

The City of Nanaimo



Municipal Elections Project

Nanaimo Elections Background

- Large number of candidates
 - Mayor - 5
 - Council - 29
- 42,000 eligible voters
- 37% turnout
- 15 polling stations
- Voting machines used since 1992

Project Overview

- The 1999 Election
 - used an “in house” built Foxpro application, delivered via standalone PC at each polling station, a significant improvement from the paper based system of 1996.
 - data from 15 workstations was merged after the polls closed, with the duplicates eliminated to achieve final counts.
 - turnaround of election results took several hours, under pressure from anxious candidates.
 - there was room for error, as residents could vote at more than one polling station if they were trying to abuse the system.
 - heavy ITO involvement, staging equipment and merging data sets after the polls closed.

Project Overview

- Objectives:
 - Reduce results tabulation time
 - Identify voter irregularities at point of origin
 - reduce costs
- Project Initiated February, 2002
- Project sponsored by the City Clerk's Office.
- Project Team set up, consisting of Information Technology Office and City Clerk's Office.
- E-government Initiatives are high priority at the City of Nanaimo. Every new application built or purchased is reviewed for possible delivery via the web.

Project Overview

- What are we did for the Year 2002 Election:
 - delivered the application via the city web page, as most polling stations already have web connectivity.
 - allowed residents to check if they are on the voters list via the web, several weeks before the election.
 - central database eliminates the chance for a resident to register more than once, abusing the system.
 - results available to the City Clerk's office immediately after the polls close and the voting machine results have been keyed into the web application.
 - final statistics available for export to Excel, for creation of presentation quality graphics.

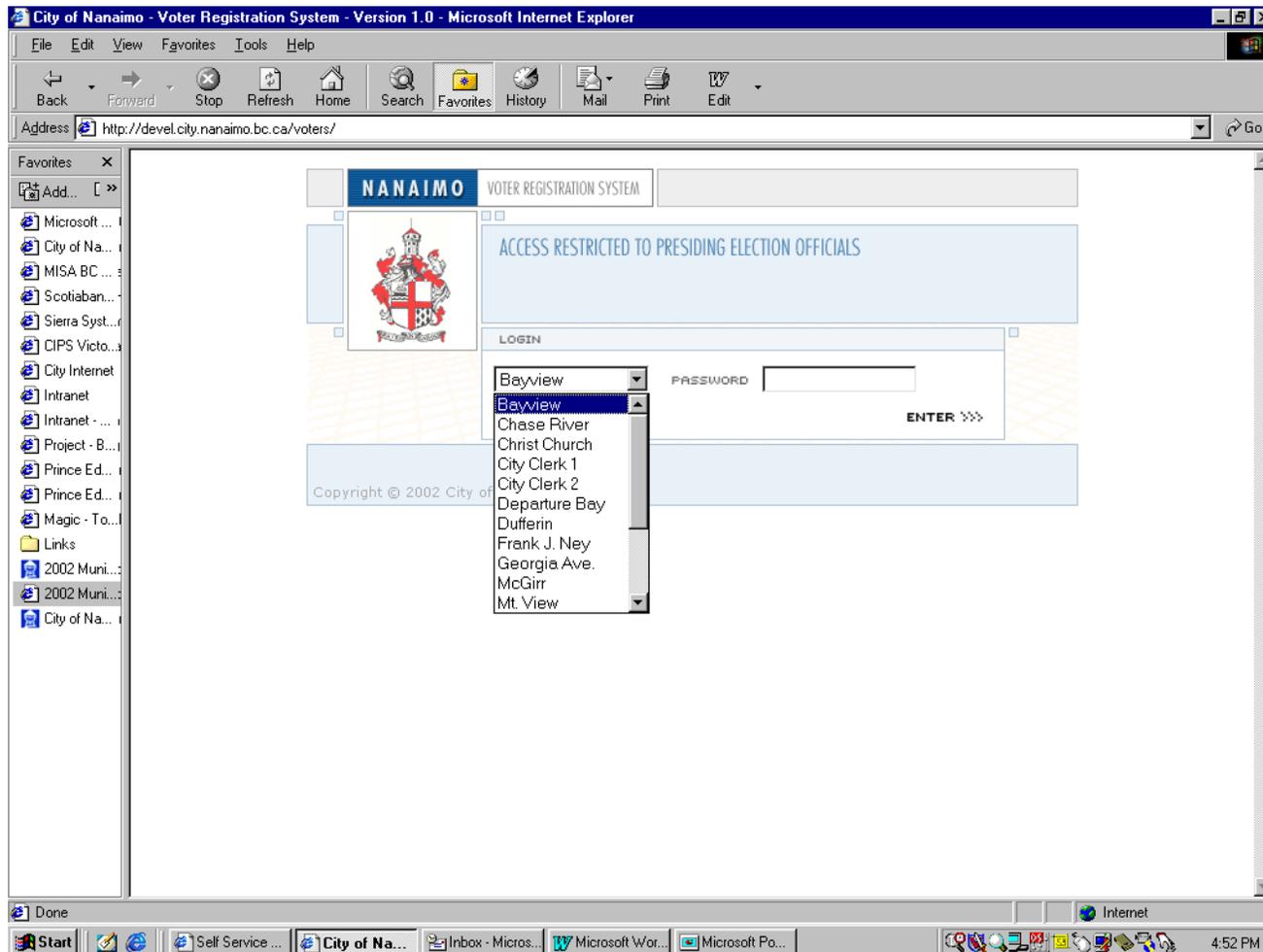
Municipal Elections Application - the web interface

- In advance of the election, residents can check to see if they are on the voter's list.

The screenshot shows a Microsoft Internet Explorer browser window with the address bar displaying `http://devel.city.nanaimo.bc.ca/b_clerk/elections.asp`. The browser's Favorites list on the left includes various links, with "2002 Municipal Elections - Voter's List look-up" selected. The main content area displays the City of Nanaimo website header with navigation links (HOME, CITYMAP, FAQ, SITE MAP, CONTACTS, WHAT'S NEW, SURVEYS, SEARCH, LOCAL WE) and a banner image of a harbor. Below the banner is a navigation menu with categories: COMMUNITY SERVICES, CORPORATE SERVICES, DEVELOPMENT SERVICES, and ABOUT NANAIMO. The "CORPORATE SERVICES" menu is expanded, showing a list of topics including "City Clerk Home", "Agendas & Minutes", "Animal Control", "Application Forms", "Bylaws", "City Manager", "City Positions", "Conference Centre", "Election", "Liquor Licensing", "Mayor & Council", "Parking", "Public Information", "2002 Municipal Election", "Archives", "CityPage", and "Council Committees". The "2002 Municipal Election" topic is selected, leading to the "2002 Municipal Election Voter List" page. The page features a "CITY CLERK'S OFFICE" header and a "VOTER SEARCH" section with a search form containing fields for Last Name, First Name, House Number, Street, and Apartment. A "SEARCH" button is located at the bottom right of the form. To the right of the search form is a "Statue of Frank Ney" image and a "GET ADOBE READER" section with text about downloading Adobe Acrobat Reader software.

Municipal Elections Application - the web interface

- The application is delivered from the City of Nanaimo Internet server.
- Polling Officers are assigned stations and passwords.



Municipal Elections Application - the web interface

- The Polling Officer is given basic "review" instructions on how to use the application.

The screenshot shows a web browser window titled "City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer". The address bar contains the URL: <http://devel.city.nanaimo.bc.ca/voters/list.asp?status=DK&scholl=17&peo=Pat+Parkin>. The page header includes the "NANAIMO VOTER REGISTRATION SYSTEM" logo and a "Help" link. Below the header, the user is identified as "City Clerk 2 Pat Parkin, Presiding Election Official". The interface features a search bar with the following fields: "Last Name: smith", "First Name: john", "Street:", and "ID#: ". A "SEARCH >>>" button is located to the right of the ID# field. Below the search bar, the user is greeted with "Welcome Pat Parkin," and provided with instructions on how to use the application. The instructions state that users can register residents for the 2002 City of Nanaimo Municipal Elections by entering the name or street address of the person to be registered. Basic instructions are provided for using the search function, which allows searching by Last Name, First Name, and Address. An example is given for searching for John Smith at 5549 Rutherford Road. A note mentions that names and streets with an apostrophe should be searched without it. The page concludes with a contact email: webmaster@city.nanaimo.bc.ca. The footer of the page reads "Copyright © 2002 City of Nanaimo". The browser's taskbar at the bottom shows several open applications, including Microsoft Outlook, Microsoft PowerPoint, and the City of Nanaimo application, along with the system clock showing 4:57 PM on 24-Jan-02.

Municipal Elections Application - the web interface

- When the resident presents, the name and address particulars are keyed into the search screen.
- The more information available, the less names retrieved. 50 names only are retrieved.

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Address: http://devel.city.nanaimo.bc.ca/voters/list.asp

NANAIMO VOTER REGISTRATION SYSTEM

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: smith First Name: john Street: ID#: SEARCH

LAST NAME	FIRST NAME	ADDRESS		
NAYSMITH	JOHN G	#3-667 ROSEHILL ST	9/17/2002 7:02:06 PM at Christ Church	
NAYSMITH	JOHN GIBB	#308-116 PRIDEAUX ST	9/17/2002 6:56:59 PM at St. Andrews	
SMITH	ALLAN JOHN	469 DEERING ST	7/31/2002 11:11:40 AM at Bayview	MODIFIED
SMITH	JOHN	5549 RUTHERFORD RD	UNREGISTERED	
SMITH	JOHN COWAN	6248 MCGIRR RD	UNREGISTERED	
SMITH	JOHN FREDRICK	179 ACACIA AVE	9/17/2002 7:17:35 PM at Mt. View	MODIFIED
SMITH	JOHN H	2496 COSGROVE CRES	9/17/2002 7:04:09 PM at Pleasant Valley	MODIFIED
SMITH	NICHOLAS JOHN	3332 KITE WAY	9/17/2002 7:03:49 PM at Pleasant Valley	

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Municipal Elections Application - the web interface

- If the resident has already been registered through another polling station, the system displays this information

NANAIMO VOTER REGISTRATION SYSTEM

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: First Name: Street: ID#: SEARCH 🔍

LAST NAME	FIRST NAME	ADDRESS	
NAYSMITH	JOHN G	#3-667 ROSEHILL ST	9/17/2002 7:02:06 PM at Christ Church
NAYSMITH	JOHN GIBB	#308-116 PRIDEAUX ST	9/17/2002 6:56:59 PM at St. Andrews
SMITH	ALLAN JOHN	469 DEERING ST	7/31/2002 11:11:40 AM at Bayview MODIFIED
SMITH	JOHN	5549 RUTHERFORD RD	UNREGISTERED
SMITH	JOHN COWAN	6248 MCGIRR RD	UNREGISTERED
SMITH	JOHN FREDRICK	179 ACACIA AVE	9/17/2002 7:17:35 PM at Mt. View MODIFIED
SMITH	JOHN H	2496 COSGROVE CRES	9/17/2002 7:04:09 PM at Pleasant Valley MODIFIED
SMITH	NICHOLAS JOHN	3332 KITE WAY	9/17/2002 7:03:49 PM at Pleasant Valley

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Municipal Elections Application - the web interface

- Only one resident can be registered at a time in each polling station.
- “Modified” indicates the information provided by the resident differs from information available the last time the voter’s list was compiled.

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Register Resident? - Microsoft Internet Explorer

NANAIMO VOTER REGISTRATION SYSTEM

ID#-13470464
JOHN SMITH
5549 RUTHERFORD RD

COMPUTER REGISTRATION? YES NO
MODIFIED REGISTRATION? YES NO

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: smith First Name: john Street: ID#: SEARCH

LAST NAME	FIRST NAME	ADDRESS	
NAYSMITH	JOHN G	#3-667 ROSEHILL ST	9/17/2002 7:02:06 PM at Christ Church
NAYSMITH	JOHN GIBB	#308-116 PRIDEAUX ST	9/17/2002 6:56:59 PM at St. Andrews
SMITH	ALLAN JOHN	469 DEERING ST	7/31/2002 11:11:40 AM at Bayview MODIFIED
SMITH	JOHN	5549 RUTHERFORD RD	UNREGISTERED
SMITH	JOHN COWAN	6248 MCGIRR RD	UNREGISTERED
SMITH	JOHN FREDRICK	179 ACACIA AVE	9/17/2002 7:17:35 PM at Mt. View MODIFIED
SMITH	JOHN H	2496 COSGROVE CRES	9/17/2002 7:04:09 PM at Pleasant Valley MODIFIED
SMITH	NICHOLAS JOHN	3332 KITE WAY	9/17/2002 7:03:49 PM at Pleasant Valley

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Start | Inbox - Microsoft ... | Microsoft PowerP... | City of Nanaimo - ... | Fw: Acknowledge... | Register Resid... | 5:00 PM

Municipal Elections Application - the web interface

- a newly registered voter at Station City Clerk 2, Mr. John Smith

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Address: http://devel.city.nanaimo.bc.ca/voters/list.asp

NANAIMO VOTER REGISTRATION SYSTEM Help

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: First Name: Street: ID#: SEARCH >>>

LAST NAME	FIRST NAME	ADDRESS	
NAYSMITH	JOHN G	#3-667 ROSEHILL ST	9/17/2002 7:02:06 PM at Christ Church
NAYSMITH	JOHN GIBB	#308-116 PRIDEAUX ST	9/17/2002 6:56:59 PM at St. Andrews
SMITH	ALLAN JOHN	469 DEERING ST	7/31/2002 11:11:40 AM at Bayview MODIFIED
SMITH	JOHN	5549 RUTHERFORD RD	9/18/2002 5:06:31 PM at City Clerk 2
SMITH	JOHN COWAN	6248 MCGIRR RD	UNREGISTERED
SMITH	JOHN FREDRICK	179 ACACIA AVE	9/17/2002 7:17:35 PM at Mt. View MODIFIED
SMITH	JOHN H	2496 COSGROVE CRES	9/17/2002 7:04:09 PM at Pleasant Valley MODIFIED
SMITH	NICHOLAS JOHN	3332 KITE WAY	9/17/2002 7:03:49 PM at Pleasant Valley

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Done Internet

Start | Inb... - Microsoft Outlook | Microsoft PowerPoint - [...] | City of Nanaimo - V... | Fw: Acknowledge "in" to... | 5:01 PM

Municipal Elections Application - the web interface

- John Cowan Smith was registered as a "Modified" voter at station City Clerk 2.

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Address: http://devel.city.nanaimo.bc.ca/voters/list.asp

NANAIMO VOTER REGISTRATION SYSTEM

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: smith First Name: john Street: ID#: SEARCH

LAST NAME	FIRST NAME	ADDRESS	
NAYSMITH	JOHN G	#3-667 ROSEHILL ST	9/17/2002 7:02:06 PM at Christ Church
NAYSMITH	JOHN GIBB	#308-116 PRIDEAUX ST	9/17/2002 6:56:59 PM at St. Andrews
SMITH	ALLAN JOHN	469 DEERING ST	7/31/2002 11:11:40 AM at Bayview MODIFIED
SMITH	JOHN	5549 RUTHERFORD RD	9/18/2002 5:06:31 PM at City Clerk 2
SMITH	JOHN COWAN	6248 MCGIRR RD	9/18/2002 5:07:32 PM at City Clerk 2 MODIFIED
SMITH	JOHN FREDRICK	179 ACACIA AVE	9/17/2002 7:17:35 PM at Mt. View MODIFIED
SMITH	JOHN H	2496 COSGROVE CRES	9/17/2002 7:04:09 PM at Pleasant Valley MODIFIED
SMITH	NICHOLAS JOHN	3332 KITE WAY	9/17/2002 7:03:49 PM at Pleasant Valley

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Municipal Elections Application - the web interface

- Serving the next resident in line.....

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Address: http://devel.city.nanaimo.bc.ca/voters/list.asp

NANAIMO VOTER REGISTRATION SYSTEM Help

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Last Name: First Name: Street: ID#: SEARCH >>>

LAST NAME	FIRST NAME	ADDRESS	
CRANDALL	ELAINE ANNETTE	3220 DEPARTURE BAY RD	9/17/2002 7:23:35 PM at Dufferin
CRANDALL	MARY	3901 MERLIN ST	UNREGISTERED
CRANDALL	PHYLLIS JEAN	#409-275 CYPRESS ST	9/17/2002 7:23:39 PM at Dufferin
CRANDALL	WILLIAM	5550 HAMMOND BAY RD	UNREGISTERED
RANDALL	BARBARA ANN	5206 LOST LAKE RD	UNREGISTERED
RANDALL	BRIGITTA	5131 BROUGHTON PL	UNREGISTERED
RANDALL	DAVID	5131 BROUGHTON PL	9/17/2002 7:23:43 PM at Dufferin MODIFIED
RANDALL	FIONA MARGARET	2561 CYPRESS BOWL PL	UNREGISTERED
RANDALL	HELEN THOMSON	1239 COLLEGE DR	UNREGISTERED
RANDALL	JAMES HOWARD	2561 CYPRESS BOWL PL	UNREGISTERED
RANDALL	JANETTE MAY	#305-154 PROMENADE DR	UNREGISTERED
RANDALL	MARK	5131 BROUGHTON PL	UNREGISTERED
RANDALL	RUSSELL GEORGE	5206 LOST LAKE RD	9/17/2002 7:23:47 PM at Dufferin
RANDALL	WILLIAM DAVID	5131 BROUGHTON PL	UNREGISTERED

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Start | Internet | 5:03 PM

Municipal Elections Application - the web interface

- When the polls close, the station Polling Officer keys the information from the voting machine into the application.

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address <http://devel.city.nanaimo.bc.ca/voters/admin.asp?id=17&status=OK&peo=Pat+Parkin> Go

Favorites

NANAIMO VOTER REGISTRATION SYSTEM Help

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Administration

Mayor

KIPP, Jim	2000
KORPAN, Gary Richard	12000
O'DWYER, Lani	100
PLAVETIC, Cidalia	400
THEOS, John Anthony	900

Councillor

ANDERSON, Brian	3000
BECKER, Dirk Marcus	3500
HOOYBERG, Eileen	9000
IWASKOW, Larry	
KING, Bill	3677
KOCHER, Randi	9999
LITTLE, Jack	2345
LITTLE, John F.	800

Start | Inboxes - Microsoft... | Microsoft PowerP... | City of Nanaim... | Fw: Acknowledge... | Internet | 5:05 PM

Municipal Elections Application - the web interface

- If the Polling Officer wants to change anything, they have an option to go back and fix any errors.

City of Nanaimo - Voter Registration System - Version 1.0 - Microsoft Internet Explorer

Address: http://devel.city.nanaimo.bc.ca/voters/admin_redraw.asp?id=17&status=OK&peo=Pat+Parkin

NANAIMO VOTER REGISTRATION SYSTEM

City Clerk 2
Pat Parkin, Presiding Election Official

SEARCH VOTERS ADMIN [LOGOUT]

Administration

Please verify that the correct number of votes have been entered for each candidate.
If there are any errors, use your browser's **BACK** button to return to the previous page and enter the correct values.

Once you press submit, these numbers cannot be changed or re-entered.

Mayor

KIPP, Jim	2000
KORPAN, Gary Richard	12000
O'DWYER, Lani	100
PLAVETIC, Cidalia	400
THEOS, John Anthony	900

Councillor

ANDERSON, Brian	3000
BECKER, Dirk Marcus	3500
HOOYBERG, Eileen	9000
IWASKOW, Larry	0
KING, Bill	3677
KOCHER, Randi	9999
LITTLE, Jack	2345
LITTLE, John F.	800
LOFTHAUG, Monty	2000

Municipal Elections Application - the web interface

- When the submit button is pressed for the second time, the polling station numbers are finalized.

Administration

Mayor

KIPP, Jim	2000
KORPAN, Gary Richard	12000
O'DWYER, Lani	100
PLAVETIC, Cidalia	400
THEOS, John Anthony	900

Councillor

ANDERSON, Brian	3000
BECKER, Dirk Marcus	3500
HOYBERG, Eileen	9000
IWASKOW, Larry	0
KING, Bill	3677
KOCHER, Randi	9999
LITTLE, Jack	2345
LITTLE, John F.	800
LOFTHAUG, Monty	2000
MCCARTHY, Paulette	0
MCGUFFIE, Blake	0
MCNABB, Larry	0
RISPIN, Doug	0
ROBINSON, Mark	0

Municipal Elections Application - the web interface

- This section is security protected for the Chief Elections Officer.
- The Chief Elections Officer can see the polls close, as the stations change from Green (open) to Red (closed).

NANAIMO VOTER REGISTRATION SYSTEM

Jim Bowden
System Administrator

REPORTS [LOGOUT]

Voters by Surname
Voters by Street
Voter Count
Vote Results

	Bayview	Chase River	Christ Church	Departure Bay	Dufferin School	Frank Ney School	Georgia Avenue	McGirr School	Mt. View	NAC Pool	Pleasant Valley	Protection Island	Rock City School	St. Andrews	Uplands	Advanced	Total
MAYOR																	
KIPP, Jim	100	1548	35	1	2001	11	10	1	1056	0	1500	2000	10526	9000	30	0	27819
KORPAN, Gary Richard	200	2121	70	0	500	1	100	1	783	0	4400	2	14354	8000	25	0	30557
O'DWYER, Lani	300	2454	3	0	1000	1	40	1	102	0	500	1000	12255	1250	7	0	18913
PLAVETIC, Cidalia	0	261	0	0	9000	1	12	1	68	0	22	2000	13495	1251	25	0	26136
THEOS, John Anthony	0	2654	1	0	2000	0	151	1	12	0	333	10000	17953	0	8	0	33113
																	136538
COUNCILLOR																	
ANDERSON, Brian	0	2665	76	0	200	200	14	0	93	0	5500	202	15951	25	9	0	24935
BECKER, Dirk Marcus	0	10000	77	0	0	1	25	0	11	0	4500	3000	26485	50	18	0	44167
HOOPYBERG, Eileen	0	1212	7	0	0	1	412	0	4	0	0	9000	35779	75	45	0	46535
IWASKOW, Larry	0	1313	59	0	0	1	0	0	2105	0	44	2	15795	100	23	0	19442
KING, Bill	0	1414	0	0	220	1	13	0	981	0	666	20	3574	0	69	0	6958
KOCHER, Randi	0	1515	14	0	1230	1	255	0	442	0	5555	200	49854	125	37	0	59228
LITTLE, Jack	0	1616	0	0	900	1	444	0	64	0	0	100	35156	500	88	0	38869

Municipal Elections Application - the web interface

- This section is security protected for the Chief Elections Officer.
- As the polls close, the tallies are displayed indicating who the leading candidates are for Mayor, Councilor and School Trustee.

NANAIMO VOTER REGISTRATION SYSTEM Help

Jim Bowden
System Administrator

REPORTS [LOGOUT]

Voters by Surname

Mayor	Count	Percentage
THEOS, John Anthony	33113	24.25%
KORPAN, Gary Richard	30557	22.38%
KIPP, Jim	27819	20.37%
PLAVETIC, Cidalia	26136	19.14%
O'DWYER, Lani	18913	13.85%
Total Count	136538	100.00%

Voters by Street

[Voter Count](#)

Vote Results

Councillor	Count	Percentage
KOCHER, Randi	59228	8.99%
HOYBERG, Eileen	46535	7.06%
BECKER, Dirk Marcus	44167	6.70%
SHERRY, Loyd	41944	6.36%
LOFTHAUG, Monty	41874	6.35%
LITTLE, Jack	38869	5.90%
ROMINE, Terry	35441	5.38%
LITTLE, John F.	31778	4.82%
SALIKEN, Daniel	29389	4.46%
THEOS, Manno	28322	4.30%
MCGUFFIE, Blake	26708	4.05%
SPENCER, Margaret	25819	3.92%
MCCARTHY, Paulette	25619	3.89%
ANDERSON, Brian	24925	3.78%

Post-Mortem

- Overall very satisfied with the solution and performance.
 - Results available 30 minutes after polls closed
 - No voting irregularities
 - Equipment returned and checked in 1.5 hours after polls closed
- training...training...training
 - classroom hands-on trial run
 - detailed step-by-step documentation
- installed extra registration PC at 6 polling stations due to heavy voter turnout
 - registration time: 15-60 seconds
 - had manual backup procedure
- Minimal impact on system resources
 - CPU utilization always under 15%, with other web applications running
- Scrutineers role changes
 - Regular uploads of persons voting

SPATIAL APPLICATIONS

- Viewing legal plans and as-builts with Mapguide

Thank you.....

➤ questions?