

**July 2004 R-NRUF Report  
to the  
Canadian Steering Committee on Numbering (CSCN)**

**September 2004**

Issued by:  
Canadian Numbering Administrator  
SAIC Canada

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## 1. Purpose of R-NRUF

The purpose of the General Numbering Resource Utilization Forecast (G-NRUF) is to provide an annual forecast to aid in projecting Numbering Plan Area (NPA) and North American Numbering Plan (NANP) exhaust. The G-NRUF requires current and prospective Code Holders to submit actual and forecasted annual data regarding their current and prospective future use of Central Office (CO) Codes to the Canadian Numbering Administrator (CNA) on an annual basis.

In accordance with the Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline (the Guideline), approved by the Canadian Radio-television and Telecommunications Commission in Telecom Decision CRTC 2004-45, dated 12 July 2004:

When an NPA is entering the timeframe for NPA Relief Planning (e.g., about 6 years before the Projected Exhaust Date), an initial R-NRUF is conducted to obtain actual and forecast annual data at the Exchange Area level of detail. The purpose of the initial R-NRUF is to validate the Projected Exhaust Date for an exhausting NPA, and to provide the CNA with detailed information to be used to identify a potential Relief Date and to prepare the Initial Planning Document as outlined in the Canadian NPA Relief Planning Guidelines.

On 15 April 2004, the CNA released the aggregate results of the 2004 G-NRUF for all geographic Canadian NPAs. The G-NRUF results indicate that NPAs 250 and 403 will exhaust in September 2009 and NPA 780 will exhaust in November 2011.

In a letter dated 21 April 2004, the Canadian Steering Committee on Numbering (CSCN) requested the CNA to conduct an R-NRUF for NPA 780 coincident with the NPA 403 R-NRUF required by the Canadian NPA Relief Planning Guidelines. The CSCN's request was based on the premise that simultaneous relief planning for both NPA 403 and NPA 780 would provide a coordinated approach for relief planning in Alberta.

On 30 April 2004, the CNA requested that all current and prospective CO Code Holders in NPAs 250, 403 and 780 develop a six year CO Code forecast by Exchange Area for all the exchanges located in NPAs 250, 403 and 780, to enable to CNA to examine the forecast closely and prepare the Initial Planning Documents (IPD) for those NPAs.

The CNA has prepared this report in accordance with the Guideline approved by the CRTC on 12 July 2004 in Telecom Decision CRTC 2004-45.

Included as an attachment to this report is the CSCN letter dated 25 November 2003 (see section 6).

## 2. High Level Summary

The results from the July 2004 R-NRUF are slightly different than the 2004 G-NRUF results due to two major factors:

- 1) The format used for the 2004 R-NRUF is different from that used in the 2004 G-NRUF (i.e., at Exchange Area level of detail).
- 2) Various Telecommunications Service Providers (TSPs) have submitted a set of data to the CNA that is different from the 2004 G-NRUF data. The CNA has verified the input from various TSPs and the variance from previous input can be rationalized.

The impacts of each of the above factors will vary from NPA to NPA.

Specific changes are listed below:

- NPA 250 Projected Exhaust Date is now forecast for June 2009, which moves the Exhaust Date out by one (1) month from the 2004 G-NRUF result of May 2009.
- NPA 403 Projected Exhaust Date is now forecast for October 2009, which moves the Exhaust Date out by one (1) month from the 2004 G-NRUF result of September 2009.
- NPA 780 Projected Exhaust Date is now forecast for January 2012, which moves the Exhaust Date out by two (2) months from the 2004 G-NRUF result of November 2011.

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NPA 250								
NPA 250	Actual		Forecast					
	Total quantity of existing CO Codes assigned and reserved as of		Total quantity of existing and future CO Codes forecast to be assigned and reserved as of					
	01/01/ 2004	01/06/ 2004	01/01/ 2005	01/01/ 2006	01/01/ 2007	01/01/ 2008	01/01/ 2009	01/01/ 2010
<b>Total</b>	623	634	657	688	720	806	842	870
<b>Exhaust</b>							<b>June 2009</b>	

NRUF data, including the most recent results is summarized in the following chart.

NPA 250 Summary of Projected Exhaust Dates			
NPA	Type of C-NRUF	Date of Publication	Projected Exhaust Date
250	2004 G - NRUF	14 April 2004	May 2009
250	2004 R - NRUF	1 September 2004	June 2009

NPA 403								
NPA 403	Actual		Forecast					
	Total quantity of existing CO codes assigned & reserved as of		Total quantity of existing and future CO Codes forecast to be assigned and reserved as of					
	01/ 01/ 2004	01/ 06/ 2004	01/ 01/ 2005	01/ 01/ 2006	01/ 01/ 2007	01/ 01/ 2008	01/ 01/ 2009	01/ 01/ 2010
<b>Total</b>	560	575	610	651	690	733	772	868
<b>Exhaust</b>							<b>October 2009</b>	

NRUF data, including the most recent results is summarized in the following chart.

NPA 403 Summary of Projected Exhaust Dates			
NPA	Type of C-NRUF	Date of Publication	Projected Exhaust Date
403	2004 G - NRUF	14 April 2004	September 2009
403	2004 R - NRUF	1 September 2004	October 2009

NPA 780								
	Actual		Forecast					
NPA 780	Total quantity of existing CO Codes assigned and reserved as of		Total quantity of existing and future CO Codes forecast to be assigned and reserved as of					
	01/01/2004	01/06/2004	01/01/2005	01/01/2006	01/01/2007	01/01/2008	01/01/2009	01/01/2010
Total	523	534	565	603	645	684	707	729
Exhaust							January 2012	

NRUF data, including the most recent results is summarized in the following chart.

NPA 780 Summary of Projected Exhaust Dates			
NPA	Type of C-NRUF	Date of Publication	Projected Exhaust Date
780	2004 G - NRUF	14 April 2004	November 2011
780	2004 R - NRUF	1 September 2004	January 2012

### 3. Schedule of Future NRUF Activities in the Following Year

Due Date	NRUF Type	NRUF Format	NPA(s)
February 7	R-NRUF	Format 2 – proposed by CNA	250
February 7	R-NRUF	Format 2 – proposed by CNA	403
February 7	R-NRUF	Format 2 – proposed by CNA	780

### 4. R-NRUF Assumptions

The assumptions used for the 2004 mid year R-NRUF are the same assumptions utilized for the 2004 G-NRUF, as detailed in the Final Report. See the attached CSCN letter dated 25 November 2003.

## **5. Summary of Challenges Encountered During the R-NRUF Process**

Some TSPs continue to remain unaware of the significance and schedule for completing R-NRUFs. The CNA started contacting companies during the week of June 21<sup>st</sup>. Four companies submitted R-NRUF data after July 1, 2004.

### **Conclusion**

In accordance with Section 4, Item 6 f) and h) of the Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline, the CNA has conducted an assessment, at a total aggregate level, to determine whether the July 2004 R-NRUF results are reasonable and the Projected Exhaust Dates for NPAs 250, 403 and 780 are realistic based on the data submitted by TSPs.

Accordingly, based on this assessment, in the CNA's opinion, the July 2004 R-NRUF results for NPAs 250, 403 and 780 appear reasonable and the Projected Exhaust Dates for the NPAs are generally realistic in relation to the 2004 G-NRUF.

# CSCN

## Canadian Steering Committee on Numbering

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25 November 2003

TRANSMITTED ELECTRONICALLY

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### **Subject: CSCN Direction to CNA re: 2004 G-NRUF Methodology and Assumptions**

On 25 November 2003, the Canadian Steering Committee on Numbering (CSCN) discussed and agreed to the direction to the CNA with respect to the 2004 G-NRUF Methodology and Assumptions.

The attached document contains the direction titled "CSCN Direction to CNA re: 2004 G-NRUF Methodology and Assumptions 25 November 2003".

Please contact me at 613-781-4366 if you have any questions or want to discuss this matter further.

Sincerely,

***Original signed by***

Doug Birdwise  
CSCN Chair

c.c.: Brenda Stevens, CRTC  
CSCN

Attachment

CSCN Direction to CNA re: 2004 G-NRUF Methodology and Assumptions  
25 November 2003

**The CSCN submits the following methodology and assumptions to the CNA for the 2004 G-NRUF.**

1. If there is a discrepancy between the CNA records and those submitted by the CO Code Holder with respect to the quantities of actual CO Codes assigned and reserved as of January 1, 2004, the CNA will attempt to rectify the discrepancy. However, if the discrepancy cannot be resolved, the quantity of CO Codes appearing in the CNA's records will be used. The CO Code Holder and the CNA should attempt to resolve the discrepancy before the next NRUF is conducted.

This problem has generally occurred when a CO Code:

- is still "being recovered" (i.e., a Part 3 Form has not been issued but the CO Code Holder believes the CNA has recovered the CO Code);
  - is a Plant Test code (i.e., legacy, NPA Relief, industry plant test codes and Appendix D temporary plant test codes); or
  - has been assigned and a Part 4 Form has not been received. In the past some CO Code Holders have not counted assigned codes.
2. On 31 March 2003, the CSCN received a copy of a letter dated 26 March 2003 from CRTC staff addressed to the CNA regarding the 2003 G-NRUF Methodology and Assumptions. In this letter, CRTC staff indicated that they are concerned about the lack of allowance for unforecasted demand for new unknown entrants, new technologies or other unforecasted demand. To address this concern, CRTC staff requested the CNA to include an allowance for CO Code reservations for new unknown entrants, new technologies and other forecasted demand in area code exhaust projections. The CRTC staff letter contained an attachment that provided the quantity of codes that CRTC staff requested be added to the 2003 data as assigned CO Codes and carried forward throughout the 20 year study period with no growth. For the purposes of conducting the 2004 G-NRUF, the CSCN recommends that the CNA utilize the same values as used for the 2003 G-NRUF, per the following table.

<b>CRTC Staff Allowance for Unforecasted Demand</b>	
<b>NPA</b>	<b>Quantity of CO Codes</b>
204	3
250	3
306	3
403	4
416/647	6
418	3
450	5
506	3
514	6
519	10
604	2

<b>CRTC Staff Allowance for Unforecasted Demand</b>	
<b>NPA</b>	<b>Quantity of CO Codes</b>
613	7
705	5
709	2
778	2
780	4
807	2
819	2
867	2
902	3
905/289	15

3. Where the CRTC has ordered or an RPC has recommended that quantities of CO Codes be set aside for a specified period of time (e.g., CO Codes set aside for initial CO Code Applicants for a 2-year period after implementation of an Overlay), the CNA shall identify and add such quantities to the actual quantity of CO Codes for January 1 of the current year and carry them forward in the forecasts for the specified period of time at zero growth. After the specified period of time expires, the CNA shall place the set aside CO Codes back into the assignment pool. The CNA should exclude such set aside CO Codes from the calculation of annual growth rates.
4. Future projections beyond the six year forecast period will be calculated using linear extrapolation and the average annual growth in quantity of CO Codes for the six year forecast period, excluding any extraordinary factors such as returns or reclamations of large quantities of CO Codes and Codes identified in item 3 above that would create an unreasonable projected future growth rate. Where the CNA believes, based upon its analysis of past growth and NRUF forecast data for an NPA, that the six year forecast average annual growth may not be the best methodology for that NPA for projecting growth beyond the six year forecast period, the CNA shall advise the CSCN as to the alternate method it proposes to use. The six year average growth of CO Codes per year shall be calculated as follows and rounded to one decimal point at a maximum (e.g., 5.14 rounds down to 5.1; 5.15 rounds up to 5.2):

$$[(\text{Forecasted Quantity of CO Codes in year six}) - (\text{Actual Quantity in January 1 of Current Year})]/6$$

5. Stranded Codes

- a) The CNA advised the CSCN that there are 37 Stranded Codes with ported telephone numbers in 12 different NPAs, with a breakdown as follows:

<b>NPA</b>	<b>Quantity of Stranded CO Codes with Ported TNs</b>
403	1
416	2

<b>NPA</b>	<b>Quantity of Stranded CO Codes with Ported TNs</b>
418	1
450	3
514	2
519	4
604	2
613	4
705	1
780	1
819	1
905	15

- b) For the purposes of the 2004 G-NRUF, the CNA shall assume that all of the CO Codes that are stranded at the beginning of 2004 will be transferred to other TSPs prior to January 1, 2005.
6. The CNA shall provide for each NPA the total quantity of actual and forecasted CO Codes and a breakdown of the quantity of "Unassignable CO Codes" as per section 3.7 of the Canadian Central Office Code (NXX) Assignment Guidelines when the draft aggregate results are released, and in the subsequent 2004 G-NRUF Report to the CSCN after the aggregate results are finalized.
7. The CNA shall provide two forecasts each for NPAs 613 and 819, one with Protected CO Codes required out to the Projected Exhaust Date and one without Protected CO Codes out to January 1, 2024. When submitting the 2004 G-NRUF results to NANPA, the CNA shall include the results for NPAs 819 and 613 without Protected CO Codes.
8. The CNA shall establish the quantity of "Unassignable CO Codes" in accordance with the directions contained in section 3.7 of the Canadian Central Office Code (NXX) Assignment Guidelines approved by the Commission on December 12, 2002. The CNA shall generally not include current neighbouring U.S. NPAs as "Unassignable CO Codes" in Canadian NPAs; however, the seven CO Codes shown in the table below shall be identified as "Unassignable CO Codes".

<b>NPA</b>	<b>NXX</b>	<b>Existing Status (2003-07-04)</b>	<b>Proposed Status</b>	<b>Notes</b>
250	907	Available	Available – Protected: Stewart	Protection required because Stewart exchange includes Hyder AK
306	701	Available	Available – Protected: North Portal	7D local dialling to Portal ND
403	406	Available	Available – Protected: Coutts	7D local dialling to Sweet Grass MT

NPA	NXX	Existing Status (2003-07-04)	Proposed Status	Notes
506	207	Available	<i>Option 1:</i> Available – Protected: Campobello, St Stephen, Clair, Edmunston, St Léonard, McAdam, Blacks Harbour, Deer Island, Grand Manan, St Andrews, St George, St Stephen, Baker Brook, Edmunston, St Basile, Harvey Station, Keswick, Kedgwick, St-Quentin, Ste-Anne-de-Madawaska <i>Option 2:</i> Not available existing US NPA	Due to number of exchanges affected by 7D local dialling to ME, ILEC may prefer option 2, i.e. unassignable,
613	518	Available	Available - Protected St-Régis QC, Cornwall ON	7D local dialling St-Régis-Fort Covington NY
807	218	Available	Available – Protected: Barwick, Devlin, Emo, Fort Frances, Morson, Rainy River, Stratton,	7D local dialling Rainy River to Baudette MN
819	207	Available	Available – Protected: Woburn, Lac-Mégantic	7D local dialling Woburn to Coburn Gore, ME
819	802	Available	Available - Protected: Rock Island, Ayer's Cliff, North Hatley, Sherbrooke	7D local dialling Rock Island to Derby Line, VT

9. The “CNA Codes” and the “Stranded Codes” shall not be used in the calculation of the average annual future growth used for the 7 to 20 year projection.
10. The CNA shall not include any demand for CO Codes for proposed CLECs that did not submit NRUF forecasts.
11. When extending the forecast from 7 to 20 years, the CNA should use the average annual growth rate for years one to six, calculated to one decimal point, to develop the 1 January quantity of CO Codes for each year (e.g., in year seven  $100+5.4=105.4$  rounds up to 106; in year eight  $105.4+5.4=110.8$  rounds up to 111).
12. 10-Digit dialing would likely be required in future NPA Relief and the CNA should assume that the overlay Relief Method will be used for the purpose of the G-NRUF.
13. The CNA should follow the directions contained in section 3.7 of the Canadian Central Office Code (NXX) Assignment Guidelines with respect to NXXs available for assignment when projecting NPA Exhaust. The CNA should retain all unassigned CO Codes equivalent to the 37 Projected Future Canadian Geographic NPAs in "Not Available" status until such time as the Commission approves the CSCN's recommended changes to section 3.7 of the Guidelines.
14. With respect to NPAs that are due to exhaust approximately in the 2024 timeframe, the CNA should exercise its best judgement in finalizing the forecast for those NPAs.