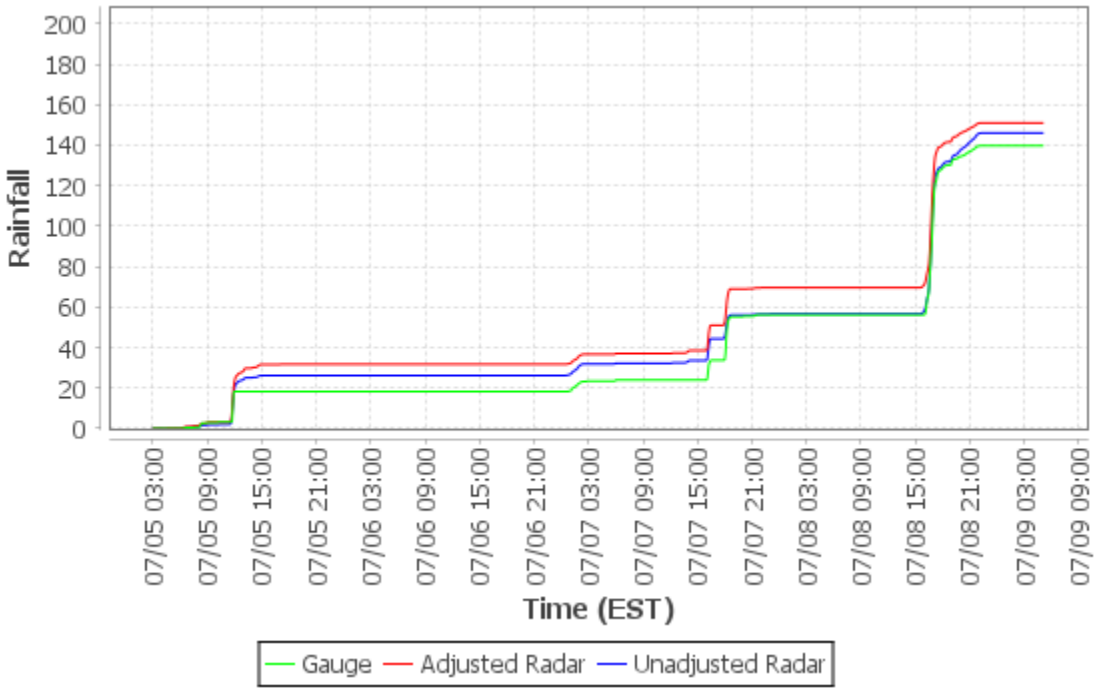
Cumulative Distribution Plot - Martin Grove (TOR_RG-013)



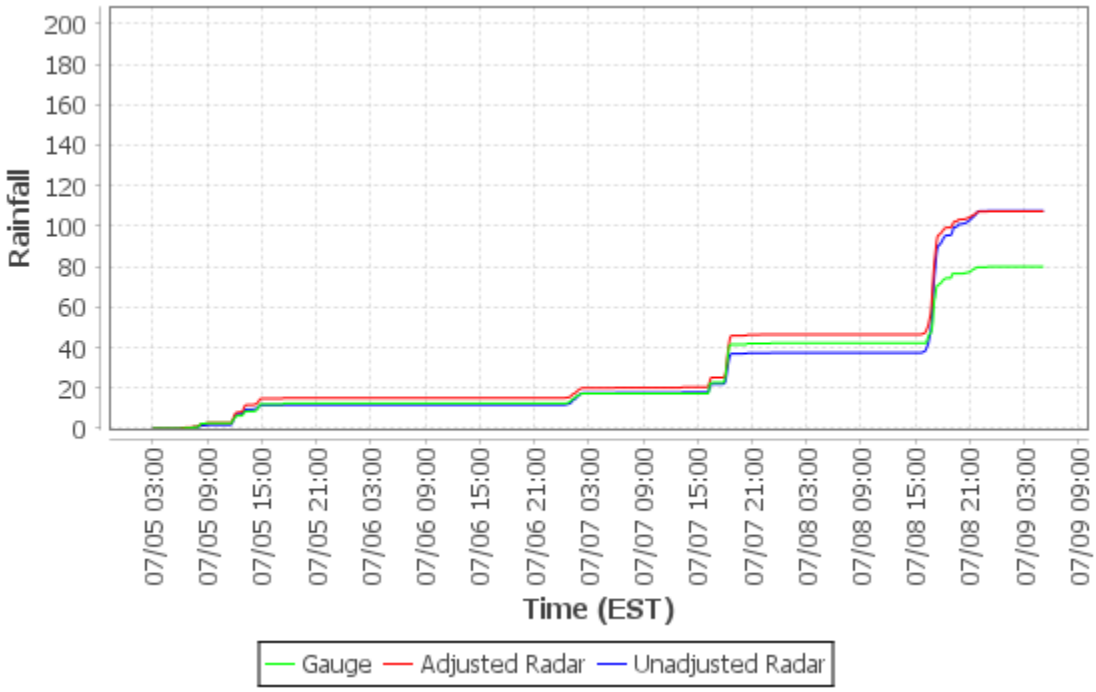
Cumulative Distribution Plot - Richview (TOR_RG-014)



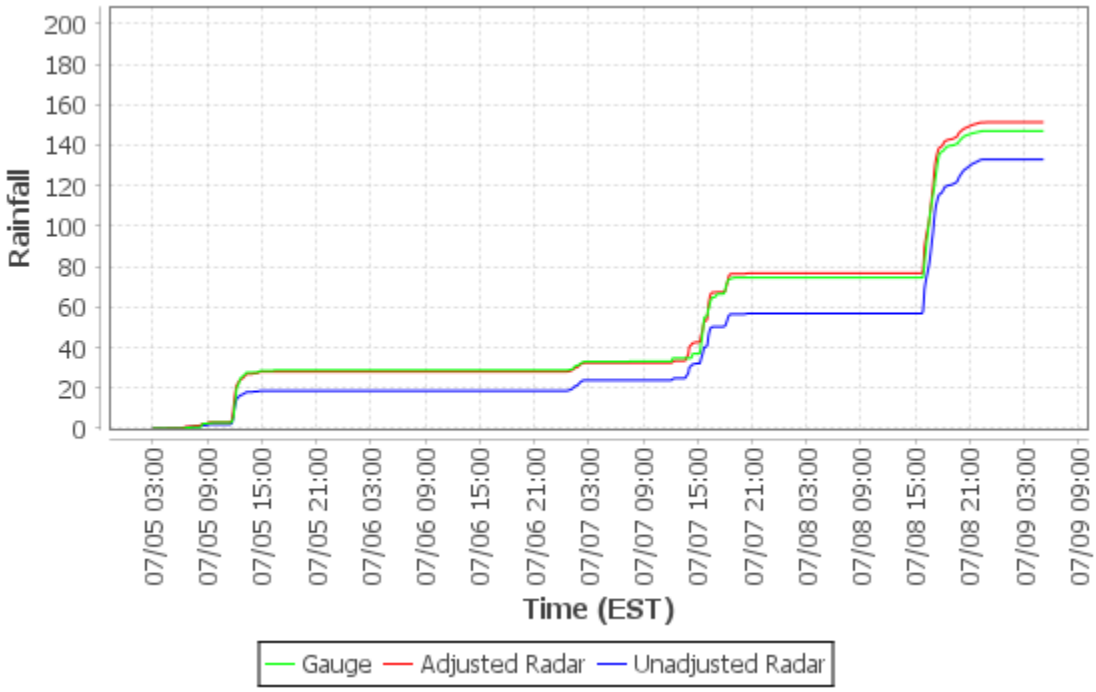
Cumulative Distribution Plot - Bering (TOR_RG-015)



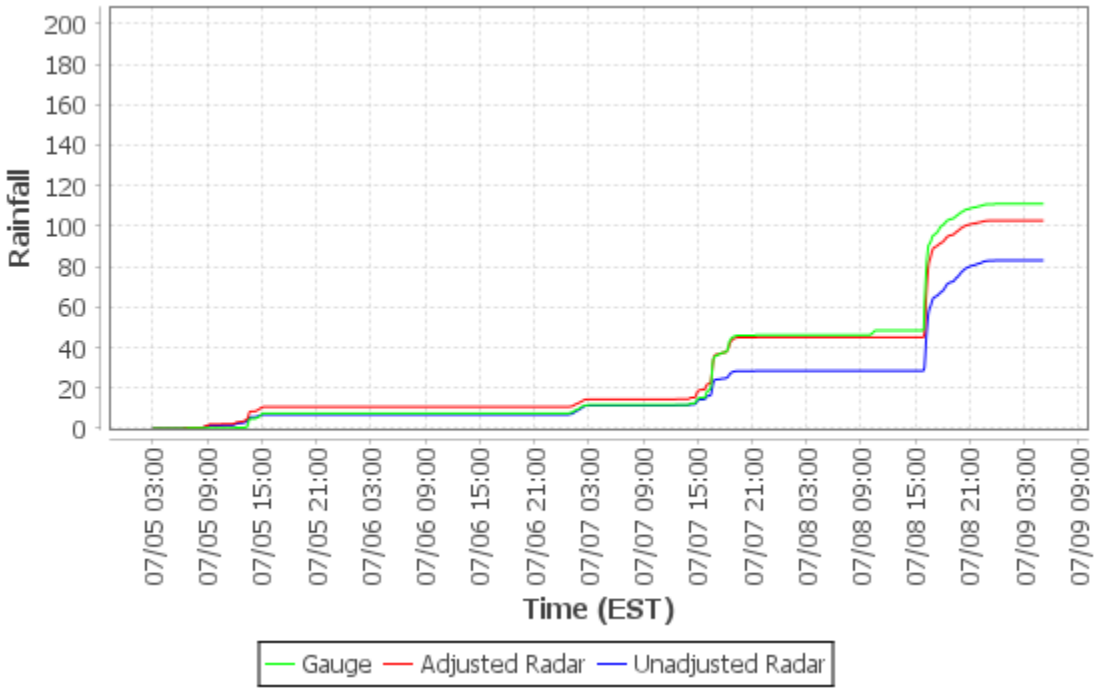
Cumulative Distribution Plot - Kipling (TOR_RG-016)



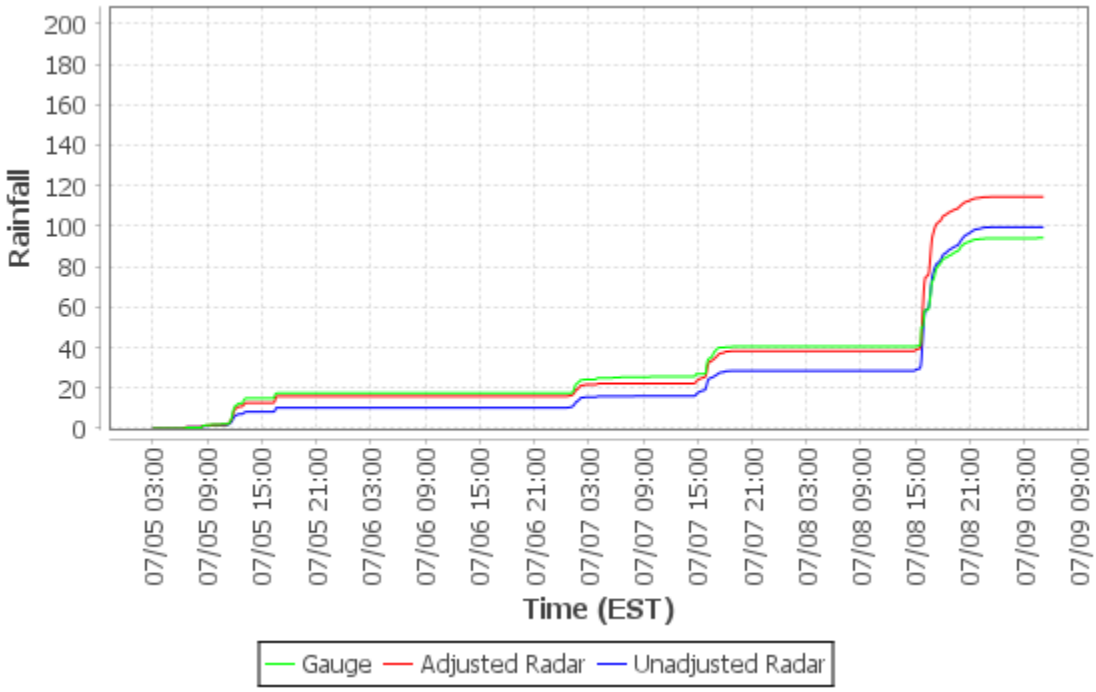
Cumulative Distribution Plot - Castlefield (TOR_RG-017)



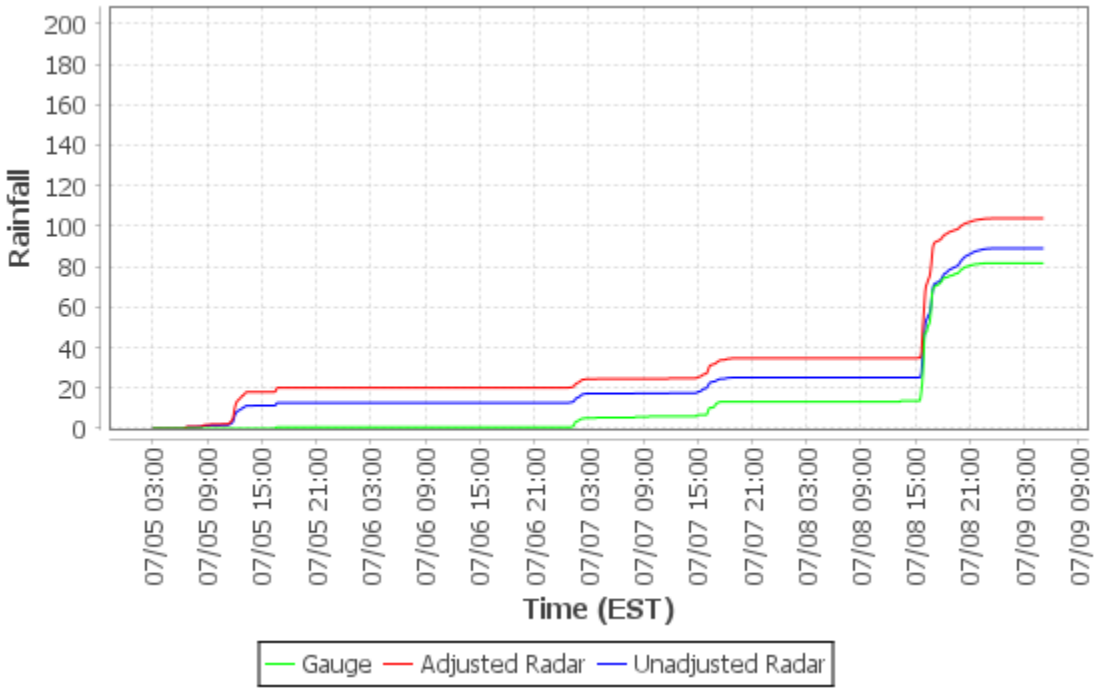
Cumulative Distribution Plot - Thorncliffe (TOR_RG-018)



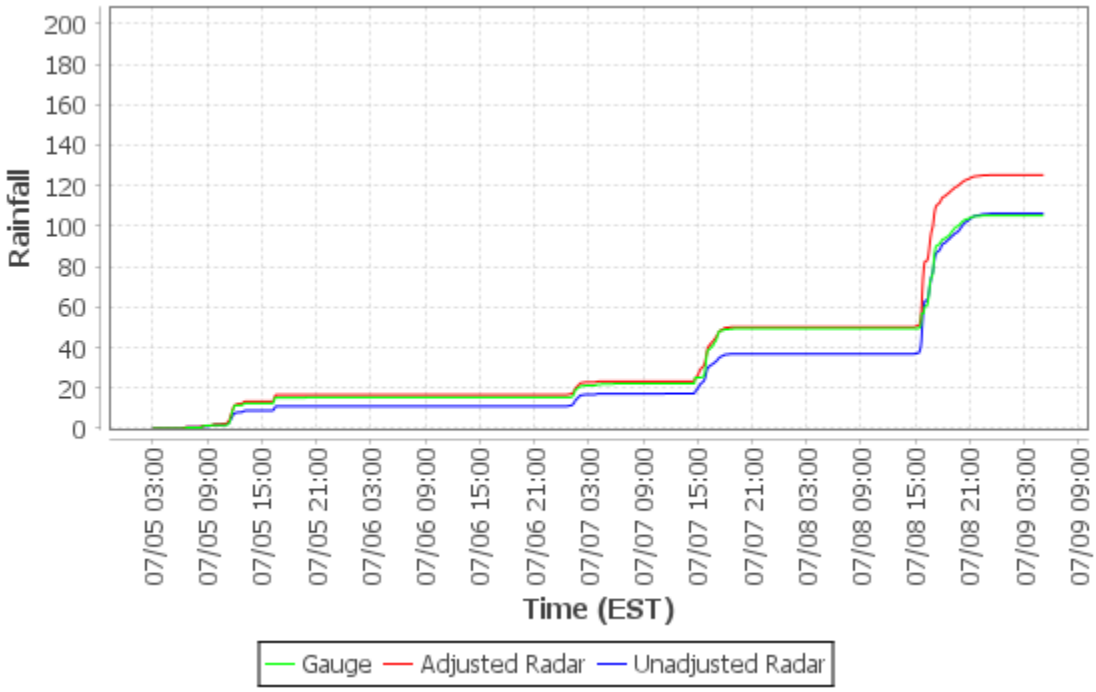
Cumulative Distribution Plot - Jane (TOR_RG-019)



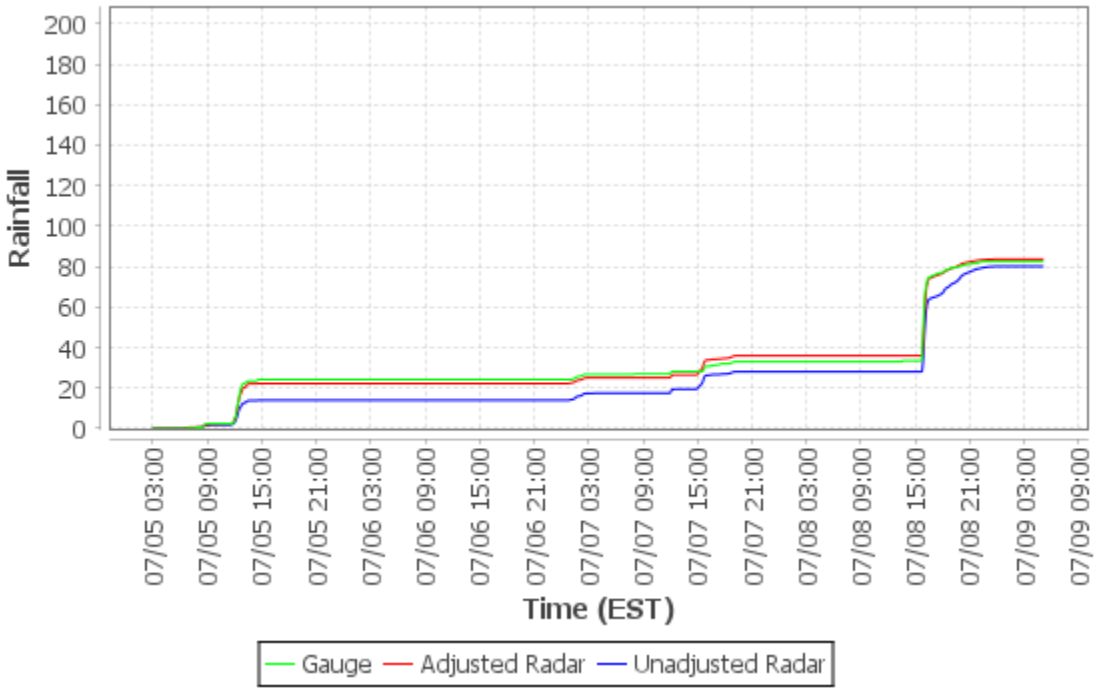
Cumulative Distribution Plot - Finch Yard (TOR_RG-020)



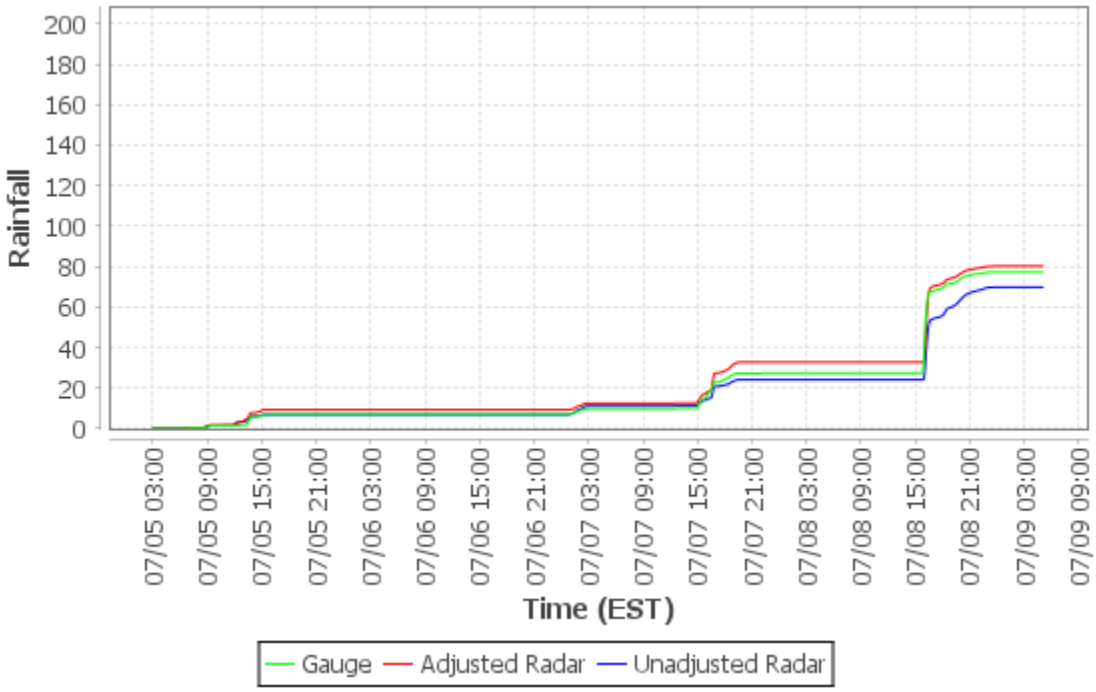
Cumulative Distribution Plot - Emery Yard (TOR_RG-021)



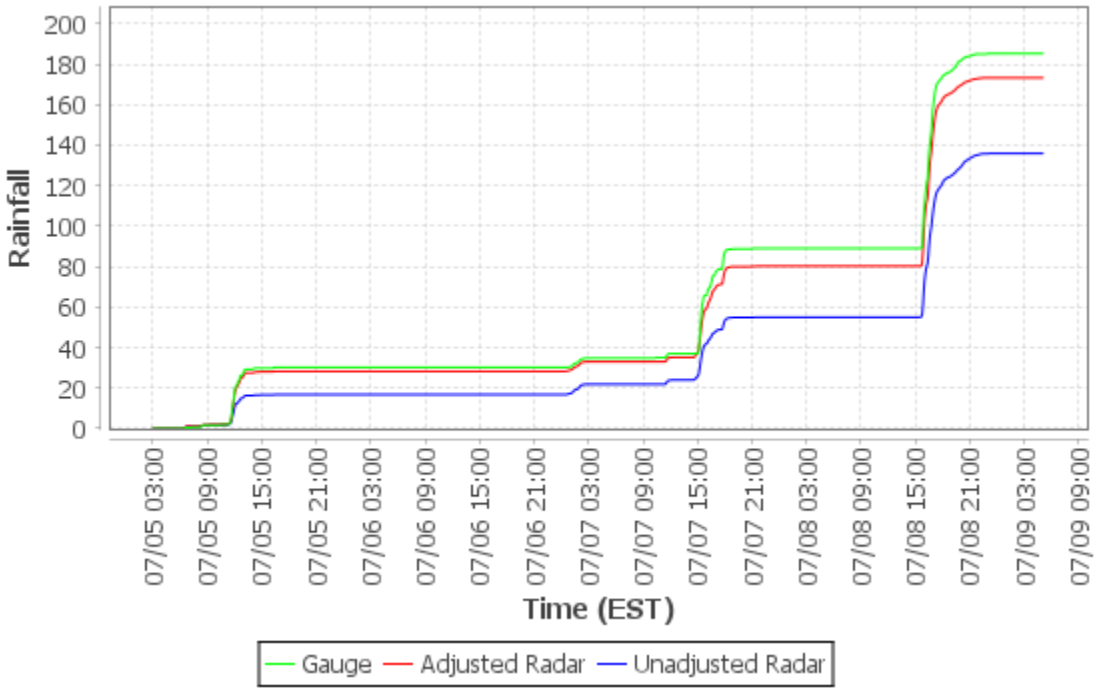
Cumulative Distribution Plot - Fire Station 116 (TOR_RG-022)



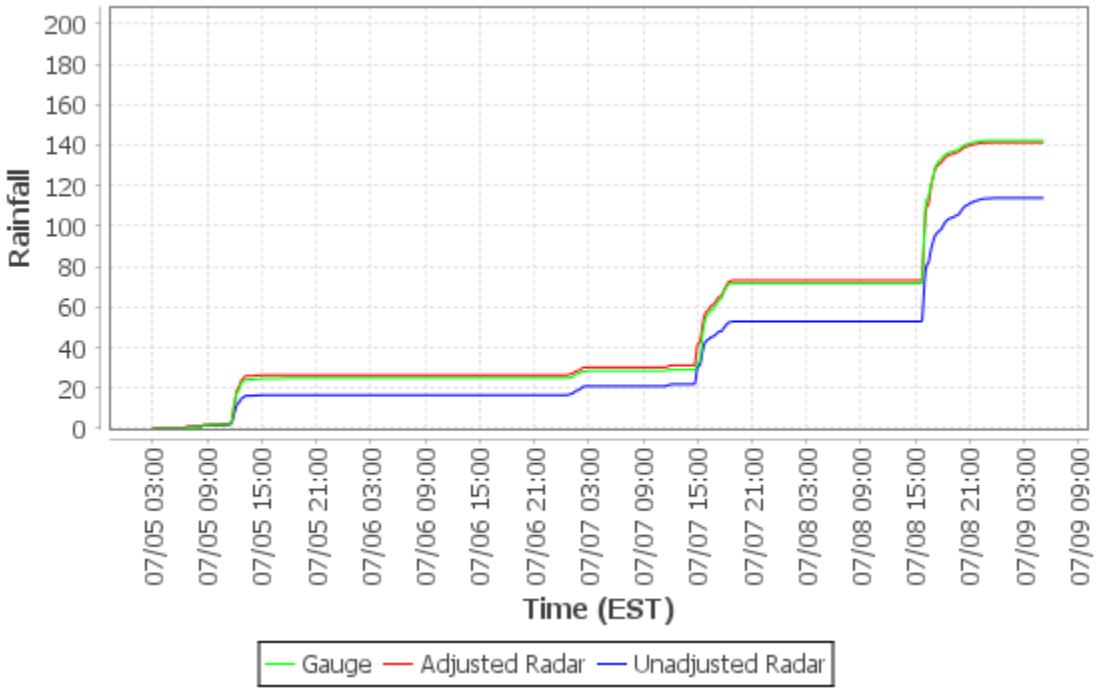
Cumulative Distribution Plot - Bermondsey Yard (TOR_RG-023)



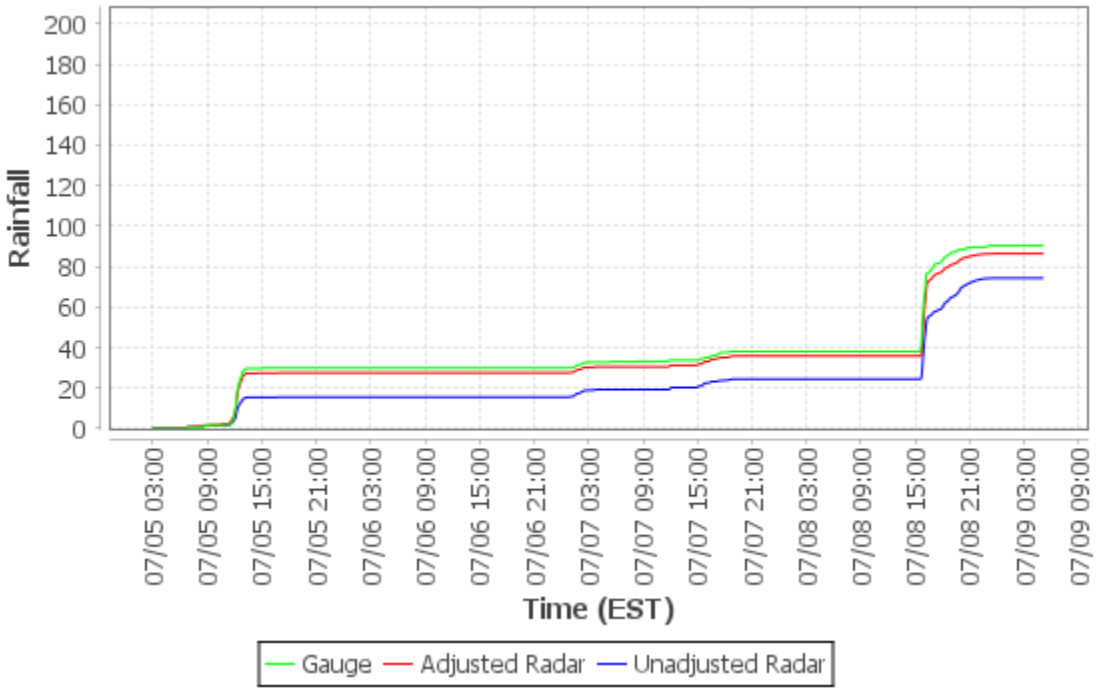
Cumulative Distribution Plot - Wilson (TOR_RG-024)



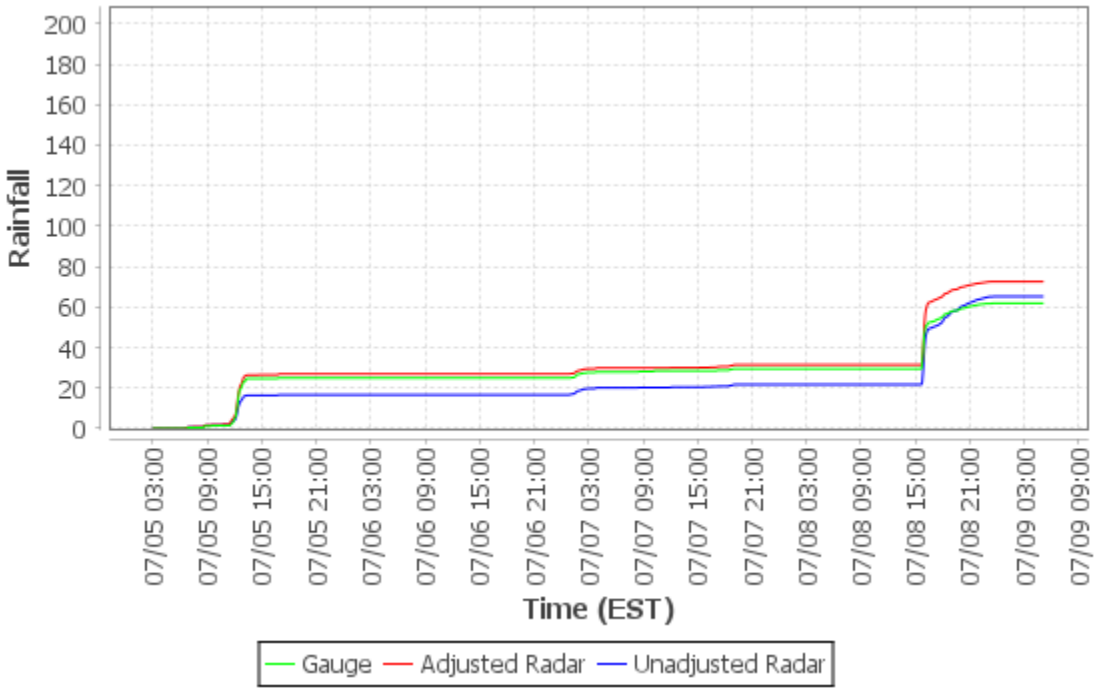
Cumulative Distribution Plot - Ancaster (TOR_RG-025)



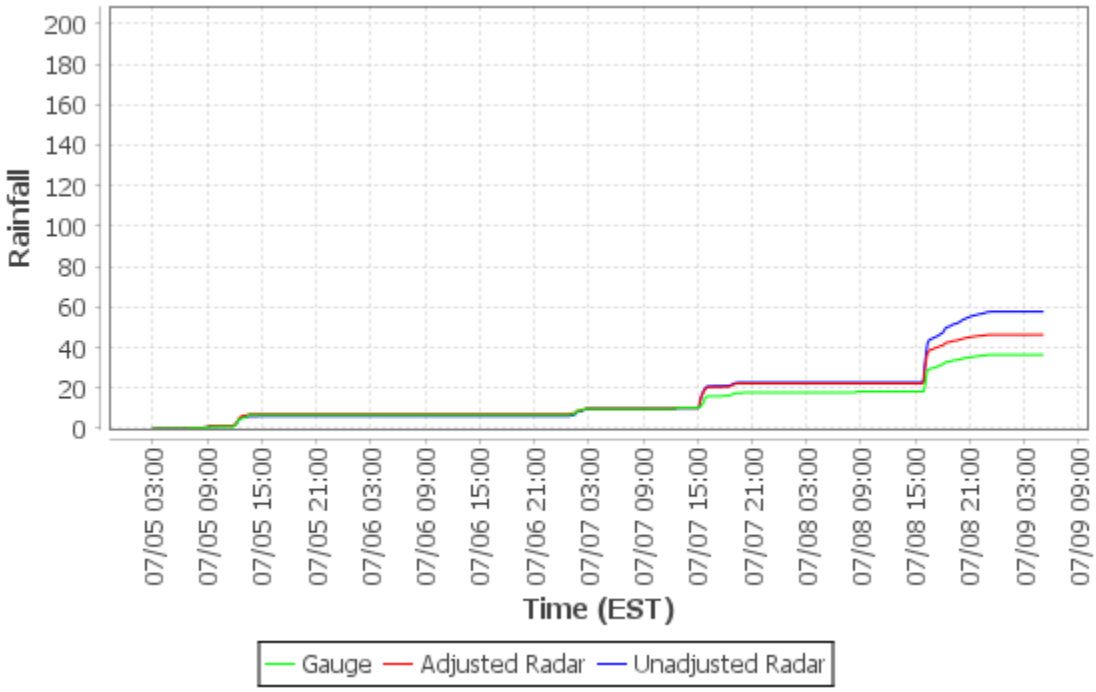
Cumulative Distribution Plot - Mitchell Field (TOR_RG-027)



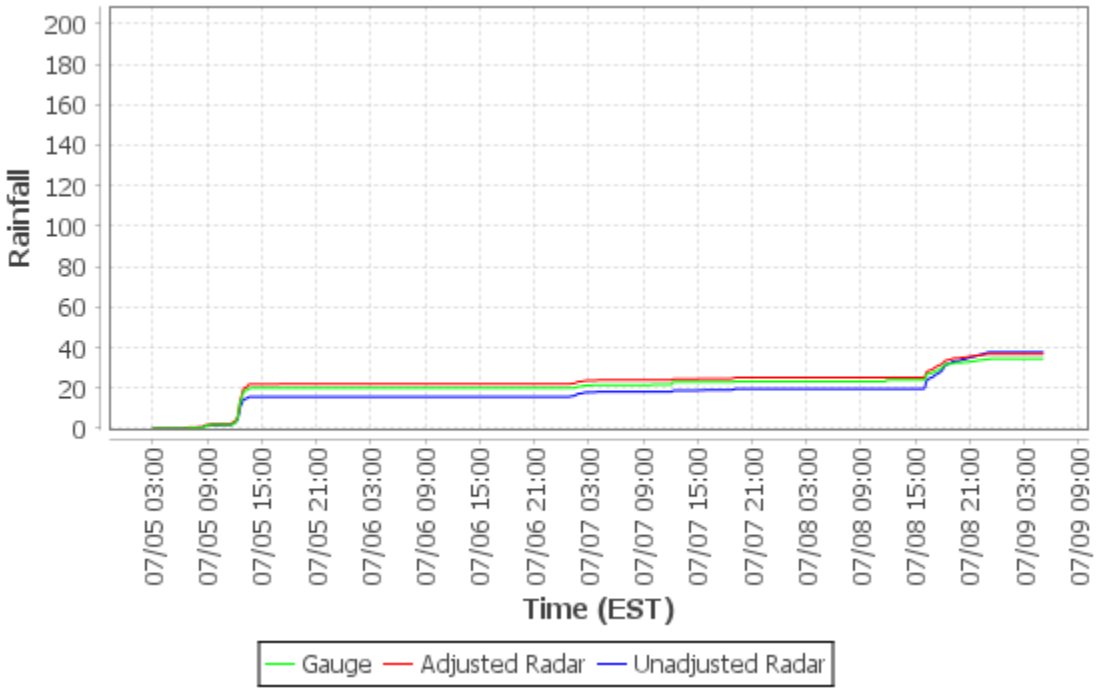
Cumulative Distribution Plot - Cummer (TOR_RG-028)



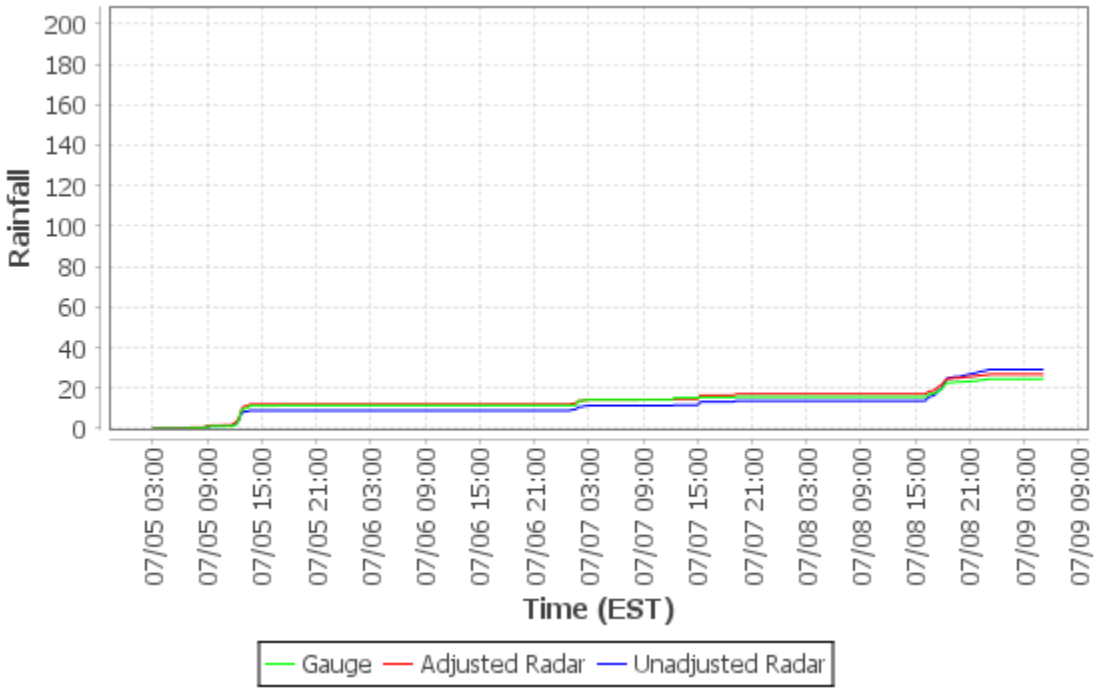
Cumulative Distribution Plot - Pharmacy/401 (TOR_RG-030)



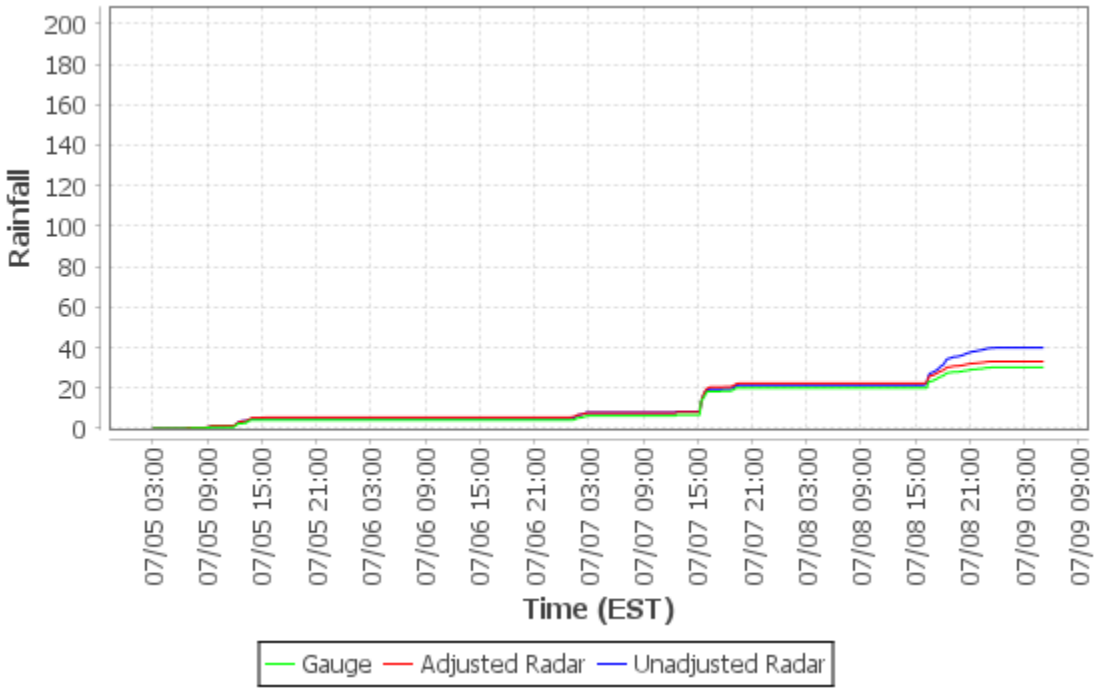
Cumulative Distribution Plot - Liamoreaux (TOR_RG-031)



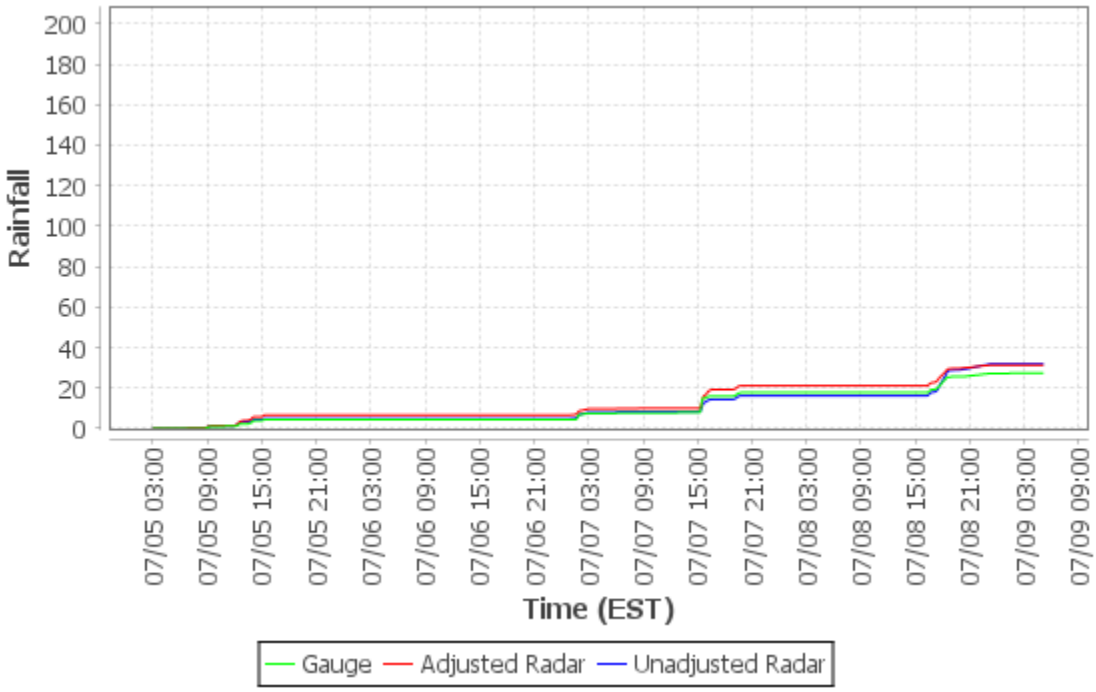
Cumulative Distribution Plot - Nashdene Yard (TOR_RG-033)



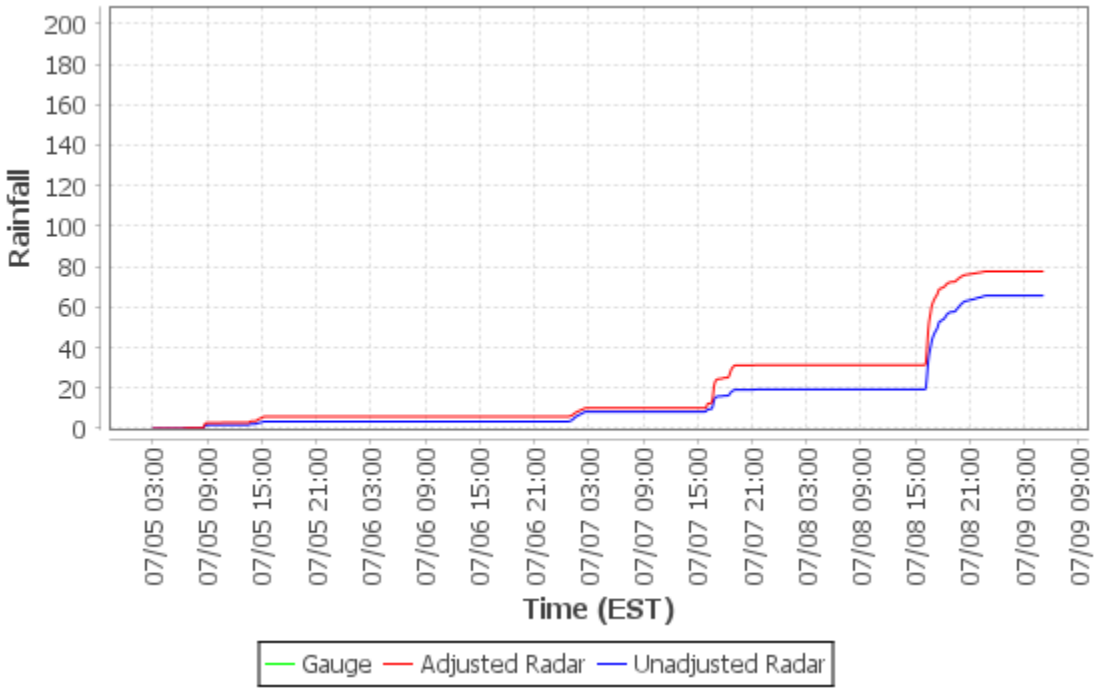
Cumulative Distribution Plot - Ellesmere Yard (TOR_RG-034)



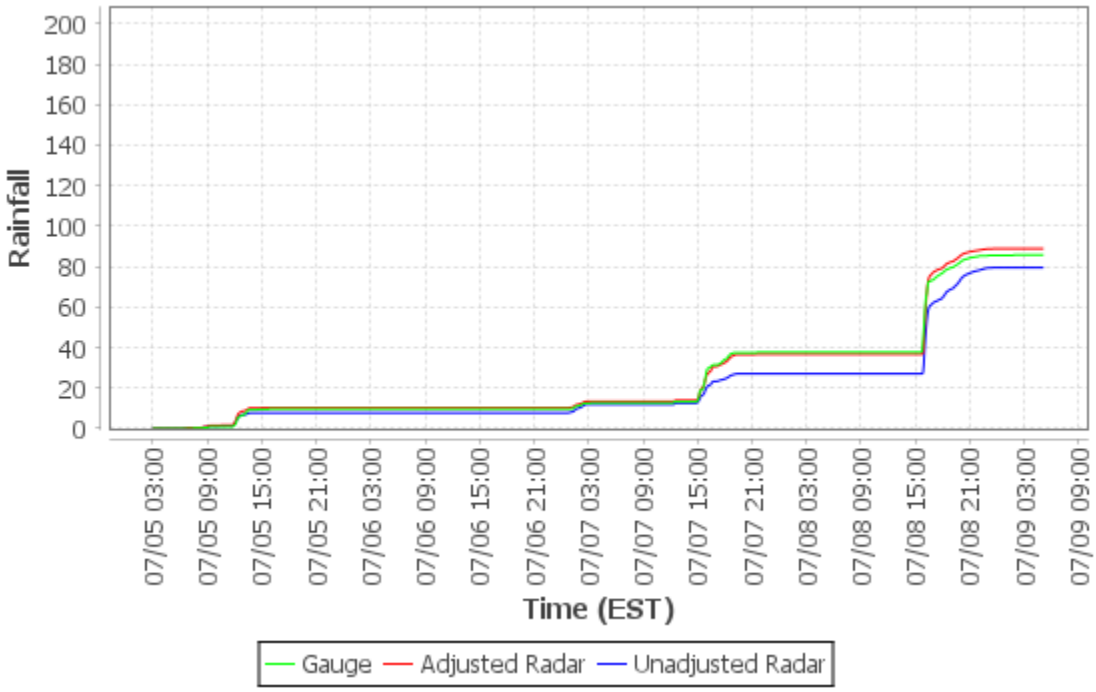
Cumulative Distribution Plot - Morningsidede Yard (TOR_RG-035)



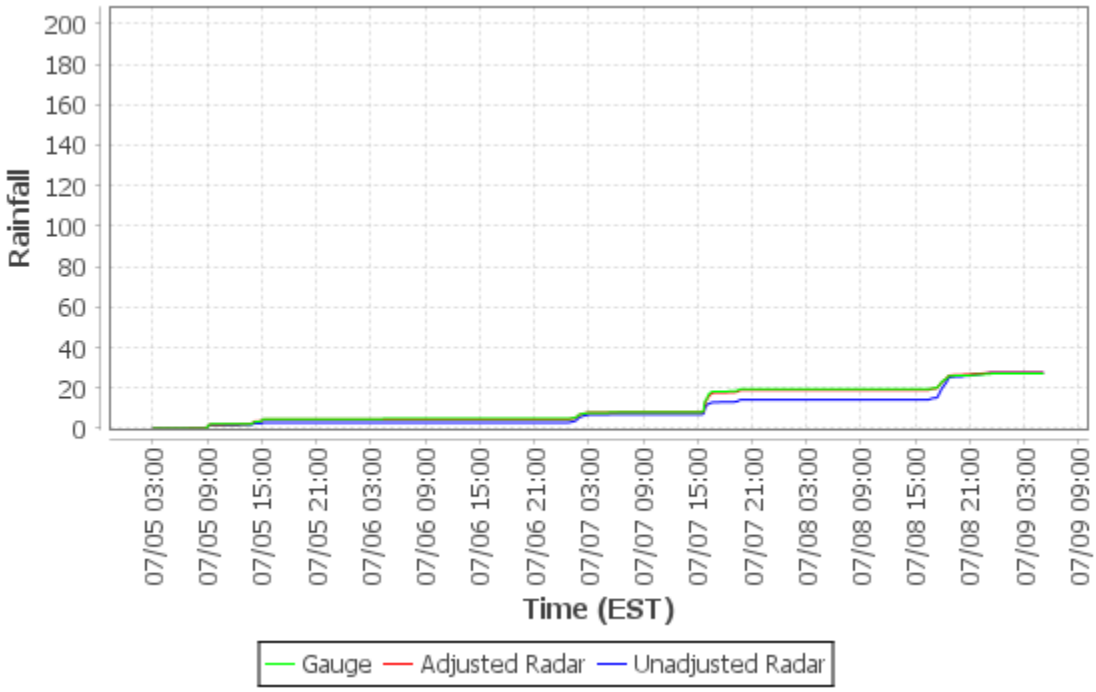
Cumulative Distribution Plot - Ashbridges Bay (TOR_RG-036)



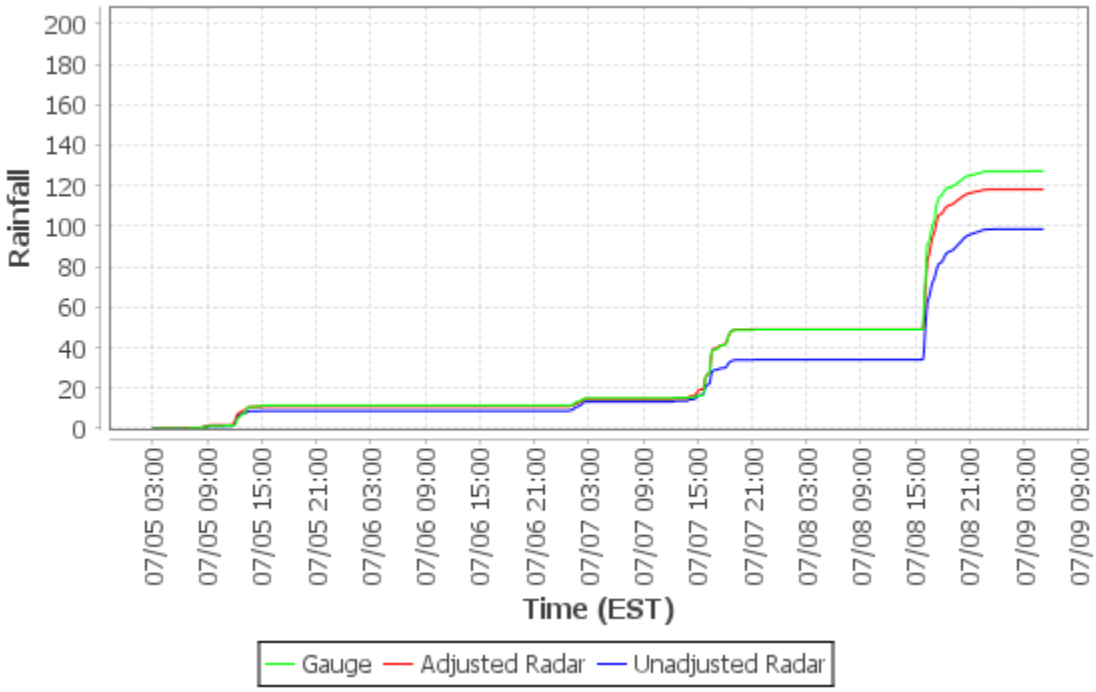
Cumulative Distribution Plot - Edwards Gardens (TOR_RG-037)



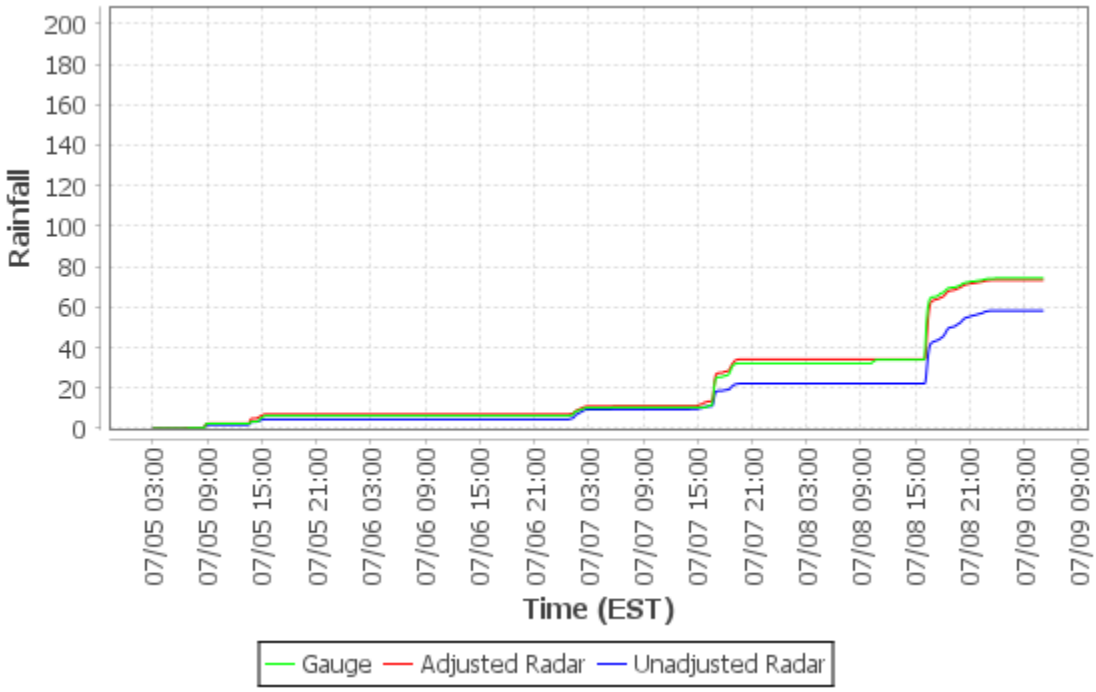
Cumulative Distribution Plot - Fire Station 215 (TOR_RG-038)



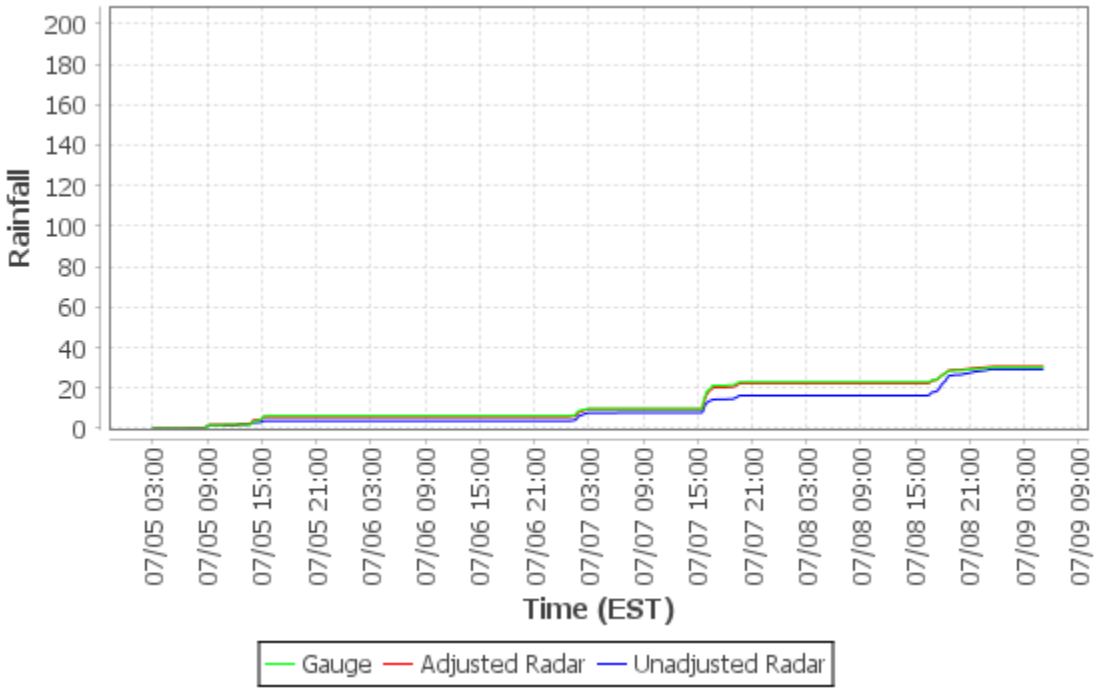
Cumulative Distribution Plot - Mount Pleasant (TOR_RG-039)



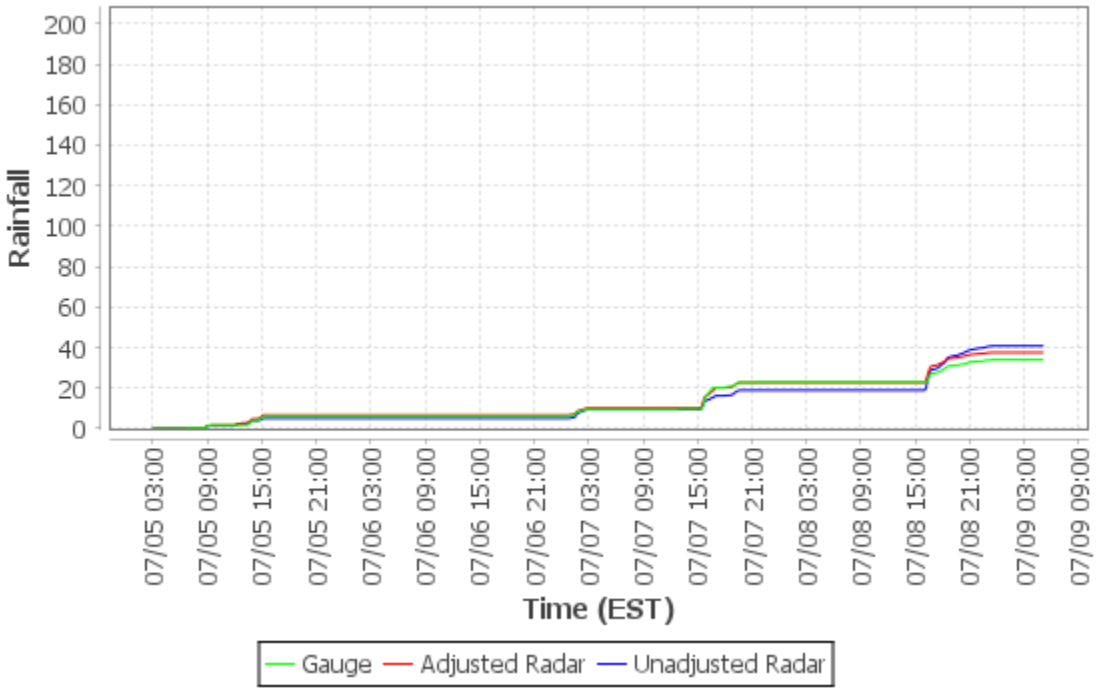
Cumulative Distribution Plot - Denton (TOR_RG-040)



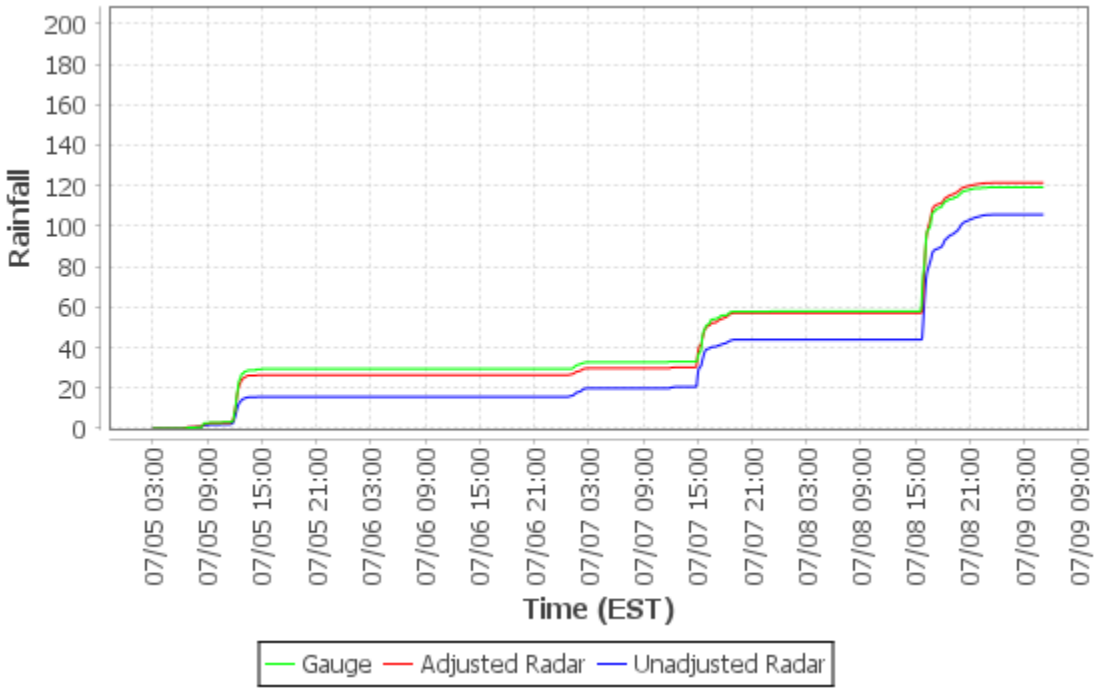
Cumulative Distribution Plot - Poplar (TOR_RG-041)



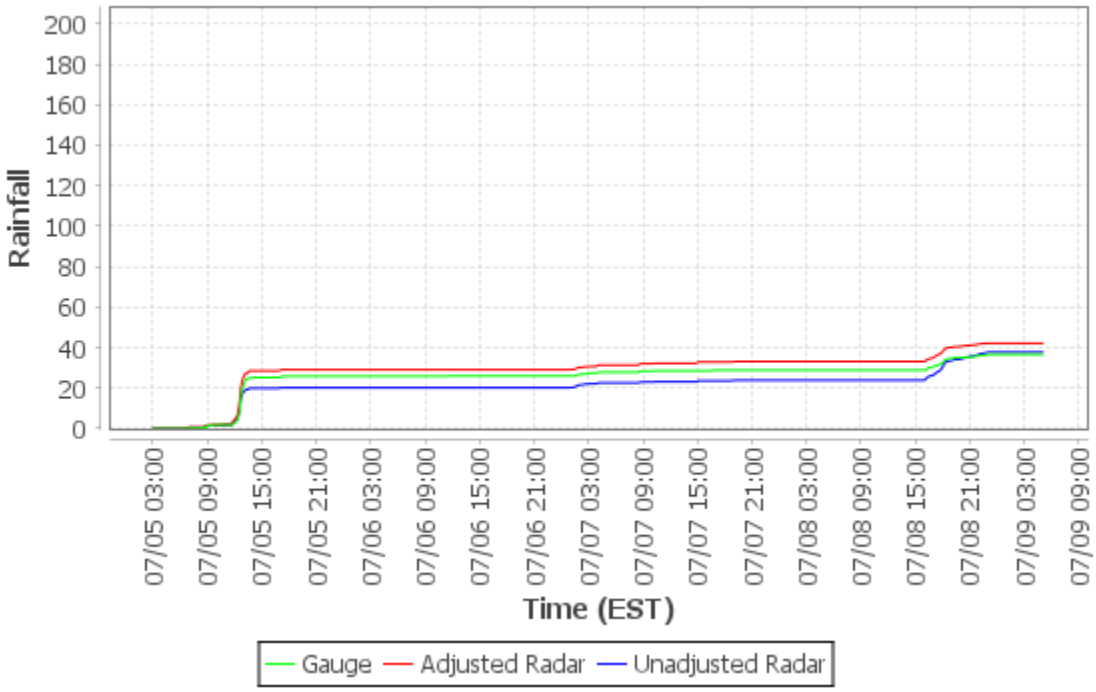
Cumulative Distribution Plot - Seminole (TOR_RG-042)



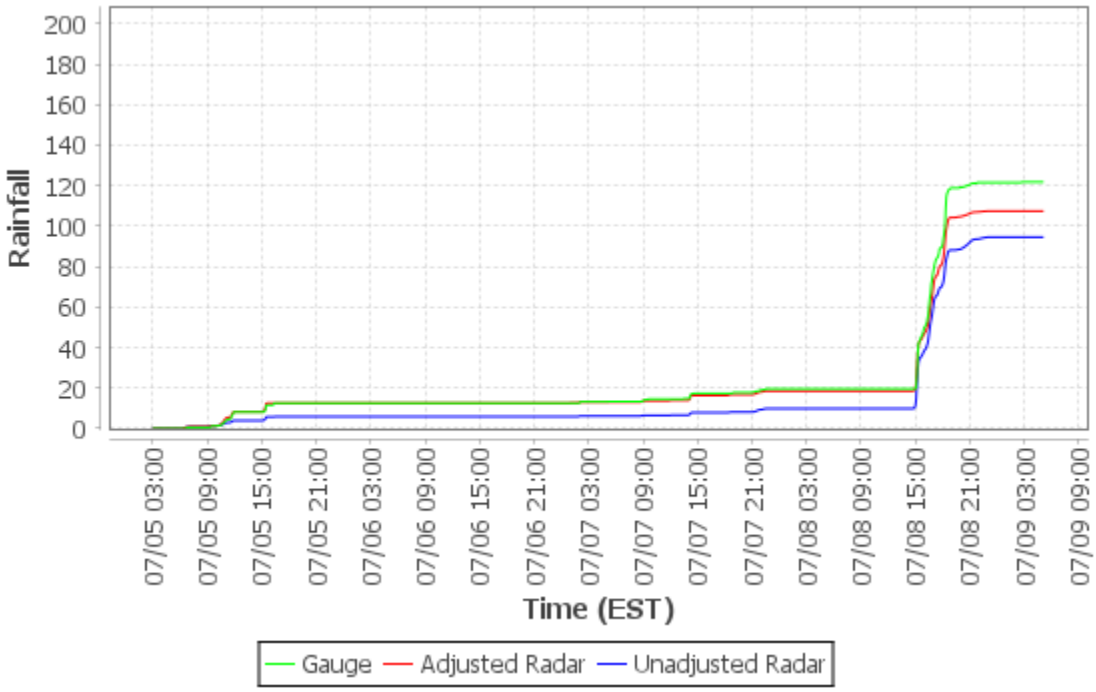
Cumulative Distribution Plot - Fire Station 121 (TOR_RG-044)



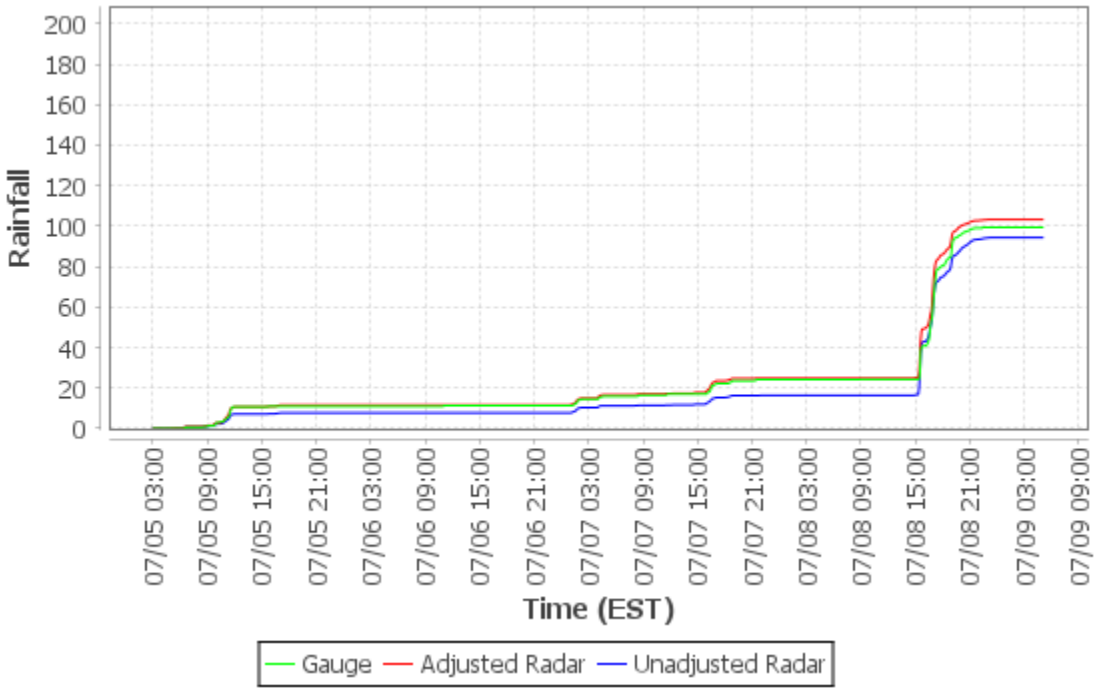
Cumulative Distribution Plot - 2401 Denison St. (R_ET_MA03)



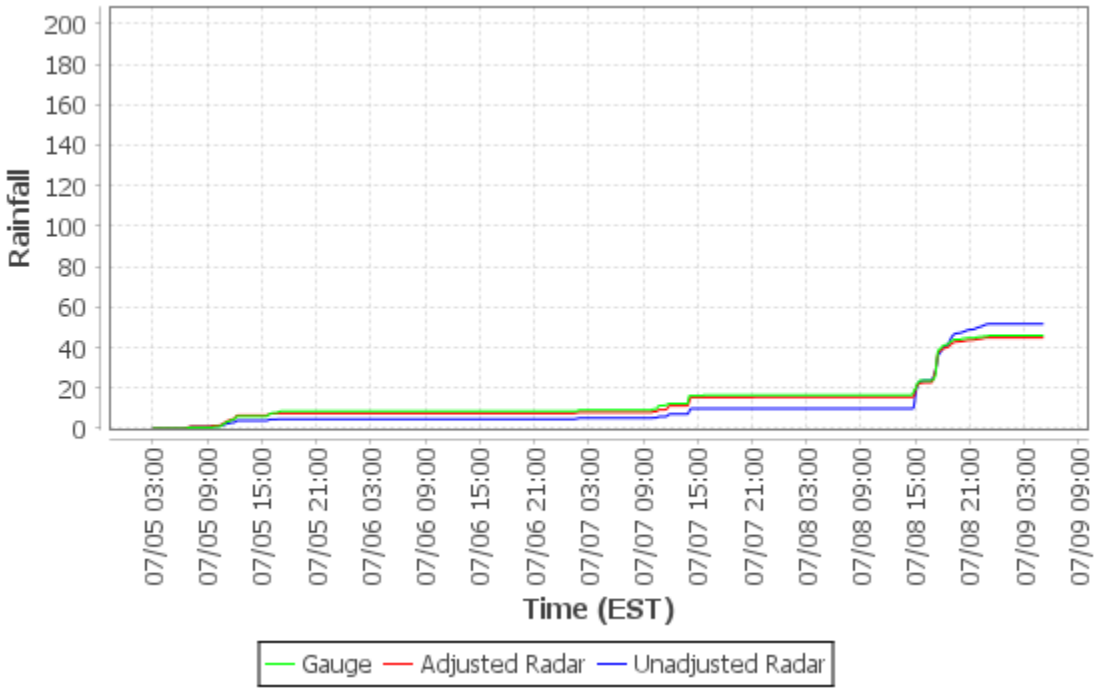
Cumulative Distribution Plot - 65 Janet Ave. (R_ET_NO01)



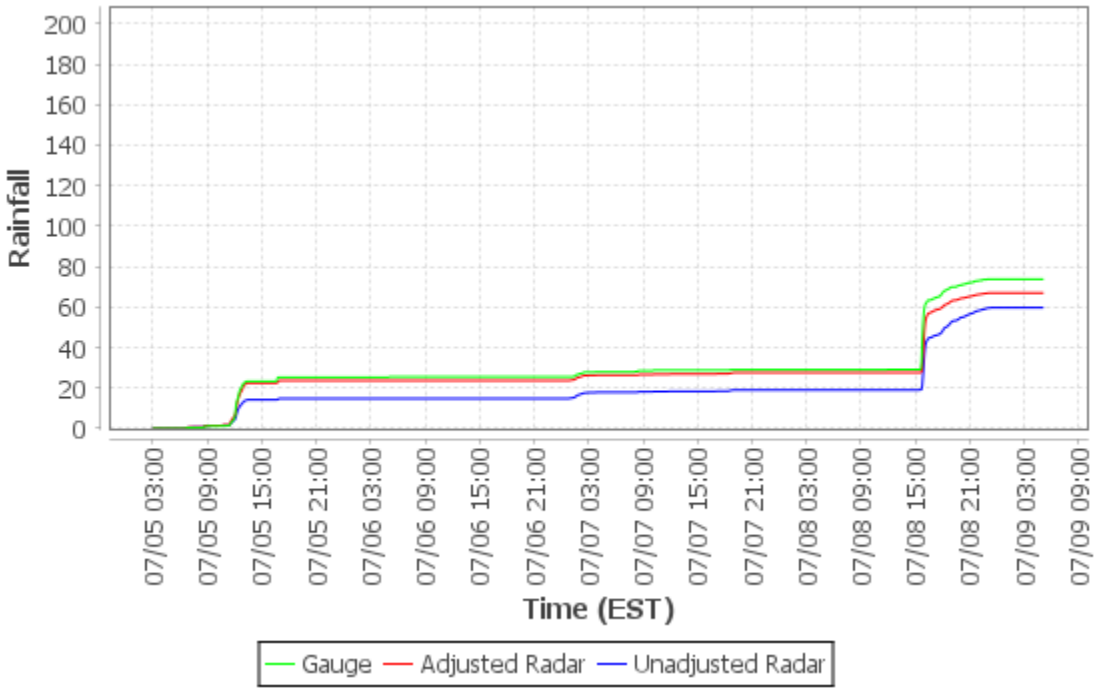
Cumulative Distribution Plot - 4630 Langstaff Rd. (R_ET_VA01)



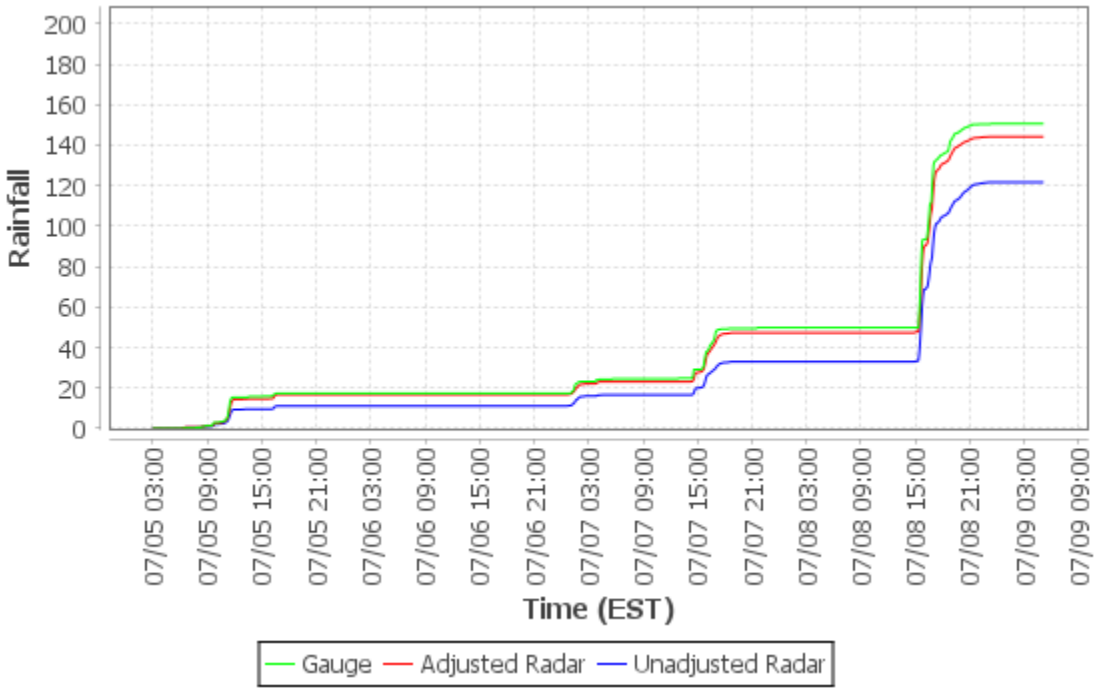
Cumulative Distribution Plot - 242 St John's Sideroad (R_YR_AU02)



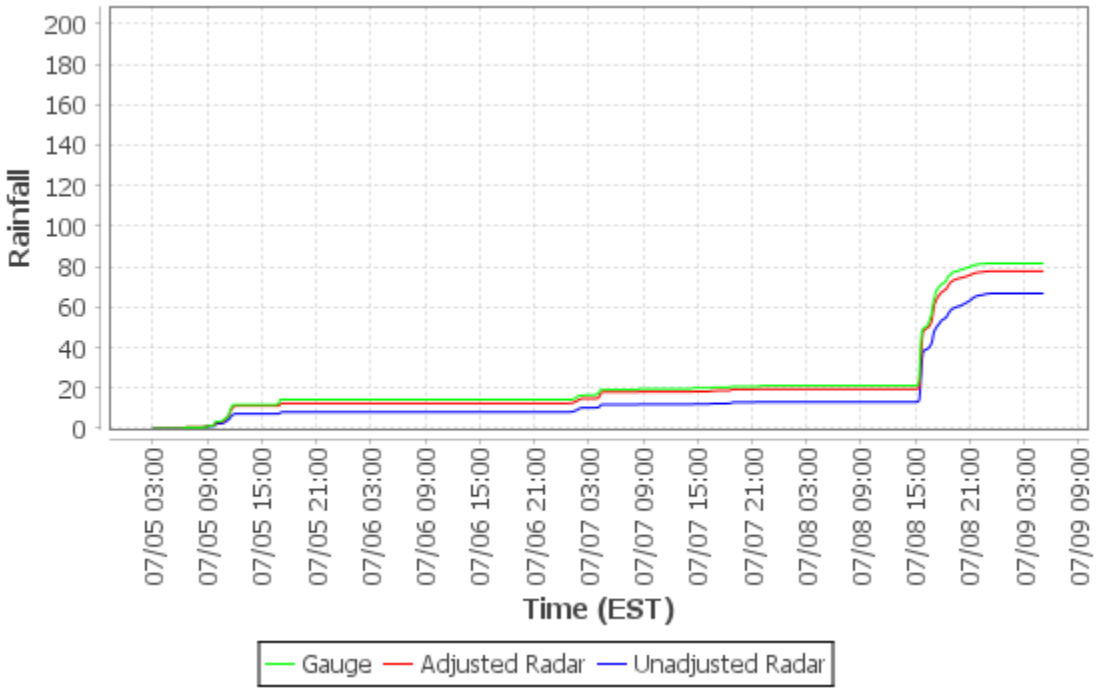
Cumulative Distribution Plot - 7021 Leslie Street (R_YR_MA03)



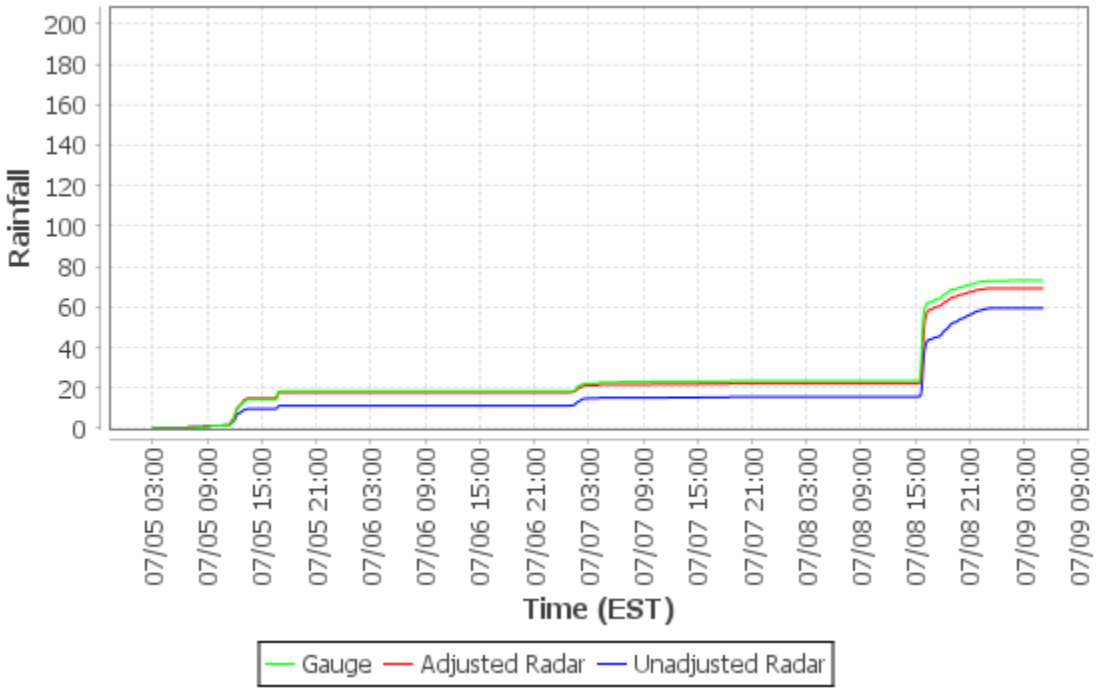
Cumulative Distribution Plot - 4738 Steeles Ave. W. (R_YR_VA03)



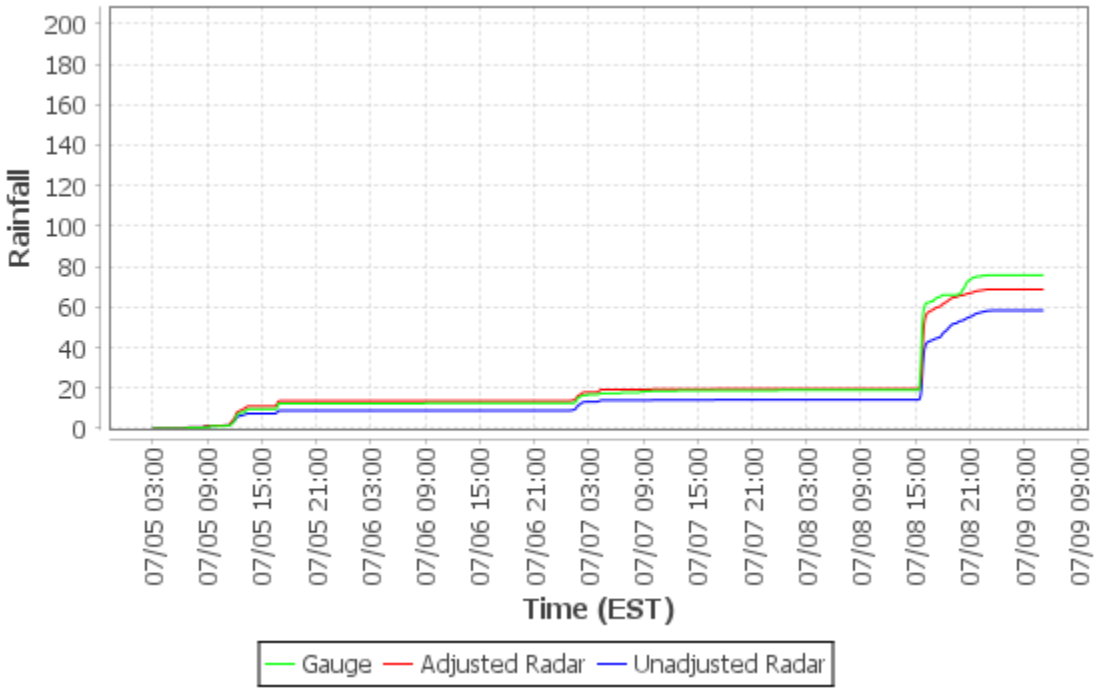
Cumulative Distribution Plot - 2850 Rutherford Rd. (R_YR_VA04)



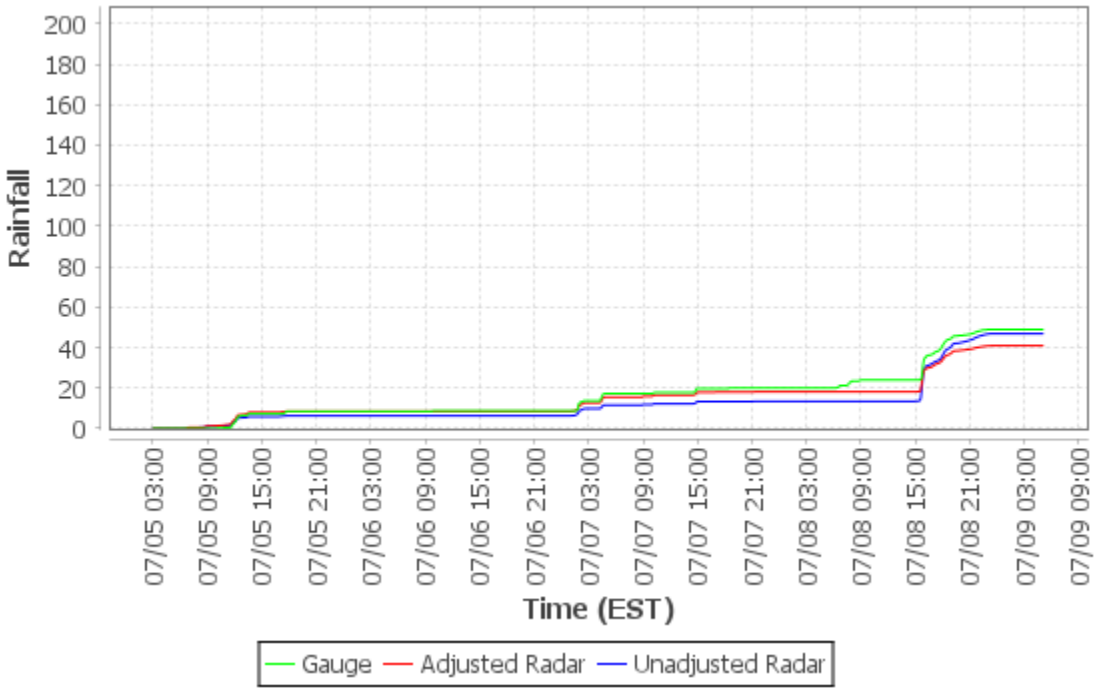
Cumulative Distribution Plot - Thornhill C.C. (R-MUN-MA-05)



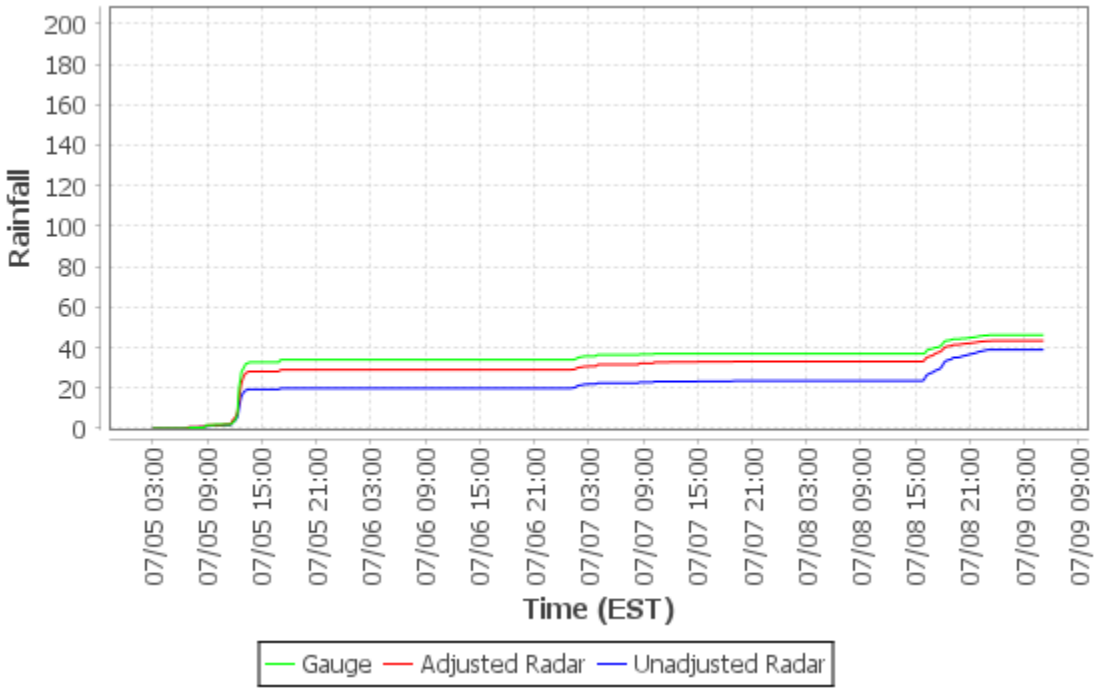
Cumulative Distribution Plot - Stornoway P.S. (R-MUN-MA-07)



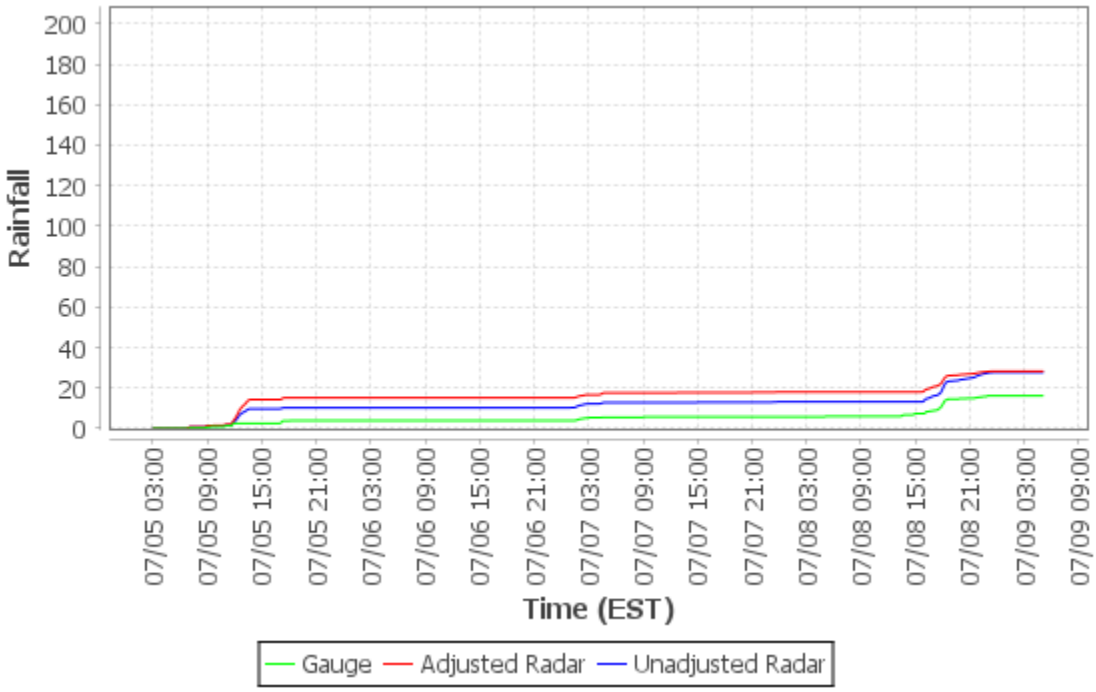
Cumulative Distribution Plot - Lincoln Alexander P.S. (R-MUN-MA-09)



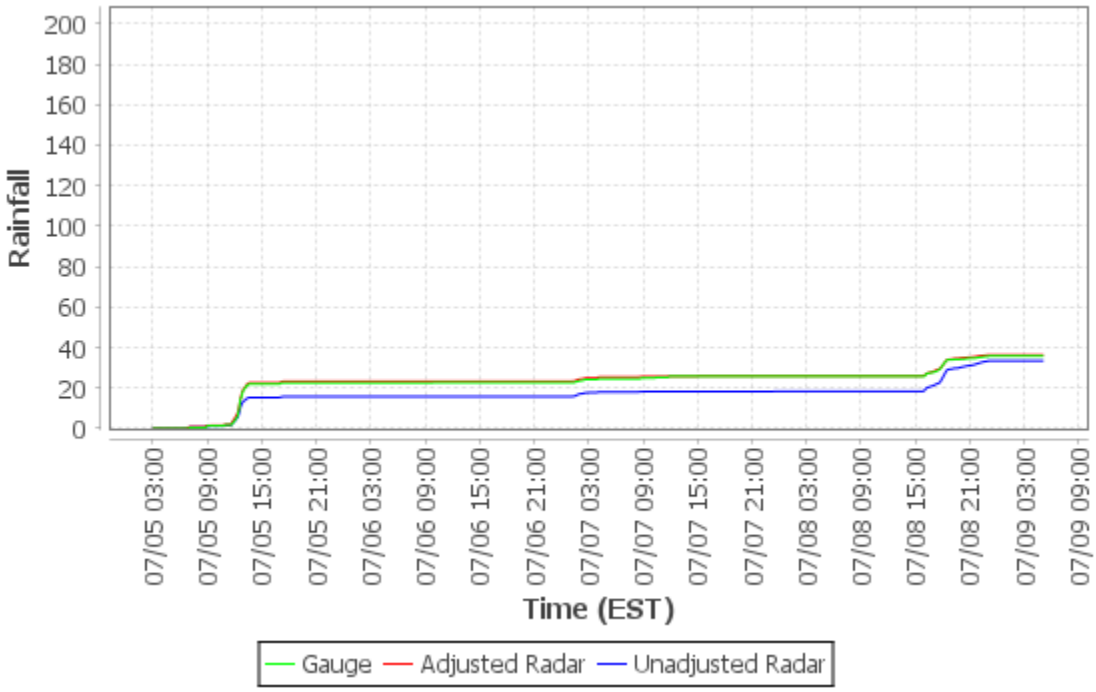
Cumulative Distribution Plot - Milliken Mills C.C. (R-MUN-MA-11)



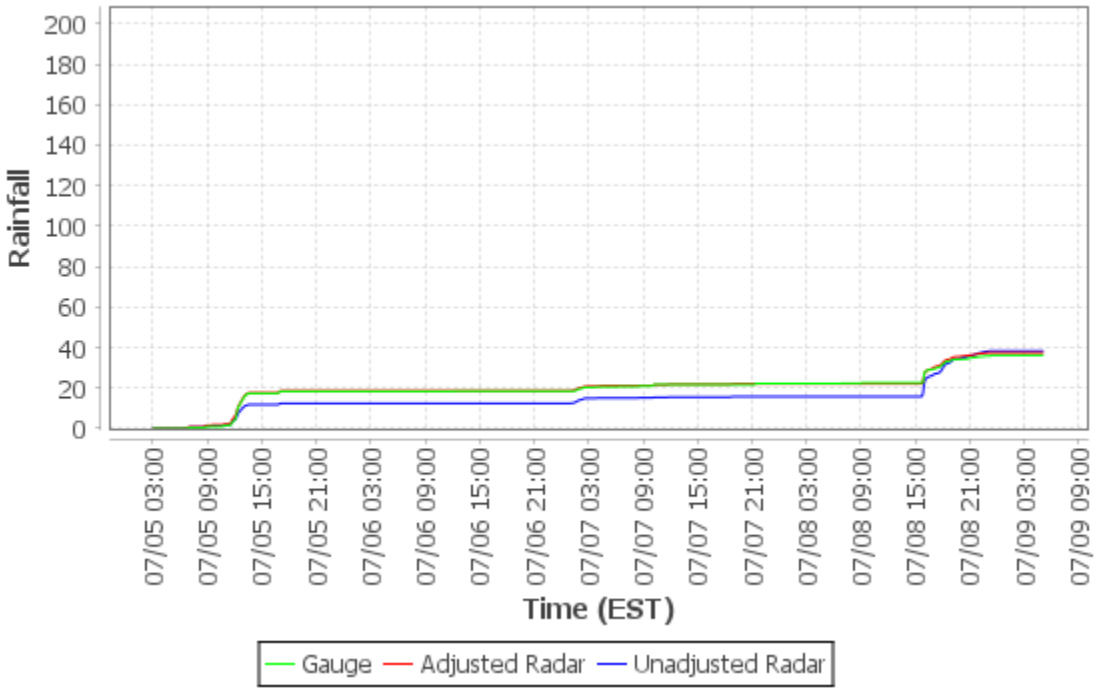
Cumulative Distribution Plot - Markham Museum (R-MUN-MA-12)



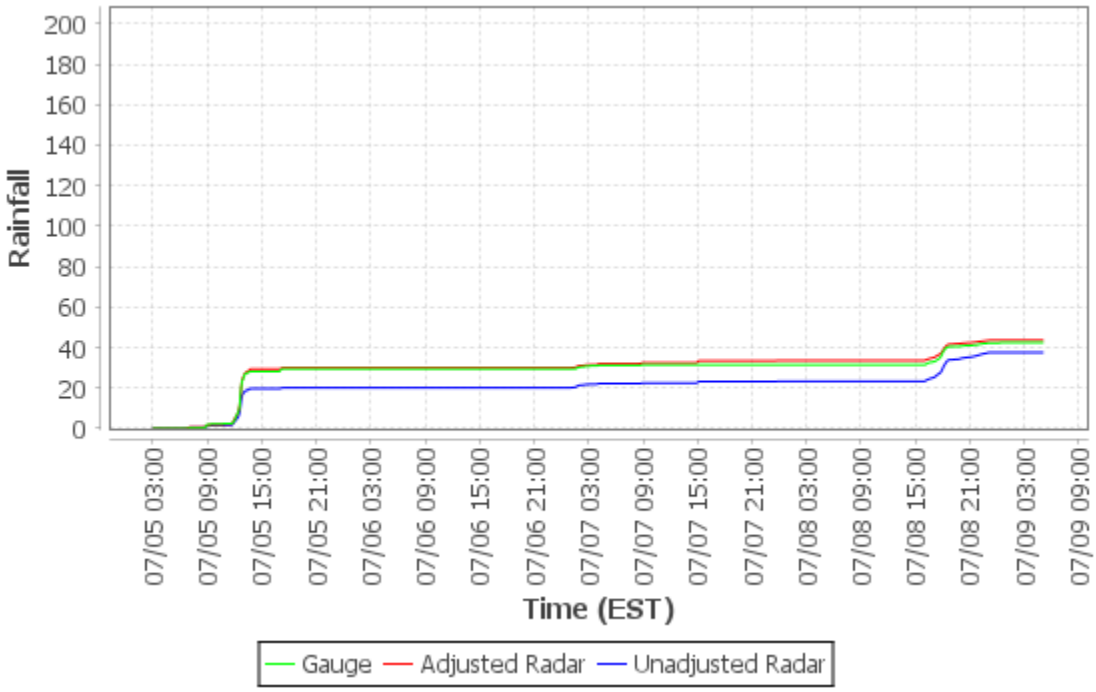
Cumulative Distribution Plot - Roy H Crosby P.S. (R-MUN-MA-13)



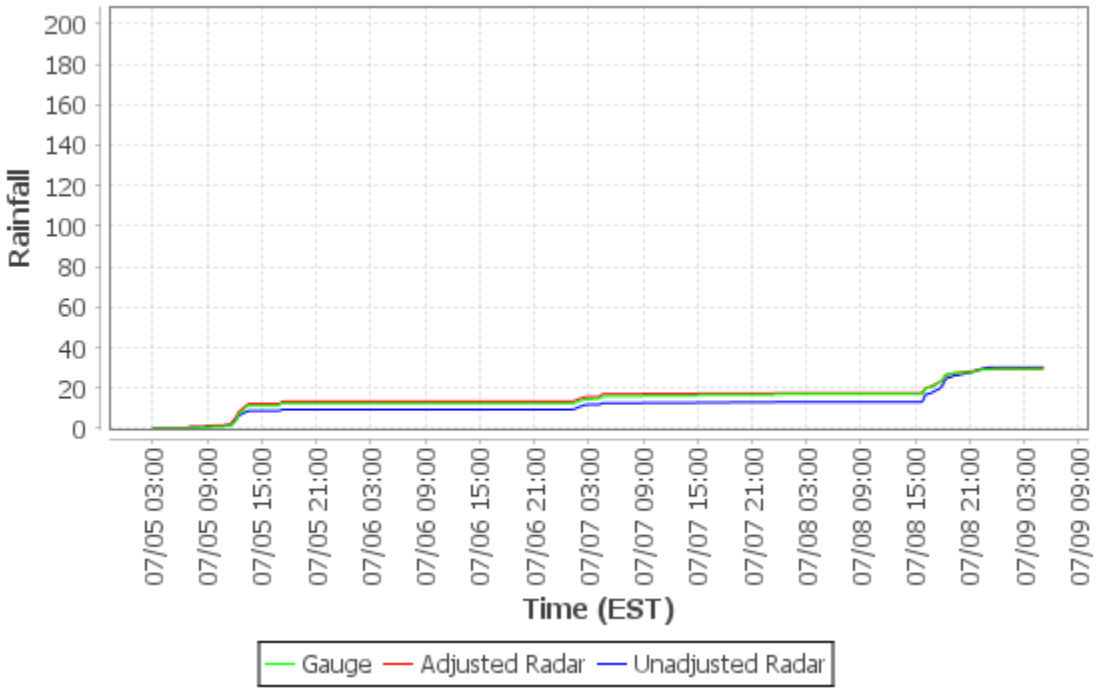
Cumulative Distribution Plot - 8100 Warden Ave (R-MUN-MA-14)



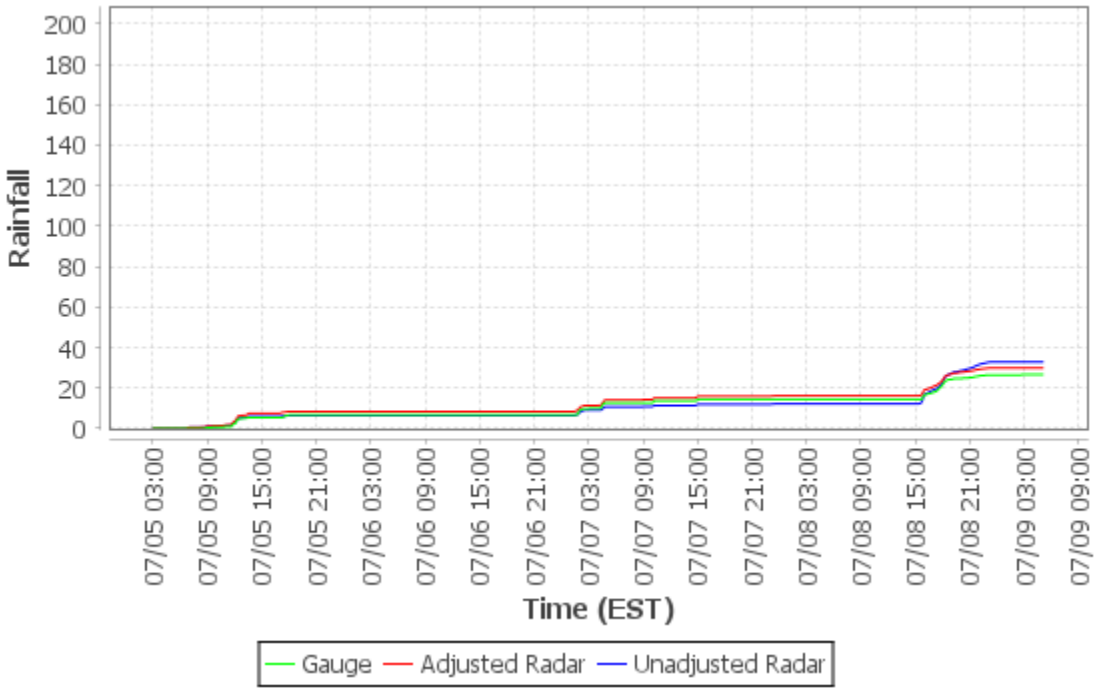
Cumulative Distribution Plot - Rouge River C.C. (R-MUN-MA-15)



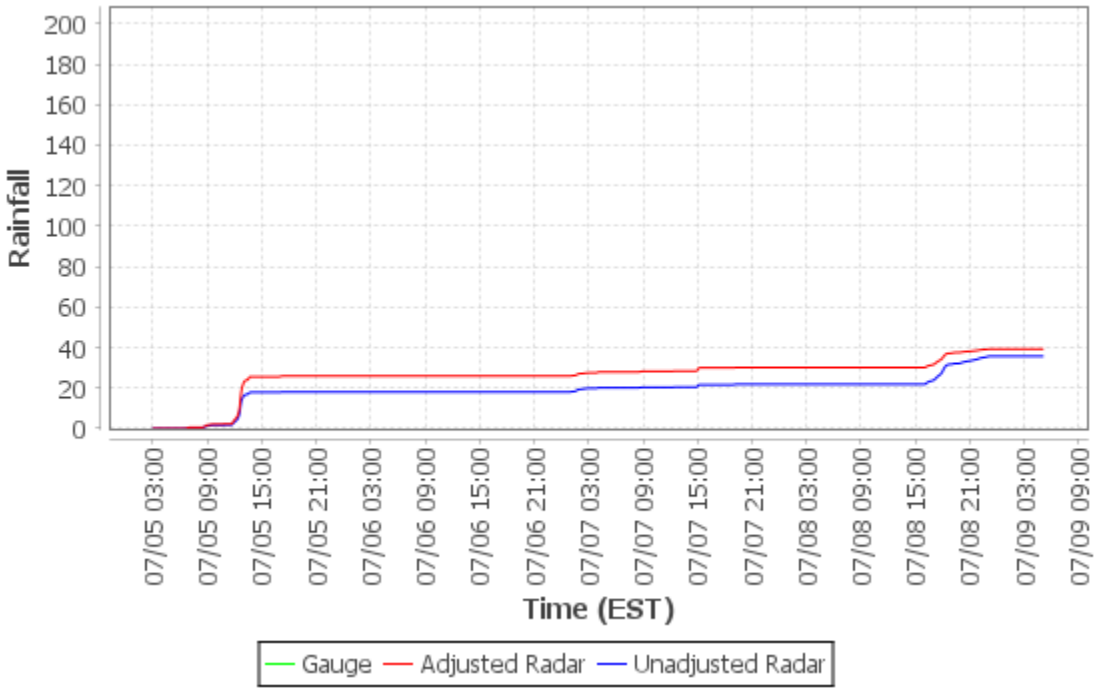
Cumulative Distribution Plot - Fire Hall #94 (R-MUN-MA-16)



Cumulative Distribution Plot - Angus Glen C.C. (R-MUN-MA-18)



Cumulative Distribution Plot - Parkland P.S. (R-MUN-MA-21)



Cumulative Distribution Plot - 11091 Warden Ave (R-MUN-MA-22)

