

Dear Ms Fettes and COUNCIL:

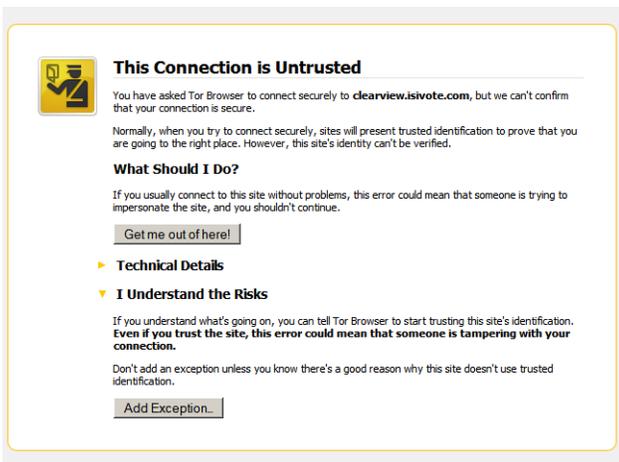
During the Creemore voters meeting I spoke with Inteli-Vote regarding the use of the TOR browser over a VPN network and was told that there would be no problems with that browser/communications combination.

You have also been advised of problems when users concerned about privacy and security have secured browser access only to https: web sites.

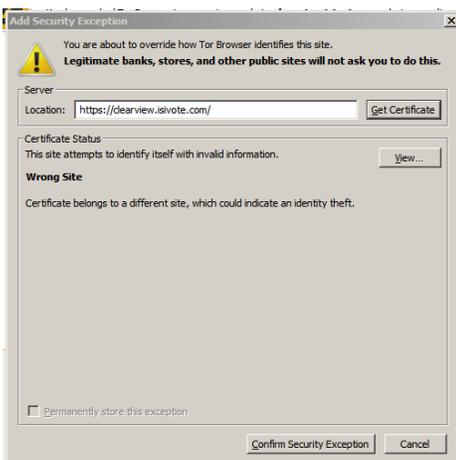
You have stated that "because the banks don't have secure front end pages, I should not be concerned" - I do not use internet banking or purchasing simply because it is so insecure and have seen numerous accounts that have been "hacked" to the detriment of users who took security for granted!

This morning I started to vote using the system configuration of which both you and Inteli-Vote had been advised with the following **TOTALLY UNNACCEPTABLE** results:

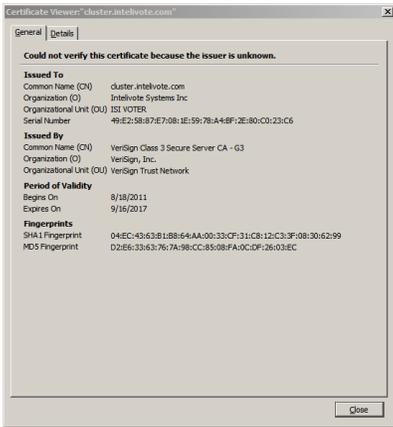
I logged into the clearviewisivote.com site using the TOR and Firefox browser forced https: and received the expected warning about being on an insecure page:



I then clicked on "Add exception" to get through the page to what you have told me is a secure voting page for Clearview and received the following (expected) message:



I then clicked on "Confirm security exception" to allow further access and received the following security information:



This took me to the following voting page where we tried to enter my wife's name and PIN



Intelivote Login

Enter your Single Sign-On user name and password to sign in.

User Name

Password

Login Cancel

Unauthorized use of this site is prohibited and may subject you to civil and criminal prosecution.

With the following "authentication failed" message:



It was my expectation that I would get a page that at least confirmed I was on the correct site using something like "Clearview Voting Page" or something showing that I was on the correct page, and I also expected that the term PIN would be used instead of the term "password".

1. Has ANYONE actually tested BETA tested this system for use with common browser and communications configurations?
2. How many others have run afoul of the flaws in this internet based system and just given up on it? (I know of at least three)
3. Are you going, once again, to ignore these basic errors in access and once again assert that these flaws do not matter because this system has been used by many other municipalities? (the "blind leading the blind" is not an excuse for a system that has flaws of this magnitude!)
4. Yesterday you told me that it was COUNCIL and not YOU that had determined this system met all of the standards required of the municipal and voting acts, who on council tested this system and promoted its use for this election?

Please advise me by return email what is wrong and when Inteli-Vote will be fixing these problems by ensuring that the front end is certificate secured AHEAD of the final day for voting on Monday.



Peter Lomath
29 George Street, Creemore,
Ontario, L0M1G0

Council for the Township of Clearview by email with a signed copy for receipted delivery to follow.
The Corporation of the Township of Clearview,
217 Gideon Street, Stayner, Ontario

and to

Minister Bill Mauro, Ontario Ministry of Municipal Affairs by email

April 16, 2018

Ladies and Gentlemen,

Re the ELECTRONIC VOTING system approved by the council for Clearview:

After attending the recent meeting put on jointly by the Ministry of Municipal Affairs and the Township of Clearview and subsequently contacting the office of the Chief Electoral Officer for Ontario (Greg Essensa), I have undertaken an analysis of the provincial and municipality of Clearview results from the 2014 provincial and municipal elections. The findings from that analysis are provided below, along with a number of questions related to the internet based system approved by you for this next election.

Based upon the publicly disclosed facts of Mr. Essensa and these publicly available results I believe that the system council has approved for the 2018 Clearview Municipal Elections:

1. does not meet the standards expected by voters or REQUIRED by legislation for either privacy, security or validity of numbers, as confirmed publicly by Mr. Essensa
2. yields results that are not open to public view, nor are able to be validated by either candidates nor their referees
3. have deviances from the norms provided by the Ontario electoral results of such high values as to bring into question the way in which the "secret" counting process you have approved is going to take place again
4. Utilizes a "honey pot" as a collection point for votes that the "secret" software has not been able to determine using "secret" criteria, a factor agreed to as an error in the system by its supplier.

Request A

This is a formal request for the Council for the Township of Clearview to direct the returning officer to immediately change the voting process back for the upcoming 2018 election from the selected electronic system to a paper based system equivalent to that provided at the provincial and federal level. This request to remain in force until such time as both the Federal and Provincial electoral offices have tested and approved a single common system (for use by all municipalities in Ontario) to ensure that it meets ALL of the required standards and EXPECTATIONS of validity owed to voters and clearly specified within legislation as a condition of the electoral process. This would ensure that ALL voters within Ontario have the same level of access, privacy and voting integrity available to them regardless of where they live.

Request B

- 1. If it is the decision of council NOT to direct the returning officer to change to a secure paper based voting system meeting the standards for privacy, security and data integrity as set out by legislation and the Ontario Electoral Officer, this is a request for the council for the Township of Clearview to REQUIRE the chosen provider of services to provide a publicly disclosed "letter of comfort" warranting that their system meets all of the requirements of appropriate legislation.**
- 2. That request should also include the requirement that they lodge a copy of the un-compiled source code and compiled running code for the system being used in 2018 with the Ontario Privacy Commissioner in case of dispute by ANY candidate or the courts.**
- 3. That "letter of comfort" should also acknowledge that if there are deviations in voter to defective vote ratio from the norm and beyond the historic average value (>0.722562%) provided by the current paper based provincial voting system (see following and attachments) that require a new elective process, the supplier (and not the taxpayers of Clearview) will pay for ALL costs associated with that process.**
- 4. In the event that the chosen supplier refuses to issue a letter of comfort covering the above concerns, requirements for escrow and deviance from the historic averages , I believe this will confirm that the system does not meet the requirements of the law as confirmed by the supplier and that council has no option but to return to a paper based system for this election.**

The publicly available disclosures of other levels of government

- In last week's Stayner/Wasaga Sun, Greg Essensa, Chief Electoral Officer for Ontario acknowledged that the methods so far explored for fully electronic voting (the form adopted by the council for the Township of Clearview) "do not ensure secrecy of the vote or one vote per voter".**

- Prior to the last municipal election in 2014, we obtained an FOI from the Province that showed that they had **neither tested nor approved ANY form of electronic voting system**.
- We advised the council for the Township of Clearview of our concerns and received a response from the (then) deputy Mayor Alicia Savage that we should "**stop wasting councils time**".
- We had been told by the previous Mayor that "municipalities have been allowed to use other than paper based voting systems since 2003", however it is the understanding of the undersigned that any system that is chosen is still required to meet the same high standards of accuracy and privacy and offer the same oversight capabilities as the historic paper system.

Any review of the system selected by the Township of Clearview and any continuing failure of the township to **REQUIRE** that a copy of the source code be placed in escrow with an entity such as the Privacy Commissioner in case of a dispute where the courts would need to evaluate the processes and methodology behind the vote counts and in this case the manner in which votes are deemed to be defective and not counted should be considered an error in judgment by this council.

At the public meeting on the voting process in Creemore on Thursday October 02, 2014, the representative from the chosen supplier for 2014, who I understand is also the supplier for the 2018 election, confirmed that the **ONLY computer systems in Clearview that would have secure certificate access to the voting server for the 2014 elections would be the systems at the libraries and the administration centre. That meant that in 2014 only a few computers in just three voting area's were suitable for secure and trusted voting!**

Q - Please have the supplier provide any update or change to this information relative to the 2018 elections and advise the public of these concerns in a public announcement as part of the "voting" package.

That notice should clearly advise voters:

- of the KNOWN limitations in vote count accuracy using the numbers and percentages shown on the last election results; and
- the insecurity of the voting process when taking place on other than the certificate secured systems available at the Municipal Office in Stayner and the library branches; and
- the insecurity and potential for votes cast to be deemed invalid from any computer that does not have a secured certificate as is apparent from the 2014 results
- the inability of the election software to protect the privacy of voters nor guarantee that their vote, if made from other than the municipal offices or libraries, will be registered as valid, may be rejected for unspecified reasons that a voter can expect not to be determined and may, in case of a "close" vote mean that the working party is declared elected.

Consequently those with concerns over their privacy and the security of their vote, will need to attend at one of the libraries or the administration centre to cast their vote using one of the VERY FEW secure computer systems.

In the 2014 software release, If anyone cast an illegal vote (by using somebody else's PIN number), once that vote had been registered in the system, Intelli-Vote has acknowledged for the 2014 election they had no way of:

- **Identifying the improper vote**
- **Determining who the vote was for**
- **Determining who submitted the vote**
- **Removing the vote from the ballot count**

IF an illegal vote is registered it remains in the system and Intelli-Vote has **NO WAY** of identifying the person who voted, who they voted for, where they voted from or **any way of removing that vote**. Additionally there is a possibility that the person whose personal pin was "miss-used" can be issued with a new pin and a second vote can be made in addition to the illegal vote.

Q - Please have the supplier provide any update or change to this information relative to the 2018 election and advise the public of these concerns in a public announcement as part of the "voting" package.

These deficiencies and limitations of the electronic system approved by the council for the Township of Clearview should be of huge concern to voters in Clearview where we have recently seen a race in the 2010 election that was determined by just one vote.

If there is a repeat of this close race and anyone has registered an illegal vote it will mean one of two resolutions:

1. A totally new paper based vote to ensure that the flaws in the electronic voting system are taken out of the equation
2. A decision by the **NON-Elected returning officer** to let the result stand which will mean that the person elected may not have the same backing of the community found with a trusted voting system.

Voting code visibility

Another concern that needs to be addressed by council is the problem of "visibility" of the voting codes that in the 2014 election process could be seen simply by holding the sealed envelopes up to sunlight.

Here is an example that was rejected for any action to rectify by the returning officer in 2014



The differences between the Provincial data and the Township of Clearview data.

The data provided by Elections Ontario is for the 2014 provincial elections, which as best we could determine were ALL "**paper based**" non-electronic votes, that allowed candidates (by referee) to observe the counting process and where necessary undertake various processes when the counting of votes appeared to require further review. The data also breaks the "invalid votes" into two reported values, "Rejected" and "Unmarked".

The data provided by the Township of Clearview is for the 2014 municipal elections that used a totally electronic, internet based system that appears to only provide a single broad based description of "spoiled ballot" for votes that were either not counted or were "spoiled".

The data from the Township of Clearview does not provide any information on what criteria the "secret" software uses to count votes or to determine what constitutes a "spoiled ballot" so candidates have no opportunity to validate the integrity of the voting process or review the accuracy of results until AFTER the returning officer received the results from the voting system provider and has announced the results! The data also fails to break down "invalid votes" into either "Rejected" or "Unmarked" ballots.

In 2014 the Township refused to require as part of their RFQ for the voting system that a copy of the source code used in that process is lodged with a third party (such as the Ontario Privacy Commissioner) do that in the event of the types of data difference dealt with in this paper can be reviewed by the courts under a judicial review of what appears to be a flawed process not tested nor approved by the Province of Ontario.

Provincial Voting statistics 2014

Source:

Bad vote average is the number of total uncountable votes /total cast votes expressed as a percentage of votes cast.

Bad vote average for all Ontario Provincial elections in 2014

Average for all races = 0.722562% (Median value 0.694317%)

(Hi = 028 HALDIMAND—NORFOLK - 1.854905%, Lo = 039 KITCHENER—WATERLOO - 0.459600% with only 5 of the races above 1%)

Clearview voting statistics 2014

Source:

Bad vote average is the number of total uncountable votes /total cast votes expressed as a percentage of votes cast.

268 votes cast in Clearview 2014 were rejected by the secret on-line counting system as being spoiled votes and as best we can determine there were another 11 totally non-attributable votes in the "honeypot", meaning that **279 votes were rejected by the SOFTWARE used for counting!**

For the various races the number of "spoiled votes" were as follows

Race	total votes cast	Spoiled	Ratio
MAYOR/COUNTY COUNCILLOR	5111	68	1.330464%
DEPUTY MAYOR/COUNTY COUNCILLOR	5095	158	3.101079%
COUNCILLOR WARD 1	926	6	0.647948%
COUNCILLOR WARD 2	805	4	0.496894%
COUNCILLOR WARD 3	759	17	2.239789%
COUNCILLOR WARD 5	845	5	0.591716%
COUNCILLOR WARD 7	606	10	1.650165%

What's wrong with these numbers?

In the seven races for the 2014 election that were not acclaimed there is a **HUGE** variation in the Bad vote average for the Township of Clearview. In 4 of the races the bad vote average was over twice the provincial average and the race for Deputy Mayor had a bad vote average over 4 times the provincial average and twice that for the Mayor's race.

Each voter in Clearview has the opportunity to vote on 1 ward race and the 2 at-large races with the same single voter code as issued by mail. The system approved by the council is fully electronic and used composite voting controls, so if a voter successfully "logs on" to the voting system and places their votes for the 3 races it should be expected that their votes in each individual race **SHOULD** ALL be deemed a valid vote. If a voter chooses not to vote in any of the three races set out in their "voting package" their vote should not be deemed to be "spoiled", it should simply not be counted either as a vote or an "offer to vote".

A separate ballot is designed to be used for only one office, by-law or question, as the case may be; a composite ballot is one that combines the contents of two or more separate ballots. 1996, c. 32, Sched., s. 41 (5).

Q - Did the returning officer and elected councilors fail to recognize these disparities and if so what steps will be undertaken from this letter to validate the integrity of the chosen voting system for the voters of Clearview Township?

Q - How can there be such a difference in the bad vote average for the 3 races with common voter participation?

The process would appear to rule out the electronic communication infrastructure (integrity of the internet connection) as being a factor in just 1 or more of the three votes being deemed by the SECRET software used to count votes to be "spoiled" since it is highly unlikely (and maybe not even possible) for

each of the three votes to take place at different times from three different internet access points.

Without a court having free access to source code that issue could never be resolved.

In the case of the two at-large votes the number of votes cast were almost identical (5,111 to 5,095, a **difference of just 16 votes cast**) yet the number of "spoiled" votes reported by the voting system for the Deputy Mayor role (**158**) was 2.3 times that for the Mayor (**68**) and was far above the difference of 16 cast votes between polls.

In a single voter "package" with three votes to be taken, would not all of the votes not be counted if one of the votes from the three available was found defective?

In that scenario it would be expected that the number of defective votes would be equal across all three races.

Questions for council, and the returning officer:

- 1. Why did these disparities in data not "trigger" some concern by the returning officer for the integrity of the system council had approved?**
- 2. If these results did "trigger" any form of analysis and investigation by either the returning officer or council, where can the public find the results of that "investigation" or review and why was this process kept from the public?**
- 3. What are the grounds for a vote being considered as "spoiled" by the voting system approved by the Council for the Township of Clearview?**
- 4. What are the criteria regarding the impact of votes that end up in the "honey pot" confirmed by the software creator to be a place where any votes that cannot be determined to be from a registered voter, or from an "approved" internet access point (something else for which there does not appear to be a public definition see additional note C) below on that concern) and cannot be "traced" by any means to a specific voter number, end up?**

Clarifying notes:

- A. The Township of Clearview was advised long before the last election of the problems with the visibility of voting codes and the returning officer determined that no action would be taken by the Township on that clearly identified flaw in the process that may well also have led to the re-issuance of voting credentials (maybe ask the returning officer if any credentials had to be re-issued and upon what grounds, together with the steps taken to ensure that the request was for valid reason and that the software was then changed to reject or deny a vote based upon the original voting credentials.

- B. The Township of Clearview and the all associated levels of the Provincial Government and Elections Ontario have been previously advised in 2013 of these problems with this particular voting system and ALL have failed to act or even acknowledge receipt of such concerns. (Letters available upon request).

- C. For the 2014 election at least one web site being run by a candidate had a link to the "official" voting site from that privately owned web site. Without knowing the specific routines employed by the software (and that would be available for review if a copy was placed in escrow) it is difficult to determine if votes placed through that link (created without any directive base of linkages specific to and approved by the voting software supplier) might well have all ended up in the "honey pot". That would have meant that the supporters of that particular candidate might well have "added" to her loss. I fully understand that "conjecture" might be inappropriate analysis tool, but when the full process that voters are being required to use is not "open" with regard to validity and integrity testing, conjecture is the only tool upon which concerns can be based.

I await your timely response addressing the reasons why you have chosen to burden this community with an electronic, Internet based, voting system lacking the equal integrity and accuracy to that of current paper based systems.

Thank you



Peter Lomath

cc

CBC Go-Public by email - gopublic@cbc.ca

TVO - Director of documentaries by email - asktvo@tvo.org

Encl:

The 2014 Ontario Provincial voting records in Excel format

The 2014 election results Clearview spoiled vote analysis 2014 all races.xlsx