

Major Event Response Reporting
Guelph Hydro Electric Systems Inc. (Guelph Hydro)
May 4, 2018 Wind Storm

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Introduction

Major Event Description

On May 4, 2018 a severe wind storm and thunderstorm occurred in Guelph and surrounding areas. The Weather Network reported wind gusts at a maximum speed of 122 km/h and 20.1 mm of precipitation in the area.

A major event occurred between 11:48 a.m. and 11:00 p.m. on May 4th. Multiple power outages occurred in each the City of Guelph and the Village of Rockwood. Rockwood is supplied by two Hydro One supply feeder circuits. Supply was lost on both feeders and the village was out of power for several hours.

In total 11,317 customer hours were lost to 13,028 customers. Operators were able to remotely transfer over 5,000 customers supplied from Rockwood MS1 and Campbell 36M62. This had the effect of reducing potential customer outage hours by 7,882 hours.

Guelph Hydro's Control Room and Communications team is ready to respond to emergencies at all times. Guelph Hydro's Outage Management System enables Control Room Operators to efficiently tweet out outage and restoration information on a timely basis.

As part of the company's Crisis Communications Plan, Guelph Hydro Communications has created templated social media messages and news releases which can be deployed at a moment's notice.

As has been demonstrated during previous widespread outages, the use of social media works very well. Local media pick up Guelph Hydro tweets and use them in their news broadcasts and social media interactions. The quick dissemination of outage information using Twitter helps prepare the public for possible outages and assuages customer concerns during an outage. By providing media outlets and customers with up-to-the-minute information about outages and restoration efforts, the number of media and customer calls received during these incidents is reduced. In fact, the media now typically only contact Guelph Hydro the day after a major event.

The communications effort during the May 2018 wind storm reflected the success of this approach.

Prior to the Major Event

1. Did the distributor have any prior warning that the Major Event would occur?

Response:

Yes, Guelph Hydro was aware of severe weather forecasts leading up to the Major Event. Environment Canada issued a wind warning shortly before 11:00 a.m. on May 4, 2018, indicating that wind gusts between 90 and 100 km/h were possible on this day in Guelph and surrounding areas. Environment Canada noted that damage to buildings and tree branches were possibilities given forecasted high winds. A severe thunderstorm watch was also issued by Environment Canada.

2. If the distributor did have prior warning, did the distributor arrange to have extra employees on duty or on standby prior to the Major Event beginning? If so, please give a brief description of arrangements.

Response:

Guelph Hydro did not have any extra employees on duty or stand-by other than its normal two-person on-call crew and on-call supervisor.

Guelph Hydro did not have any extra employees on duty or standby for communications support; however, Guelph Hydro's regular communications staff were ready to respond in the event of any power outages during or after normal business hours.

3. If the distributor did have prior warning, did the distributor issue any media announcements to the public warning of possible outages resulting from the pending Major Event? If so, through what channels?

Response:

Guelph Hydro Communications staff began sending out the following preliminary storm-readiness messages through Twitter on the morning of May 4 to almost 5,000 followers, including local media outlets. Tweets appear automatically on the Guelph Hydro website and power outage map.



11:45 a.m. – May 4, 2018



1:59 p.m. – May 4, 2018



4:51 p.m. – May 4, 2018

4. Did the distributor train its staff on the response plans for a Major Event? If so, please give a brief description of the training process.

Response:

The Guelph Hydro Control Room follows its emergency plan and has on-call supervisors who have the authority to declare an emergency and alert the operation crews. The Control Room provides training on its emergency plan once a year.

Guelph Hydro's Communications staff has received training in crisis communications and media relations. The company has a Crisis Communications Plan in place and power outage communications are considered a typical communications function.

Customer Service has developed a Crisis Communication Plan designed specifically for Customer Service and Billing. The Crisis Communication Plan is reviewed twice a year.

5. Did the distributor have third party mutual assistance agreements in place prior to the Major Event? If so, who were the third parties (i.e., other distributors, private contractors)?

Response:

Although mutual aid was not required during this event, Guelph Hydro has mutual aid agreements in place with other distributors through the Grid Smart City cooperative. Distributors are:

-) Burlington Hydro
-) Energy Plus Inc.
-) Halton Hills Hydro
-) Kingston Hydro
-) Kitchener-Wilmot Hydro
-) Milton Hydro
-) Niagara Peninsula Energy
-) Oakville Hydro
-) Waterloo North Hydro

Mutual aid agreements for response during previous events have been established as needed with Hydro One and other local utilities.

A template for a mutual aid agreement for communications support exists and is available for use if the need arises.

During the Major Event

1. Please explain why this event was considered by the distributor to be a Major Event.

Response:

Using the IEEE 1366-2012 method, Guelph Hydro has established a major event day threshold (“Tmed”) of 6.473 Average Customer Minutes for 2018 events. The observed SAIDI of the major event day is 12.28 Average Customer Minutes (679,044 customer minutes)/(55,296 customers). The event involved loss of supply interruptions (which made up 86.21% of the customer minutes interrupted). The event was also related to a wind storm weather event which was outside of the control of Guelph Hydro.

2. Was the IEEE Standard 1366 used to identify the scope of the Major Event? If not, why not?

Response:

Yes.

3. Please identify the Cause of Interruption for the Major Event as per the table in section 2.1.4.2.5.

Response:

Cause Code	Customer Minutes	Average Customers	SAIDI(Average customer minutes)
6 Adverse Weather	64,673.00	55296	1.17
5 Defective Equipment	2,652.00	55296	0.05
9 Foreign Interference	289.00	55296	0.01
2 Loss of Supply	585,400.00	55296	10.59
1 Scheduled Outage	295.00	55296	0.01
3 Tree Contacts	25,735.00	55296	0.47
10 Major Event	679,044.00	55296	12.28

4. Were there any declarations by government authorities, regulators or the grid operator of an emergency state of operation in relation to the Major Event?

Response:

Guelph Hydro was not aware of any declarations by government authorities, regulators or the grid operator of an emergency state of operation in relation to the Major Event.

5. When did the Major Event begin (date and time)?

Response:

May 4th, 2018 at 11:48:00 AM

6. What percentage of on-call distributor staff was available at the start of the Major Event and utilized during the Major Event?

Response:

100% of the on-call distributor staff was available to respond to the Major Event, and 100% of on-call distributor staff were utilized.

7. Did the distributor issue any estimated times of restoration (ETR) to the public during the Major Event? If so, through what channels?

Response:

Yes, Guelph Hydro issued estimated times of restoration for the Rockwood outage via Twitter when it was learned that there was a loss of supply from Hydro One. (See attached list of tweets – Appendix A.)

8. If the distributor did issue ETRs, at what date and time did the distributor issue its first ETR to the public?

Response:

Although Guelph Hydro did not communicate specific restoration times, the public was advised at 7:57 p.m. on May 4 that power was expected to be out in Rockwood for at least a couple of hours.

7:57 p.m. – May 4, 2018



9. Did the distributor issue any updated ETRs to the public? If so, how many and at what dates and times were they issued?

Response:

Yes. At 10:10 p.m. the public were advised that the power outage was expected to last until after midnight.



10:10 p.m. – May 4, 2018

Tweets containing estimated restoration times were also issued in response to inquiries from individual customers.

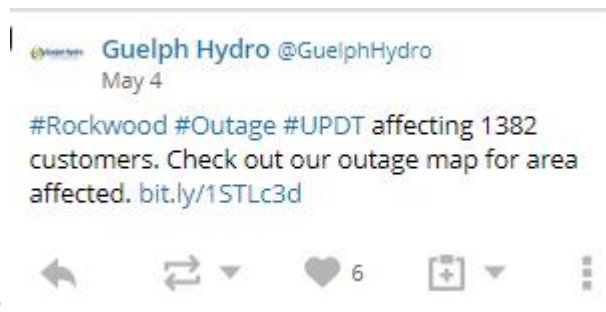
Tweets from 8:01 p.m. to 10:47 p.m. – May 4, 2018



10. Did the distributor inform customers about the options for contacting the distributor to receive more details about outage/restoration efforts? If so, please describe how this was achieved.

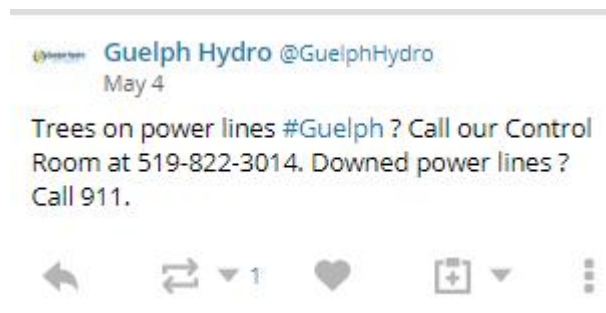
Response:

Twitter outage notification tweets sent out by the Control Room refer customers to the company's Outage Map for additional details. The following is just one example. Note that the company's Twitter feed appears automatically on the Guelph Hydro website and Outage Map so it can be viewed by customers who are not on Twitter.



8:01 p.m. – May 4, 2018

Guelph Hydro also advised customers to contact the company's Control Room in the event of tree limbs on power lines.



5:31 p.m. – May 4, 2018

Guelph Hydro also responded directly to customer Tweets with special instructions depending on the circumstance. This included informing individuals in Hydro One territory to contact Hydro One.



11. Did the distributor issue press releases, hold press conferences or send information to customers through social media notifications? If so, how many times did the distributor issue press releases, hold press conferences or send information to customers through social media notifications? What was the general content of this information?

Response:

Guelph Hydro did not issue press releases or hold press conferences during the storm. The company did provide regular updates to customers through Twitter, which were picked up by local media. The attached record of tweets (Appendix A) indicates that 53 tweets were sent out between 11:45 a.m. on May 4 to 1:43 p.m. on May 5, 2018.

12. What percentage of customer calls were dealt with by the distributor's IVR system (if available) versus a live representative?

Response:

Guelph Hydro has an IVR system available to provide automatic responses to customer calls. Fifty calls were received by Customer Service Staff during business hours on May 4th after 11:48 a.m. Three of those calls, or 6%, were answered by the IVR system. The remaining 47 calls (94%) were answered by live representatives. In addition, Guelph Hydro Customer Service Representatives provided service to customers via online chat and email inquiries.

Guelph Hydro's IVR system does not track the purpose of each individual call. The three calls responded to via IVR may have been related to the wind storm, or may have been for a different purpose (billing inquiries, etc.).

13. Did the distributor provide information about the Major Event on its website? If so, how many times during the Major Event was the website updated?

Response:

Information about power outages related to the storm were provided via the Twitter feed that appears on the Guelph Hydro website homepage, internal website pages and Outage Map that provides up-to-date information about power outages in real time. A total of 26 tweets would have appeared on the website from 11:45 a.m. on May 4 to 1:43 p.m. on May 5, 2018.

14. Was there any point in time when the website was inaccessible? If so, what percentage of the total outage time was the website inaccessible?

Response:

Guelph Hydro's website was accessible at all times throughout the storm.

15. How many customers were interrupted during the Major Event? What percentage of the distributor's total customer base did the interrupted customers represent?

Response:

13,028 unique customer interruptions occurred during the major event representing 23.6% of the total customer base of 55,296 (average customer count for 2018).

16. How many hours did it take to restore 90% of the customers who were interrupted?

Response:

Guelph Hydro restored 90% of interrupted customers within 5 hours.

17. Was any distributed generation used to supply load during the Major Event?

Response:

No distributed generation was used to supply load during the Major Event.

18. Were there any outages associated with Loss of Supply during the Major Event? If so, please report on the duration and frequency of Loss of Supply outages.

Response:

Yes.

Cause Code	Customer Minutes	Average Customers	SAIDI(Average customer minutes)
2 Loss of Supply	585,400.00	55296	10.59

19. In responding to the Major Event, did the distributor utilize assistance through a third party mutual assistance agreement?

Response:

With respect to outage communications, there was no assistance required through a third party mutual assistance agreement.

20. Did the distributor run out of any needed equipment or materials during the Major Event? If so, please describe the shortages.

Response:

Damage during the major event consisted mostly of service conductor damage. Repairs were made using materials on hand and there were no shortages of available materials.

After the Major Event

1. What steps, if any, are being taken to be prepared for or mitigate such Major Events in the future (i.e., staff training, process improvements, system upgrades)?

Response:

Guelph Hydro's distribution system in Rockwood has been upgraded with the completion of Rockwood MS1 reconstruction. This allows the majority of load in the village to be supplied by either Rockwood MS1 or Rockwood MS2 which are fed by different bulk supply feeders. During this event, all bulk supply outages were related to the Hydro One 73M4 and 73M8 44kV feeders from Hydro One Fergus TS.

Guelph Hydro's Communications staff is on alert for emergencies and major events and regularly reviews the Crisis Communications Plan to ensure Guelph Hydro is prepared at all times.

Customer Service staff are trained twice a year related to the Crisis Communication Plan. The Customer Service and Billing Crisis Communication Plan is updated periodically from the master Crisis Communication Plan.

2. What lessons did the distributor learn in responding to the Major Event that will be useful in responding to the next Major Event?

Response:

As we have learned in previous outages, the use of Twitter to keep customers informed of outages and estimated restoration times is invaluable.

In addition to regular outage status updates sent out by Twitter by Control Room Operators, it is important to have Communications staff available to respond directly to tweets to provide additional information and reassurance.

3. Did the distributor survey its customers after the Major Event to determine the customers' opinions of how effective the distributor was in responding to the Major Event? If so, please describe the results.

Response:

Guelph Hydro did not survey its customers following the storm to determine customer opinions of Guelph Hydro's response. However, the kudos received from customers via Twitter give an indication of the satisfaction level of some individuals.

In reply to GuelphFire and 5 more

Guelph Hydro @GuelphHydro
May 5

Thanks for recognizing our hard working crews and Control Room operators. It was quite a night!

1 4

Hide Conversation

Replied to by Guelph Hydro May 5

GuelphFireDepartment Yesterday was International Firefighters Day but all of the thanks and recognition this week should go to all of the hydro crews who have been working feverishly to restore power. THANKS!!! @HydroOne @GuelphHydro @ChiefOsborne @DaveElloway @cityofguelph @guelphpfaprez [Read Less](#)

Guelph Hydro @GuelphHydro
May 5

Thanks! It was a wild night for our crews and Control Room operators. Have a great day ... hopefully with power.

Hide Conversation

Shawzy Excellent! Cheers. High five to all your workers for their dedication, regardless of what territory I'm in! 23d

Guelph Hydro I think you are in Hydro One territory. Please contact them. 23d

Shawzy @GuelphHydro any estimate on when power will be restored in Guelph Eramosa on county road 29? 23d

Guelph Hydro @GuelphHydro
May 5

Thanks. It was a busy night for our crews and Control Room operators! Have a great day!

2

Hide Conversation

Chris Wilkinson Thanks for all the hard work by the crews last night! Much appreciated. 23d

Guelph Hydro #Rockwood #outage Sorry Rockwood. Repairs are being made but it appears power will be out until midnight or so. 24d

Guelph Hydro @GuelphHydro
May 4

Thanks for thinking of us. It is a tough job in adverse conditions.

1

Hide Conversation

Susan Moziar Thanks to lineman. It can't be easy fixing lines in this weather. 24d


Guelph Hydro @GuelphHydro
May 5

Yes, it was quite the night for our crews! Have a good night.

2

Hide Conversation

HotWot Well what started out as a yay it's Friday turned into high winds and no power. Thank you @GuelphHydro for restoring and @gpsmedia for keeping the roads safe ❤️ [Read Less](#)



Guelph Hydro @GuelphHydro
May 4

Thanks! It has been a busy night!

1

Hide Conversation

Replied to by Guelph Hydro May 4

Jeff the Heathen Thumbs up to Guelph Hydro workin' their asses off on this Friday night. 24d



Appendix A

May 4-5, 2018 Wind Storm Twitter Activity

Appendix A - Guelph Hydro Tweets During May 4-5, 2018 Major Outage Event

Tweet text	Time	Impressions	Engagements	Retweets	Replies	Likes	URL clicks	Hashtag clicks
@HydroOne @ChiefOsborne @DaveElloway @cityofguelph @guelphffaprez Thanks for recognizing our hard working crews and Control Room operators. It was quite a night!	2018-05-05 13:43	342	6	1	0	4	0	0
I am not sure where that is but check the Hydro One outage map. There is an area near the water where they are saying power will be restored by 11 PM but I do not know if that is where the campground is.	2018-05-05 22:04	124	1	0	0	0	0	0
@7SoNiA9 We have restored power to Guelph Hydro customers in Rockwood. However, some people served by Hydro One are still out.	2018-05-05 9:33	105	4	0	1	0	0	0
Need a Licensed Electrical Contractor to address damage caused by the windstorm? Find one at https://t.co/QnzZsfbCP	2018-05-05 8:42	1278	12	1	0	0	1	0
@Warriors_PA Thanks! It was a wild night for our crews and Control Room operators. Have a great day ... hopefully with power.	2018-05-05 8:22	59	2	0	0	0	0	0
@eastern_wolf Thanks. It was a busy night for our crews and Control Room operators! Have a great day!	2018-05-05 8:18	65	3	0	0	2	0	0
@Warriors_PA I think you are in Hydro One territory. Please contact them.	2018-05-05 8:17	66	5	0	1	0	0	0
@beckslouise4 Is it possible you are in Hydro One territory? If so, you need to contact them. Or call our Control Room at 519-822-3014 to find out.	2018-05-05 8:14	67	2	0	0	0	0	0
@HotWot @gpsmedia Yes, it was quite the night for our crews! Have a good night.	2018-05-05 0:19	183	10	0	0	2	0	0
#Rockwood #Outage #UPDT 12:06 AM. Power has been restored to CARROLL ST	2018-05-05 0:06	1414	31	0	0	2	0	3
@evans_nj If you kept it closed, your food should be fine.	2018-05-05 23:37	106	3	0	1	0	0	0
@Teddbare75 We are working on it. Not sure how long it will take.	2018-05-05 23:27	110	6	0	1	0	0	0
#Guelph #Outage #UPDT 11:24 PM. Power has been restored to Park, Dublin	2018-05-05 23:25	1420	11	0	0	0	0	0
#Rockwood #Outage #UPDT affecting 423 customers. Check out our outage map for area affected. https://t.co/9k4SBnp5xG	2018-05-05 23:21	1677	149	0	2	1	116	6
Power has been restored to the north end of Rockwood.	2018-05-05 23:15	1928	63	0	3	9	0	0
@Jeffreaky_Eh Thanks! It has been a busy night!	2018-05-05 22:52	83	1	0	0	1	0	0
@lopezcv31 @CityNews What a great idea!	2018-05-05 22:48	77	2	0	0	0	0	0
@hemo_philiaMan We expect it won't be restored until sometime after midnight.	2018-05-05 22:47	52	5	0	0	0	0	0
#Rockwood #outage Sorry Rockwood. Repairs are being made but it appears power will be out until midnight or so.	2018-05-05 22:10	9768	201	6	7	9	0	9
#Guelph #Outage 36 customers on Park, Dublin affected. https://t.co/9k4SBnp5xG	2018-05-05 21:25	1946	93	0	0	1	45	2
@nikki_pickthall We lost the supply from Hydro One. At this point we don't know how long it will be but best to assume a couple more hours.	2018-05-05 21:05	288	18	0	0	1	0	0
@pennie_roberts4 We've lost the supply from Hydro One. We don't know for sure but best to assume a few hours.	2018-05-05 21:04	112	4	0	1	0	0	0
@lopezcv31 Probably not for a couple of hours at least. We have lost power from Hydro One.	2018-05-05 20:01	154	26	0	0	0	0	0
@just_ough Best to call that in at 519-822-3014.	2018-05-05 20:01	96	7	0	0	1	0	0
#Rockwood #Outage #UPDT affecting 1382 customers. Check out our outage map for area affected. https://t.co/9k4SBnp5xG	2018-05-05 20:01	2714	498	0	2	6	281	39
#Rockwood #outage We have lost the supply from Hydro One. We cannot estimate restoration time at present but best to assume a few hours.	2018-05-04 19:57	2733	69	2	0	2	0	10
@SusanMoziar Thanks for thinking of us. It is a tough job in adverse conditions.	2018-05-04 19:12	161	10	0	0	1	0	0
@pennie_roberts4 We don't have an estimate at present.	2018-05-04 19:11	336	6	0	0	0	0	0
@KathleenL48 If you are a Guelph Hydro customer, then you should assume it is out.	2018-05-04 19:10	402	13	0	0	0	0	0
@youngkbeats That would be Hydro One territory. Please let them know if you can.	2018-05-04 19:07	112	6	0	0	0	0	0
#Rockwood #Outage #UPDT for Rockwood. Outage affecting entire town.	2018-05-04 18:56	3710	227	2	4	2	0	54
#Rockwood #Outage affecting 3013 customers. Check out our outage map for area affected. https://t.co/9k4SBnp5xG	2018-05-04 18:54	2611	163	2	0	1	125	3
#Guelph #Outage #UPDT 06:33 PM. Power has been restored to Blair, Farley, Beaver Meadow	2018-05-04 18:33	2005	17	0	0	0	0	3
#Guelph #Outage #UPDT 06:32 PM. Power has been restored to CALLANDER DR	2018-05-04 18:33	1833	6	0	0	0	0	3
#Guelph #Outage #UPDT 06:07 PM. Power has been restored to	2018-05-04 18:07	2030	38	0	0	1	0	10
Trees on power lines #Guelph ? Call our Control Room at 519-822-3014. Downed power lines ? Call 911.	2018-05-04 17:31	1893	4	1	0	0	0	0
#Guelph #Outage affecting 1344 customers. Check out our outage map for area affected. https://t.co/9k4SBnp5xG	2018-05-04 17:27	2164	197	3	1	1	174	1
@gfgiancotta Please call 911 to report	2018-05-04 17:25	98	6	0	0	0	0	0
Power has been restored to the north end of #Guelph. Further power outages are likely so keep all mobile devices fully charged and find those flashlights.	2018-05-04 17:15	2368	29	2	1	1	1	1

Guelph Hydro Tweets During May 4-5, 2018 Major Outage Event

Treat all intersections affected by power outages as four-way stops. #onstorm #Guelph	2018-05-04 17:15	2137	11	0	0	1	0	3
@DDT101 Power has been restored so it wasn't too long.	2018-05-04 17:12	91	6	0	1	0	0	0
@DDT101 We are restoring power in some spots. Restoration will depend on how much damage there is. No estimated time at the moment.	2018-05-04 17:09	226	6	0	0	0	0	0
1600 customers experiencing a power outage in the north end of #Guelph. See map for details. Trees on power lines can be deadly. Call 911. https://t.co/H6Sz6leCbF https://t.co/Jk9D2qBbM0	2018-05-04 17:06	6100	225	5	0	0	60	2
High winds may result in downed power lines. Remember, you can't tell a power line is live just by looking at it. If you see one, call 911 and keep at least 10 metres away. Downed power lines can be deadly! #Guelph https://t.co/dl7CQmsE0N	2018-05-04 16:51	2750	69	6	0	2	10	0
High winds have caused a major power outage in the north end of #Guelph in the area of Victoria Road, Woodlawn, Eastview, Eramosa, Speedvale and Stevenson. Power is expected to be out for a while.	2018-05-04 16:48	4662	128	10	6	6	1	4
#Guelph #Outage affecting 1631 customers. Check out our outage map for area affected. https://t.co/9k4Sbnp5xG	2018-05-04 16:48	2120	67	3	0	1	57	0
#Guelph Hydro #Power Outage in Town of Rockwood. Cause is a loss of Hydro One Supply.	2018-05-04 16:44	1740	22	2	0	0	0	1
@DrJulieGill We are having a few issues with trees coming into contact with power lines ... Best to keep mobile devices fully charged in case trees fall on lines.	2018-05-04 16:35	86	7	0	1	1	1	0
#Guelph #Outage #UPDT for Blair, Farley, Beaver Meadow. Crews have been dispatched.	2018-05-04 16:07	1868	11	1	0	0	0	3
#Guelph #Outage 39 customers on Blair, Farley, Beaver Meadow affected. https://t.co/9k4Sbnp5xG	2018-05-04 16:04	1471	16	0	0	0	16	0
Severe thunderstorm and wind watch for #Guelph could result in power outages. Keep mobile devices charged and know where flashlights are located. If you see a downed power line, call 911 and stay away the length of a school bus. https://t.co/mFTfQTp0H3	2018-05-04 13:59	1984	22	4	0	3	3	1
@georgiabudd . Likely due to tree branches brushing against powerlines. Be prepared for power outages. Makes sure mobile devices are charged and flashlights are handy.	2018-05-04 13:40	59	5	0	0	0	0	0
Rainy weather brings strong winds today! Be prepared for power outages and if you see a downed wire stay back the length of a school bus and call 911. #onstorm #Guelph https://t.co/28bJJEbo9k	2018-05-04 11:45	1561	15	1	2	0	0	1