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Hubert Denis  
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Ben Stewart, Minister  
Ministry of Labour, Citizens' Services and Open Government  
PO BOX 9594 STN PROV GOVT  
VICTORIA BC V8W 9K4

Re: Methods and models used by BC Stats to create population numbers: Disclosure considered harmful to intergovernmental relations or negotiations; request for continuance; audit of BC Stats; 32160 BCPSA BCGEU \_Warren Munroe, BC Human Rights Tribunal Case Number 4376, JAG File 392989

To Hubert Denis and Ben Stewart,

1. Please be aware, the methods and error of closure calculations provided by BC Stats to Statistics Canada used in the "The Equalization Program and the Property Tax Base: Feasibility Study Conducted by Statistics Canada", February 28, 2005, (referred to herein as the Conclusions to Finance) are incorrect.<sup>1</sup>
2. Also, the Ministry responsible for BC Stats, the Ministry of Labour, Citizens' Services and Open Government (referred to herein as the Ministry), determined "disclosure harmful to intergovernmental relations or negotiations", June 22, 2012.
3. These actions are more examples of the real matters in dispute regarding the dismissal of BC Stats' Population Analyst<sup>2</sup> (February 15, 2006) whose statistical analysis in 2002 revealed why the error of closure between BC Stats' methods and the 2001 census results was over 6%, and who advocated, since 2002, publication of the real methods used to create population estimates. Please allow me to explain.
4. Between 2002 and 2011, many users of BC Stats population numbers were referred to the 1998 Generalization Estimation System (GES)<sup>3</sup> methods no longer used by BC Stats to estimate population, including parents attending meetings regarding school closures, as well as Statistics Canada (STC) assessing statistics for Canada's equalization program for Finance Canada.
5. The following is a copy of a request to BC Stats for information regarding the methods referred to in a 2010 report recommending a school closure, August 5, 2011:

"In a report used to justify the closure of a school, readers are told to check out the BC Stats methods paper online. The BC Stats website refers to the methods paper "Generalized Estimation System (GES) Small Area Population Estimation Methodology" from 1998 wherein the indicators used are said to be:"

"1. The number of residential electrical (hydro) connections as of July 1.

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<sup>1</sup> The feasibility study officially started on May 17, 2004 was completed on February 28, 2005.

<sup>2</sup> I was the Population Analyst (referred to herein as the Population Analyst) for BC Stats from January 14, 2002 to February 15, 2006.

<sup>3</sup> The Generalization Estimation System (GES) Small Area Population Estimation Method and Error Evaluation papers were published in 1998 and 2011, herein referred to as GES 1998 and GES 2011

2. The number of Old Age Security (OAS) recipients aged 65 and over as of July" August 5, 2011, [www.wminformatics.com\WP\BCStatsEmail\\_Question.pdf](http://www.wminformatics.com\WP\BCStatsEmail_Question.pdf)

6. In reply, the new Executive Director of BC Stats<sup>4</sup> wrote (August 8, 2011):

An updated (long overdue) GES methodology paper is scheduled for release at the end of August. (see [www.wminformatics.com\WP\BCStatsEmail\\_Reply.pdf](http://www.wminformatics.com\WP\BCStatsEmail_Reply.pdf))

7. To be clear, the GES was not revised to show the changes between 1998 and 2011. Some of the changes are mentioned in GES 2011:

"After extensive analyses it was later determined that telephone line data (Telus) was a suitable indicator and was subsequently added to the model in 2000. With the availability of the 2001 census and further model development it was indicated that the OAS data were no longer statistically significant and were dropped from the model in 2003." P. 8 GENERALIZATION ESTIMATION SYSTEM (GES) Small Area Population Estimation, Method and Error Evaluation, August 2011, (GES 2011)

8. After the publication of GES 2011, the Population Analyst replied September 22, 2011:

" ... some important changes over the last 10 years in particular ... are not mentioned in the recently posted Generalized Estimation System (GES) methods paper, some dates incorrect, and some statements are incorrect as well.

At the monthly Population Section meetings, I regularly asked that the GES methods paper be revised and made public; thereby, showing the inclusion of the telephone data, as well as the way the regression was run for two groupings of municipalities etc.

These, and other issues regarding the real methods, and the statements found in the GES August 2011 paper (page 8) are described in more detail in an article I have written and would like to share with you. (see [www.wminformatics.com\WManalytics\Articles\110922\ACBCStats2h.pdf](http://www.wminformatics.com\WManalytics\Articles\110922\ACBCStats2h.pdf))<sup>5</sup>

9. BC Stats Executive Director did not reply nor request the aforementioned article including proposed easily implementable solutions. The Population Analyst also wrote to the Minister on November 2, 2011,

"Between 1998 and 2011 there were many changes to the methods that were not open to peer review nor made public. Methods should be tested and results should be made available for peer review as is done with Statistics Canada. Methods should be publicized when changed. Analysts should be allowed to provide creative solutions and advocate openness without reprisals, including dismissal." ([www.wminformatics.com\WP\MinL&CS9b111102.pdf](http://www.wminformatics.com\WP\MinL&CS9b111102.pdf))

10. The Ministry's Assistant Deputy Minister (ADM) replied November 22, 2011:

"I understand that BC Stats brought to your attention in previous correspondence, that assertions you provided regarding (i) arbitrary manipulation of the estimates process, and (ii) the unreliability of the estimates information provided to clients and citizens, are incorrect."<sup>6</sup>

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<sup>4</sup> Angelo Cocco replaced Don McRae who was the Executive Director for BC Stats from 2003 to 2010.

<sup>5</sup> Examples include the changes made in 2002 to reduce error of closure against the 2001 census from over 6% (splitting the municipalities into 2 groups, compounding growth for 1 group at the expense of the other, all Fortis areas in 1 group, etc.) The use of telephone along with electrical landline data was very problematic due to colinearity, as well as the increasing use of cell phones in urban areas; therefore, it was not used for an increasing number of areas. Compound growth was removed in 2004. My requests to see the writeup of the testing of these indicators were denied and met with statements like " DS tested the use of Telus data, and you are no DS." I continue to request publication of the methods and error calculations for these indicators.

<sup>6</sup> BC Stats correspondence, August 8, 2012, did point to a 2009 "Business Indicators" paper, but did not bring to my attention that assertions I provided are incorrect. Regarding "arbitrary manipulation": witnesses include the former Population Section Manager, Ruth McDougall, who retired in 2003, and the Population Analyst, dismissed

11. The Ministry's ADM quotes "a feasibility study" by Statistics Canada as evidence of confirmation of the quality, as well as support for the assertion of the integrity and objectivity, of BC Stats' procedures and methods:

"The integrity and objectivity of the population estimation procedures and methods are guarded by BC Stats, and the quality of the resulting estimates is unparalleled. Statistics Canada, Canada's national statistics agency, holds in high regard the methodology and estimates produced by BC Stats: In a 2005 feasibility study prepared by Statistics Canada (STC) for Finance Canada, the agency concluded that:

"...population estimates produced by three provincial/territorial statistical agencies (Quebec, British Columbia, Northwest Territories) were all found to be of better quality when compared with those based on any of the three STC methods.""<sup>7</sup> (The study title was not provided)

12. The Population Analyst replied, in a letter to the Minister, January 26, 2012, explaining that STC did not test the use of telephone along with electrical landlines, and requested the bibliography of the "feasibility study" from which the quote above was copied:

"I have asked Statistics Canada population methodology experts, the Demography Division, whether Statistics Canada reviewed BC Stats' use of telephone, along with electrical, landline hookups to estimate population change to the sub-provincial level. In response to my questions to Statistics Canada Demography Division:

"When was Statistics Canada first informed by BC Stats of the use of these two indicators to estimate population change?

Did Statistics Canada provide feedback to BC Stats about problems with the use of these two indicators?"

... the Demography Division of Statistics Canada replied:

"Demography Division does not consult with BC Stats regarding the telephone landlines.

The data is forwarded to us from BC Stats and used to produce our estimates."

Statistics Canada Demography Division did not test BC Stats use of telephone landlines.

Please provide the bibliography for the feasibility study referred to above."  
Letter to the Minister, January 26, 2012  
[www.wminfomatics.com/WManalytics/Articles/120127/MinL&CS11e.pdf](http://www.wminfomatics.com/WManalytics/Articles/120127/MinL&CS11e.pdf)

13. The Minister did not provide the reference for the quote used to assert the integrity of BC Stats, nor reply to 12 follow-up letters (February to May 2012) prior to the Population Analyst's request through the Freedom of Information office (May 17, 2012):

"I wrote to the Minister asking for the title and a copy of the feasibility study to no avail; therefore, could you please ask the Minister (Ministry) to provide the full reference to this study."  
[www.wminfomatics.com/WP/Articles/120517/FOIRequest2a.pdf](http://www.wminfomatics.com/WP/Articles/120517/FOIRequest2a.pdf)

14. ... but the Ministry will not provide the reference claiming (June 22, 2012):

"Disclosure harmful to intergovernmental relations or negotiations"  
[www.wminfomatics.com/WP/Articles/120622/FOI\\_STC\\_Finance.pdf](http://www.wminfomatics.com/WP/Articles/120622/FOI_STC_Finance.pdf)

15. To be clear, the Ministry - the Ministry of Labour, Citizens' Services and Open Government - determined that disclosure of the source of the quotations used to assert the integrity of BC Stats, namely

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in 2006; the unreliability of the population estimates information will again be proved herein to be "correct". See the November 22, 2011 letter at [www.wminfomatics.com/WManalytics/Articles/120127/PopEstWhat.html](http://www.wminfomatics.com/WManalytics/Articles/120127/PopEstWhat.html)

<sup>7</sup> Ibid., page 1.

the Conclusions to Finance by STC, would be harmful to intergovernmental relations or negotiations.

16. As mentioned, BC Stats did not use the methods, namely the 1998 Generalized Estimation System (GES), referred to in the 2005 Conclusions to Finance:

"BC Stats produces its CSD-level population estimates using regression methods with specific symptomatic indicators (number of residential electrical connections and Old Age Security (OAS) recipients). For more details on the methodology, see Generalized Estimation System (GES), Small Area Population Estimation Methodology published by BC Stats in 1998 and available on their website." P. 63<sup>8</sup>

17. The differences between the real methods used, and the methods provided, by BC Stats are an example of the real matters in dispute between the Ministry and the Population Analyst who was dismissed for insubordination by the Ministry.

18. Please be aware, after forwarding a grievance to the Deputy Minister, January 30, 2006, wherein issues of non-statistical and substandard methods and models were described and solutions suggested, the Population Analyst was ordered by the manager (Mr. O'Neil), with the shop steward (Mr. Paxman) present, to close the office window, leave the computer on, gather his belongings, turn in his security pass and leave the BC Stats Building, February 15, 2006, before a ruling was made.<sup>9</sup>

19. The Ministry continues to impose a block to stop proceedings into the real matters in dispute, namely the real methods used by BC Stats to create population numbers.

20. To summarize:

- a) information disseminated by BC Stats and the Ministry has been shown to be incorrect.
- b) BC Stats and the Ministry did not provide correct methods and error calculations to users of BC Stats' population numbers between 2002 and 2011, including people considering school openings and closures.
- c) BC Stats did not provide Statistics Canada with correct methods and error calculations between September 24, 2004 to February 28, 2005 to be used in the "The Equalization Program and the Property Tax Base: Feasibility Study Conducted by Statistics Canada" (Conclusions to Finance).
- d) The Ministry considers disclosure of source of the quotes used to assert integrity to be harmful to intergovernmental relations and negotiations, namely the disclosure of the Conclusions to Finance, June 22, 2012.<sup>10</sup>

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<sup>8</sup> From the Conclusions to Finance "On September 23, 2004, preliminary findings for this component of the feasibility study were presented at the meeting of STC's Federal-Provincial-Territorial Committee on Demography. Some participants questioned the quality of the CSD-level estimates when compared with the official subprovincial estimates (CMA and CD levels). Moreover, the three jurisdictions that are producing CSD-level estimates (British Columbia, Quebec and the Northwest Territories) asked that their results, based on sources of information specific to their jurisdiction and on more complex methodologies, be considered."

Please be aware, the Chief Demographer/Shop Steward, Dave O'Neil, took the position of Population Section manager in 2003. Mr. O'Neil attended the September 23, 2004 meeting with STC as the BC representative. The Population Analyst specifically points to October 2004 as when antagonism / discrimination increased..

<sup>9</sup> The grievance requesting mediation included descriptions of data mismanagement, incorrectly labeled tables, municipalities coded incorrectly, some missing, some included twice with wrong codes etc.

The details of the dismissal, including the accusation of a mental disability and the requirement to accept counseling and an assessment are summarized (again) in a letter to the Attorney General (July 20, 2012) \WP\Articles\120704\MinJust41.pdf. The Attorney General has forwarded the request for proceedings to continue to the Dispute Resolution Office of the Ministry of Justice.

<sup>10</sup> www.wminfomatics.com\WP\Articles\120622\FOI\_STC\_Finance.pdf

e) BC Stats and the Ministry considered disclosure of the real methods used to create population numbers, as described by the Population Analyst during a proceeding protected by the Labour Code, to be harmful to intragovernmental and/or intergovernmental relations and negotiations; therefore, BC Stats and the Ministry subjected the Population Analyst to (i) intimidation and coercion (ii) discrimination (iii) dismissal (iv) refusal of continued employment, and (v) imposed a block to proceedings in an effort to stop a disclosure.

f) Integrity can be characterized as “both sides demonstrate willingness to share evidence.”<sup>11</sup> Since the Ministry, and BC Stats have demonstrated a lack of willingness to share evidence, the Ministry and BC Stats can reasonably be seen to demonstrate a lack integrity.

21. The BC Minister of Justice has confirmed, May 23, 2012, (WP\Articles\120528\MinJustReply3.pdf)

“This is a matter that falls within the responsibilities of the Minister of Labour, Citizens’ Services and Open Government.”

22. Given that the Minister has the right and responsibility to evaluate...

“...the manner in which the legislation [Labour Code] is functioning and to identify problems that may have arisen under its provisions” and to “make recommendations on any specific matter” BC Labour Code, Section 3 (1), (a) (c)

23. ... will the Minister please:

a) clarify whether this case has been addressed properly,

24. Also, given that the Minister has the authority to ...

“Make appointments of mediators, industrial inquiry commissions, and/or special officers to assist parties in resolving their labour relations disputes.” Guide to BC Labour Code, www.wminfomatics.com\WP\MinL&CS10b.pdf

25. ... will the Minister please

a) make appointments to assist in resolving the labour relations disputes

b) allow a fair hearing (long overdue) to address the real matters in dispute (some of which are described herein) to proceed

c) and if not, will you please provide clarification on how to proceed,

26. Given that the Ministry claims “to provide top quality services”<sup>12</sup> and that BC Stats provided incorrect information to users of BC Stats’ population numbers

a) may the users of BC Stats information receive

i) corrections

ii) an apology

b) may changes to BC Stats methods be

i) open to peer review prior to implementation (as is done by Statistics Canada’s Demography Division)

ii) published prior to dissemination of numbers generated using the changed methods

iii) open to review, verification, and reproducible

27. Until there is a fair hearing into the real matters in dispute, namely the methods used by BC Stats to create population numbers, may the Population Analyst

a) be considered innocent until proven guilty<sup>13</sup>

i) removing “just cause” and “insubordination” from records

<sup>11</sup> Wikipedia, <http://en.wikipedia.org/wiki/Integrity>

<sup>12</sup> Ministry’s 2012/13 - 2014/15 SERVICE PLAN, [www.bcbudget.gov.bc.ca/2012/sp/pdf/ministry/lctz.pdf](http://www.bcbudget.gov.bc.ca/2012/sp/pdf/ministry/lctz.pdf)

<sup>13</sup> As per the Canadian Charter of Rights and Freedoms, d) to be presumed innocent until proven guilty according to law in a fair and public hearing by an independent and impartial tribunal

b) receive an apology

i) with recognition of the role of the Ministry in creating the work place environment experienced by the Population Analyst

28. Dear Minister, as you are aware, a purpose of Public Service Act, is to

"promote harmonious relations of the government and employees and bargaining agents that represent employees in the public service.

29. ... and we share

"a desire to improve the quality of the Public Service of British Columbia".<sup>14</sup>

30. As you can appreciate, this matter should be addressed immediately.

Yours truly,



William Warren Munroe

cc: Angelo.Cocco, BC Stats, Executive Director; Shirley Bond, BC Minister of Justice; John Doyle, BC Auditor General; Ron Cantelon, MLA; Margaret MacDiarmid, former Minister; Vincent Dale, Statistics Canada; Johanne Denis, Statistics Canada

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<sup>14</sup> Master Agreement 13, Article 1.1(b) regarding Quality