



Elections  
Ontario

# Post-Event Report: 2016 Scarborough – Rouge River By-election

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*Additional testing of the proposed technology-enabled staffing model*



# Elections Ontario

The Honourable Dave Levac  
Speaker of the Legislative Assembly  
Room 180, Main Legislative Building  
Queen's Park  
Toronto, Ontario M7A 1A2

Dear Mr. Speaker:

It is with great pleasure that I submit my report on the Scarborough – Rouge River by-election held on September 1, 2016.

This report describes the conduct of the Scarborough – Rouge River by-election and makes specific reference to this second pilot of the technology enabled staffing model that took place in the advance polls. This model was first piloted in the Whitby-Oshawa by-election on Election Day only.

For the Scarborough – Rouge River by-election I directed changes with the objectives of realizing administrative efficiencies, and maintaining the integrity of the voting process. A copy of the directive, dated August 11, 2016, was filed with your office, and published on Elections Ontario's website.

Under sections 4.1 and 44.1 of the *Election Act*, the additional use of tabulators and ballot marking devices at advance poll locations was tested.

Under section 4.4 of the *Election Act*, the voting process was modified by using a new staffing model and e-Poll Books at advance poll locations.

This report fulfills the requirements under sections 4.1(5), 4.4(11) and 44.1(9) of the *Election Act*, namely to report on this equipment and the staffing model and to make recommendations with respect to amending this *Act* to adopt changes on a permanent basis.

The successful administration of the by-election could not have been achieved without the dedication and commitments of our team at Elections Ontario headquarters, the returning officer, Kim England, the election clerk May-Lynn Fong, the 15 returning office personnel, and the 571 election officials who worked on Election Day and in the advance polls. I also extend my thanks to the registered political parties and eleven candidates for their participation in the by-election.

Respectfully submitted,

Greg Essensa



# Elections Ontario

## Contents

Message from the CEO .....	4
Pilot Program in Scarborough – Rouge River .....	5
Advance Polls: Dates, Times, Locations .....	5
What did we pilot?.....	6
Piloted Technology.....	6
Lessons Learned .....	6
Advance Poll Process .....	6
Overall Support .....	7
Deployment .....	7
Strike-Off Portal .....	8
Legislative Recommendations .....	9
Recommendations from Whitby-Oshawa that have been included in Bill 45 .....	10
Conclusion .....	11



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## Message from the CEO

During the Scarborough – Rouge River by-election of September 1, 2016, Elections Ontario completed a second successful pilot of the proposed technology-enabled staffing model that was first introduced in the Whitby-Oshawa by-election of February 11, 2016.

The goals of the technology-enabled staffing model are to:

- address the unsustainability of Elections Ontario’s staffing model by reducing the number of election officials needed through the automation of manual processes;
- to increase the accessibility of Ontario elections by expanding the availability of assistive voting technology; and,
- to lay the foundation to build modern services for electors that allow them to vote in the manner and means of their choosing.

The Scarborough – Rouge River pilot was limited to advance poll locations as the Whitby-Oshawa pilot had focused only on Election Day locations. The purpose of this pilot was to test automating the advance poll processes. There were five advance poll voting locations in Scarborough – Rouge River and 4,557 electors cast their ballots in the advance polls.

Overall, support for the model remained high across electors and election officials surveyed.

- 93 per cent of electors surveyed believed the technology maintained the integrity of the process, voter secrecy and that votes were counted accurately.
- 92 per cent of electors surveyed would support the use of similar technology in future elections.
- 88 per cent of electors surveyed through the voting process was “easy” with the new technology.

The nature of a pilot is that it is not perfect and we did learn from this pilot to better prepare us for the 2018 General Election.

Since the Scarborough – Rouge River pilot, new legislation has been introduced that, if passed, will allow Elections Ontario to implement this new technology-enabled staffing model for the 2018 General Election. Having piloted this model on Election Day and in advance polls, Election Ontario is now doing the work necessary to prepare to roll out this model across the province in 2018.

Greg Essensa



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## Pilot Program in Scarborough – Rouge River

During the Scarborough – Rouge River by-election, Elections Ontario piloted e-Poll Books, Vote Tabulators, Assistive Voting Technology and a Strike-Off Portal in advance poll locations. The purpose of this pilot was to test automating the advance poll processes. Advance polls were not part of the pilot in the Whitby-Oshawa by-election.

Advance polls are held over multiple days in multiple locations; because of this they have different processes. Piloting in the advance polls allowed us to consider different elements of the automated model such as the storage of ballots and equipment.

We also used the pilot as an opportunity to address two of the challenges experienced in the Whitby-Oshawa pilot. Those challenges related to the Strike-Off Portal and deployment of technology to the polls on Election Day.

## Advance Polls: Dates, Times, Locations

Advance polls for the Scarborough – Rouge River by-election were open from August 20 – August 26, 2016 from 10:00 AM to 8:00 PM. Electors in the electoral district could vote at any one of the area advance polls or in the returning office.

- Albert Campbell Collegiate Institute (1550 Sandhurst Circle, Toronto)
  - Open August 22 – August 26
- Malvern Family Resources Centre (90 Littles Road, Toronto)
  - Open August 22 – August 26
- Mary Shadd Public School (135 Hupfield Trail, Toronto)
  - Open August 20 – August 25
- White Haven Jr. Public School (105 Invergordon Avenue, Toronto)
  - Open August 20 – August 25
- Returning Office: 10 Milner Business Court, Toronto
  - Open August 21 - August 26

During advance polls, 4,557 voters cast their ballots. This is consistent to the 2014 General Election when 4,597 voters cast their ballot at advance polls in Scarborough – Rouge River.



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## What did we pilot?

For full details of the proposed technology-enabled staffing model please refer to the Whitby-Oshawa Post Event Report on our website. This new model introduces two pieces of technology to automate manual processes. The first is an e-Poll Book which allows an election official to quickly find an elector's information on the list of electors and perform the necessary steps to issue a ballot. The second is the Vote Tabulator which automates the counting of the ballots.

## Lessons Learned

In any pilot process the goal is to learn what worked and what did not, and have the capability to change the processes that did not work before roll out.

## Advance Poll Process

In Scarborough – Rouge River, the model performed flawlessly with respect to voting procedures that are consistent with Election Day. However, the process of issuing a ballot is slightly different in advance polls because the elector is required to sign an oath attesting that they have not voted previously in this election. Administering the oath was not automated. This meant it took slightly longer for electors to be issued a ballot as compared to Whitby-Oshawa. As a result there were some reports of line-ups at some advance poll voting locations. Going forward, if automation is added to the advance polls for the 2018 General Election, all the steps involved in issuing a ballot should be automated. However, it is important to recognize that the additional step of signing the oath remains, which means that the time it takes to issue a ballot in an advance poll will always be slightly longer than the time it takes to issue a

## Piloted Technology

Vote Tabulators have been in use widely in other jurisdictions since the 1990s. Elections Ontario has been using Vote Tabulators in its returning offices and satellite offices for General Elections since 2011. Vote Tabulators use proven, reliable election technology to count ballots faster and with more accuracy than manual counts<sup>1</sup>.

Electronic Poll Books have been used in several jurisdictions for the past decade. They replace paper-based lists. Instead of manually flipping through a paper list containing a few hundred names, the poll official can scan an elector's Notice of Registration Card and the e-Poll Book returns the voter's record in a fraction of a second. This process is very similar to how a cashier scans a bar code and the correct record is populated into the register.



# Elections Ontario

ballot on Election Day.

## Overall Support

As a comparison point between Whitby – Oshawa and Scarborough – Rouge River, Elections Ontario conducted exit surveying with electors and opinion surveying with poll officials to determine the overall acceptance and support for the technology.

Overall ratings remained mostly consistent across the two pilots. Elector satisfaction dropped by 8 per cent, likely due to not having a fully automated advance poll process.

Support Statement	Whitby – Oshawa	Scarborough – Rouge River
<b>Electors</b>		
The voting process was “easy” with the new technology.	96%	88%
The technology maintained the integrity of the process: ensuring voter secrecy and that votes were counted accurately	93%	93%
Would support the use of technology similar to what was in use in this by-election in future elections	91%	92%
<b>Poll Officials</b>		
Support the use of similar technology in future elections	89%	All*
Agreed the technology they used was easy and simple to use	87%	All*
The technology they used in the by-election maintained the integrity of the process	85%	All*

\*The advance polls have significantly fewer staff than Election Day polls. So, while the proportion that agreed is unanimous, we cannot generalize the results.

## Deployment

During the Whitby-Oshawa by-election, 12 of the 42 pilot locations had to open using the manual paper process because the deployment of technology had challenges.

Because the pilot in Scarborough – Rouge River took place in advance poll locations only Elections Ontario did not need to deploy technology to as many locations. However the deployment did need to consider how to deploy and secure the technology over multiple days. This provided us an opportunity to do a proof of concept for an alternate deployment strategy.

Deployment in the Whitby-Oshawa model was managed through the technology vendors. In Scarborough – Rouge River we changed the deployment to be the responsibility of the poll officials. Area Managers deployed the e-Poll Books to each advance poll location and the



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Tabulator Deputy Returning Officers for each location deployed the Vote Tabulators.

As a proof of concept Elections Ontario experienced no issues related to deployment of technology by election officials. As part of the preparations for the 2018 General Election we will continue to explore and test the viability of this deployment model.

## Strike-Off Portal

Connectivity issues and an error in the portal configuration caused challenges for the Strike-Off Portal in Whitby-Oshawa. In Scarborough – Rouge River by-election, Elections Ontario piloted a different model for the Strike-Off Portal that is aligned to the advance vote processes. Legislation permits candidates to request a list of individuals who voted the day prior during advance vote. The Strike-Off Portal allowed us to automate this process which is an enhancement over the current paper process making the data more efficient, timely and easier for political stakeholders. There were no challenges with the Strike-Off Portal for the advance poll model.



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## Legislative Recommendations

**The Chief Electoral Officer recommends that the *Election Act* be amended to create a longer election writ calendar to allow for the printing of ballots and the testing of the technology.**

The current election calendar is 29 days. The Post-Event Report for the 2014 General Election outlines some key benefits of a 36 day election calendar. With the introduction of technology into the election process it is even more important to create sufficient time for quality control on the printing of ballots and logic and accuracy testing on the technology itself.

There are two ways that the election calendar could create the necessary time. The first would be to extend the calendar to 36 days which is the recommended option.

If extending the calendar is not feasible, then additional time could be provided for ballot printing and logic and accuracy testing by changing some of the dates in the calendar. If the nomination period for candidates closed earlier in the election it would allow for additional time for ballot printing. If the advance vote period took place closer to Election Day, it would allow for more time for logic and accuracy testing. By making these changes more time is available to perform quality control on the ballots – which cannot be printed until after the candidates have been nominated – and to conduct the logic and accuracy testing on the technology before advance polls and Election Day.



# Elections Ontario

## Recommendations from Whitby-Oshawa that have been included in Bill 45

**The Chief Electoral Officer recommends that the *Election Act* be amended to permit the expanded use of vote tabulators by removing the provisions that limit the use of vote tabulators to advance polls in returning offices.**

The Vote Tabulators performed flawlessly in the by-election as they have since they were first used in Ontario provincial elections.

Vote Tabulators are a proven, reliable election technology. They are able to count ballots faster and with more accuracy when tested against manual counts<sup>1</sup>.

Legislation was introduced on October 19, 2016 that, if passed, will permit Elections Ontario to expand the use of Vote Tabulators to be used in advance poll and Election Day voting locations across the province.

**The Chief Electoral Officer recommends that the *Election Act* be amended to formalize the provision of strike-off data to parties and candidates.**

Currently, Elections Ontario provides strike-off data to eligible political parties and candidates as a customer service practice. Parties have come to rely on this practice. The *Election Act* permits examination of election documents but offers no clear direction on strike-off data. The practice of providing strike-off data to parties and candidates has served the purpose of finding efficiencies for parties to access the strike-off data in election documents. The practice also helps to create a level playing field because the same data is released to eligible registered parties at the same time.

Formalizing the provision of strike-off data to parties and candidates can improve the integrity of the electoral process and better protect the privacy of elector information.

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<sup>1</sup> The Voluntary Voting Systems Guideline in the United States requires a vote counting system to produce no more than one error per 125,000 ballots. The Logic and Accuracy Testing conducted on the tabulators used by Elections Ontario passed an ISO accuracy test processing 1,549,703 consecutive ballots. Manual vote count is not as accurate or consistent.



# Elections Ontario

The Chief Electoral Officer recommends that provincial election legislation be amended to permit the Chief Electoral Officer to provide technology and assistance to other electoral management bodies in Canada.

Investing in technology solutions will mean a capital investment. This investment is necessary. It is more than a systems upgrade. It protects our electoral process from risks that, if left unmitigated, may erode public trust in the integrity of our democracy. It plays a role to bring Ontario services up to the standards that the public expects, and it sets the foundation for Elections Ontario to continue to respond to changes in technology that will undoubtedly continue to shape public expectations in elections to come.

At the same time, we recognize that it is very important to be prudent and careful with public funds. General Elections typically happen once every four years. The lifecycle of Vote Tabulators is approximately 15-20 years, or about 3-4 election cycles. To maximize the investment of public funds, the Chief Electoral Officer recommends that Elections Ontario be allowed to offer to share technology and expertise with other jurisdictions in Ontario and Canada that indicate an interest.

Allowing municipalities to source Vote Tabulators directly from Elections Ontario could significantly reduce the number of Vote Tabulators municipalities are required to purchase or lease.

Legislation was introduced on October 19, 2016 that, if passed, will permit Elections Ontario to rent vote tabulators to municipalities and other Canadian electoral jurisdictions.

## Conclusion

The Scarborough – Rouge River pilot successfully demonstrated the automation of advance poll processes. Service to political parties was improved through the use of the Strike-Off Portal to provide the list of electors who had voted the previous day in an advance poll. And, a different deployment strategy was tested as a proof of concept.

The key learning from the pilot was the need to automate the full process to issue a ballot in the advance polls including the oath, so that electors experience a fully automated process

Overall, this pilot strengthened our understanding of the processes that are necessary to introduce technology into the voting process as part of a General Election.