



Public Works Committee  
July 9, 2015  
Item 7.1



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Hamilton Water

# ERMS Notification System

Public Works Committee Presentation



- Community
- People
- Processes
- Finance



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# Presentation Overview

- ERMS Overview
- Pilot Project
- Historical Data
- Current Deployment
- Moving Forward
- Conclusion
- Q & A





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- People
- Processes
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# Emergency Response Management System

Industry leading company providing full featured, highly secure, web-based emergency notification systems. Canadian owned company with servers located within Canada make it exempt from US Homeland Security laws.



Built-in redundancy located in Toronto and Montreal provides 99.99% uptime guarantee.



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- Processes
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# Emergency Response Management System

- ERMS sends notifications out to stakeholders via multiple device types.



PHONE



EMAIL



SMS



FAX



PAGER

- Once the system has completed its initial call-out, if some stakeholders were not reached, the admin is able to resend the message to those missed stakeholders.
- System can also assign backups to stakeholders in the event that someone cannot be contacted the system will then contact the backup stakeholder.



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# Emergency Communications

## Benefits of an Emergency Notification System

- Improve communication to quickly and effectively notify stakeholders of an occurring emergency.
- Engage Emergency Operation Centre teams.
- Provide next step instructions, status updates, and further contact information.
- This level of emergency communication demonstrates the Corporate Pillar of providing Sensational Service.





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# ERMS Pilot Project

## The Need for Emergency Communications

Planning process of Public Works Emergency Operations Centre (EOC) in 2012 identified a gap on how to quickly and effectively notify EOC personnel.

### June 2013 - May 2014

- Pilot project implemented a limited test environment of 1000 stakeholders.
- Tested extensively with the Public Works and Corporate EOC.
- Used to contact residents on several occasions.
- Resident contact info gather from Hamilton Water's account billing data.



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## EOC Drill Notifications

EOC Test Scenario October 2013

EOC Test Scenario November 2014

- Public Works & Corporate EOC teams engaged in emergency drills using ERMS.
- System uses the stakeholder backup feature to ensure all positions are filled.
- Stakeholder is prompted to accept or decline after listening to the message.
- Declining the message will instruct the system to call the backup stakeholder.
- Hamilton Fire Service manages the Corporate EOC notifications.
- Hamilton Water Community Outreach team manages the PW EOC.





# Resident Notifications

ERMS was used in several real-life scenarios where Hamilton Water alerted residents to emergency situations or potentially serious situations.

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**Freelton Boil Water Advisory - August 2013**

**Frozen Services - April 2014**

**Lynden E.coli Advisory - September 2014**

**Frozen Services - February / March 2015**

**Backwater Valve - March 2015**



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# Freelton Boil Water Advisory

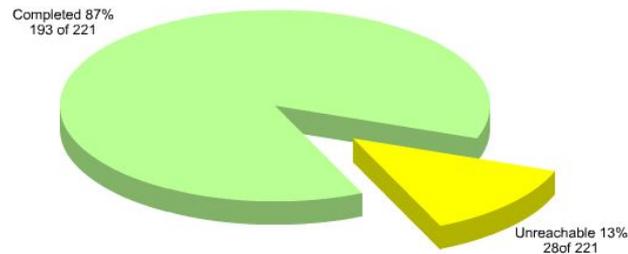
August 2013

A boil water advisory affecting the Freelton community had been in effect, and ERMS was used to lift the advisory.

The message included:

- Instruction on preparing homes and appliances for return to municipal water use
- Contact number for updates and information from Public Health and City

Freelton Call-Out Statistics



*ERMS success rate relies on contact info with Horizon Utilities.*



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## Frozen Services

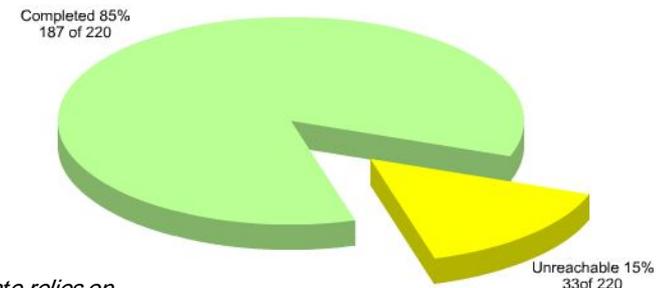
April 2014

A notification was sent to residents who had been affected by a frozen service line and who were asked as a preventative measure, to keep a small stream of water running from a tap to prevent refreezing.

The message included:

- Confirmation to discontinue preventative measure
- Water bills would be adjusted for the extra water use
- Contact number for further information

### Frozen Service Call-Out Statistics



*ERMS success rate relies on contact info with Horizon Utilities.*



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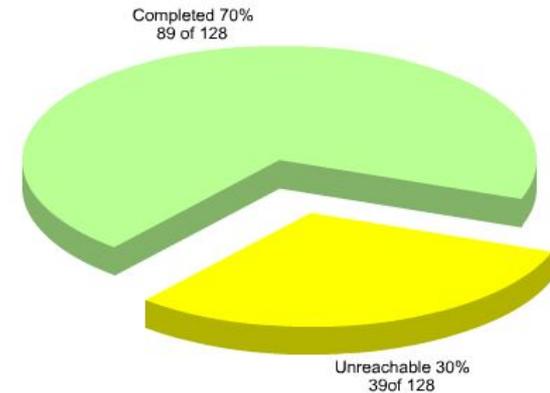
## Lynden Adverse Drinking Water Advisory September 2014

ERMS was used to notify Lynden residents of a water sample that came back testing positive for E.coli and to provide ongoing updates.

The message included:

- Incident details
- City's next steps
- Resident next steps
- Contact information for further updates
- Confirm the availability of water truck and showers
- Notify resolution was achieved
- Instructions on how to properly prepare their home and appliances to reintroduce local municipal water

### Lynden Call-Out Statistics



*ERMS success rate relies on  
contact info with Horizon Utilities.*



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## Frozen Services

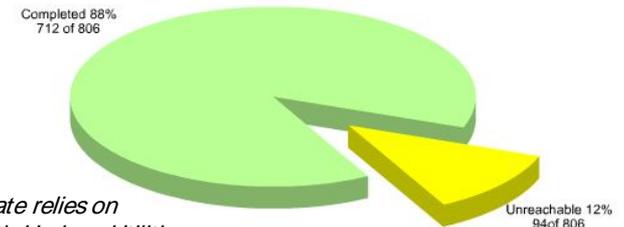
February / March 2015

Four notifications were sent to residents who had been affected by a frozen service line and who were asked as a preventative measure, to keep a small stream of water running from a tap to prevent refreezing. The final notification was for all residents who had been affected by frozen services or were notified to run their water as a preventative measure.

The message included:

- Request that residents run their water as a preventative measure
- Confirmation to discontinue preventative measure
- Water bills would be adjusted for the extra water use
- Contact number for further information

### Frozen Service Call-Out Statistics



*ERMS success rate relies on contact info with Horizon Utilities.*



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## Backwater Valve

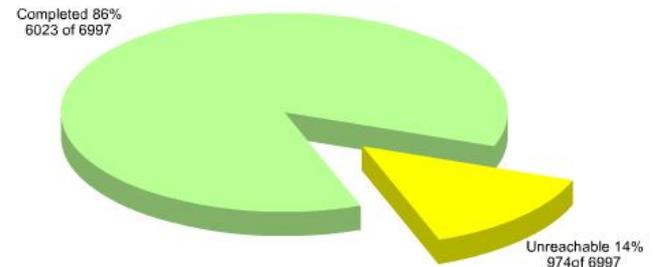
March 2015

The forecast called for warming temperatures and a potential rain storm, the rain mixed with the melting snow created a flood concern. As a proactive measure, Hamilton Water contacted households where a backwater valve had been installed as part of the Protective Plumbing Program (3P).

The message included:

- Upcoming Forecast Details
- Reminder to inspect and clean Backwater Valve
- Contact number for further information

### Backwater Valve Call-Out Statistics



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# Notification Statistics

## Residential Success Rates per Incident

Overall the success rate of resident contact using ERMS is 83%

Notification Campaign	Residents Called	Success Rate %
Freelton Boil Water Advisory	221	87
Frozen Services 2014	220	85
Lynden Adverse Drinking Water Advisory	128	70
Frozen Services 2015	806	88
Backwater Valve 2015	6,997	86
	8,372	83%



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# System Enhancements

2014

- Increased stakeholder database to 150,000
- ERMS can notify households with Hamilton Water accounts
- Over 140,000 accounts with phone numbers who can be contacted

Benefits of access to all accounts

- Expedites the notification process significantly
- Mapping Tool can pinpoint residents in the database within a specified area
- Another tool to assist with better homeowner contact

Database Automation

- Automated monthly stakeholder list update via secure FTP

## Mapping Tool



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The screenshot displays the ERMS Mapping Tool interface. At the top, there is a navigation bar with icons for 'my Advantage', 'Administrator', 'Hot line', 'Messenger', 'Roll Call', 'Crisis Manager', 'Mapper', and 'Library'. Below this, the user is identified as 'User: John Fernandes' and a 'Selector' window is open. The main map area shows a street grid in Hamilton, Ontario, with a yellow highlighted area around 'Inch Park'. A circular selection tool is visible on the map, with distance markers of 0.09km, 0.44km, 0.48km, and 0.09km. The map is powered by ESRI. On the left side, there is a sidebar with the Hamilton logo, 'Advantage' branding, and a list of user profiles. The list includes names such as AMON BRISLEY, ARNOLD SCHAFFER, LUCIA PAVANES, VALERIE LUCIFRE, ROBERT L. WATKINS, KETIN ELLIS, BETTY L. BASTROCK, DEANE HALLZWEIL, RICHARD S. LYNE, JAMES HINES, CHRISTINE LAVIUK, DONNA M. SMITH, ZORA CARROCKOUGH, FLORIDA PASOULI, LINDA L. STANTON, SAUL VINCENZI, VIRGINIA SUZRO, KENNETH SCOTT, J. PARAGARAJ, JAMES DELILLO, CARLA CORRY, ROBERT G. JONES, MURIN SCORLEONE, NALL HALL, SANDRA A. HIGGINS, ANHANE SMITH, BELINDA OLINDEO, LAURENIA I. BLAINE, VI DEDIO, JANITHA STOKLAND, CHRISTOPHER LEE, SURESH PATEL, PAUL BOTTMAN, A. CARO, ELIUSA DANOLS, DONNA UPHOLD, JOE COCCORISO, SIMON SMITH, HOLLY M. HERRARD-WILSON, GRAHAM M. SCOTT, J. BRILLINGER, PHILIP W. WALK, ROBERT CHAPMAN, MAGNETA POFA, SUZANNE SEEST, GUY HARRIS, R. SMITH, JAMES A. NELSON, DOROTHY ALAN, DEBORAH CHVIN, ELWYON LAM, RICK DAVID, BEAN PAUL LANTIONE, RONALD HAZBER, ROSMARIE M. BRANCO, YI KEN ANDERSON, CHARLES KIVELL, LILLY BEAUCHAMP, and CHRISTOPHER VAUGHAN.



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## ERMS at HSR

- ERMS has been shared with the HSR in the case of a dispute or assault on an operator. The system allows management to be notified of an incident in some detail allowing the supervisor on duty to assist with the incident on hand.
- Since the HSR began using ERMS in December, 29 notifications to supervisors and managers have been made allowing the supervisor on duty to assist the affected operator.





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## After-hours Weekend Coverage

- Currently the Hamilton Water Community Outreach team manage ERMS.
- Includes training users within Corporate EOC, and HSR.
- Investigating plan to transfer after-hour weekends to City's Contact Centre.
- Transfer would include a policy/procedure document and activation process tree.

An example of the Corporate Pillars of Collective Ownership and Sensational Service from staff and management. The supervisors at the city call centre see the value in the system to quickly and effectively communicating with our residents.





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- Processes
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## Improving Data Accuracy

- Due to incomplete or inaccurate water bill account information, we are still
- unable to reach some households with water meters.
  
- We are continuing to work closely with Horizon Utilities to promote the program and encourage residents to contact Horizon Utilities to update their information.





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# Investigate Resident Self-Registration

Relying on the web re-development project, a self-registration portal could be implemented allowing residents to sign-up for the program.

## Benefit

Portal would allow households without a water meter to receive notifications (i.e. apartment building tenants). This could lower the volume of information request calls to the city during an emergency, allowing staff to assist with more serious incidents affecting residents.

## Limitations

Implementing the self-registration process would increase cost with the added number of stakeholders and possible duplication of contacts as Hamilton Water meter data would also be in use.



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# Summary Information

- ERMS is a highly secure, reliable, emergency notification system
- Currently utilized by Hamilton Water, PW / Corporate EOC and HSR
- Has been in use at Hamilton Water since May 2013
- Used for emergencies affecting lives, property, or the environment
- Valuable tool in proactively notifying residents of a potential emergency
- Has a successful contact rate of 83%
- Working with Horizon Utilities to ensure reliable contact information
- Further expansion is possible to include more residents into the system
- Currently proceeding with contract renewal of 150,000 stakeholders





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## Cultural Pillars

The implementation of ERMS reinforces the City of Hamilton's commitment to providing Sensational Service and staff's Collective Ownership in the project.

### Sensational Service

Enhancing the City's communication with residents during an emergency to reach out to quickly and directly provide information to help protect residents, their property and the environment.

### Collective Ownership

The joint efforts of the Public Works and Corporate EOC, HSR and the City's Contact Call Centre is an example of collective ownership to improve communications across the city.





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# Questions?