

**Report for January 2010 G-NRUF – Canadian NPAs  
to the  
Canadian Steering Committee on Numbering (CSCN)**

**Published: May 26, 2010**

Issued by:  
Canadian Numbering Administrator  
SAIC Canada

Suresh Khare  
1516 – 60 Queen St.  
Ottawa, ON

## 1. Purpose of G-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 process 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.

The CNA has prepared this report in accordance with the Canadian Numbering Resource Utilization Forecast Guideline (C-NRUF) (the Guideline) approved by the Canadian Radio-television and Telecommunications Commission (CRTC) on 12 March 2010 in Telecom Decision CRTC 2010-152.

Included as attachments to this report are:

- 2010 G-NRUF Aggregate Results
- Quantity of CNA CO Codes as of 1 January 2010
- Historical G-NRUF Graphs for Canadian NPAs
- CSCN Letter dated 20 October 2009 (see section 7)

## 2. High Level Summary

The results from the 2010 G-NRUF are difficult to compare with the 2009 G-NRUF results due to four major factors:

- 1) The appearance of some new Telecommunications Service Providers (TSPs) in various Canadian NPAs that had not previously submitted G-NRUF data to the CNA.
- 2) Various TSPs have submitted to the CNA a set of data that is different from the 2009 data. The CNA has verified the input from various TSPs and the variance from previous years' input can be rationalized.
- 3) Telecom Decision CRTC 2004-46, "Trunking arrangements for the interchange of traffic and the point of interconnection between local exchange carriers", which allows for the consolidation of Exchange Areas to form larger Local Interconnection Regions (LIRs).
- 4) Telecom Decision CRTC 2006-28, "Regulatory issues related to the implementation of wireless number portability – Follow-up to Public Notice 2006-3", which requires that Wireless Service Providers (WSPs) obtain CO Codes from which LRNs can be assigned.

The impact of each of the above factors varies from NPA to NPA.

Specific significant changes are listed below:

- NPA 204 Projected Exhaust Date is now forecast for May 2013, which moves the Projected Exhaust Date in by three (3) years and five (5) month from the July 2009

J-NRUF result of October 2016, primarily as a result of increased forecast demand in the area.

- NPAs 250/604/778 Projected Exhaust Date is now forecast for July 2016, which moves the Projected Exhaust Date in by three (3) years and five (5) month from the January 2009 G-NRUF result of December 2019, primarily as a result of increased forecast demand in the area.
- NPAs 289/905 Projected Exhaust Date is now forecast for April 2014, which moves the Projected Exhaust Date in by two (2) years and seven (7) months from the June 2009 R-NRUF result of October 2016, primarily as a result of increased forecast demand in the area.
- NPA 306 Projected Exhaust Date is now forecast for April 2018, which moves the Projected Exhaust Date in by four (4) years and six (6) months from the January 2009 G-NRUF result of October 2022, primarily as a result of increased forecast demand in the area
- NPA 613 Projected Exhaust Date is now forecast for January 2011, which moves the Projected Exhaust Date in by nine (9) months from the July 2009 G-NRUF result of October 2011, primarily as a result of increased forecast demand in the area.
- NPAs 403/587/780 Projected Exhaust Date is now forecast for January 2020, which moves the Projected Exhaust Date in by two (2) years and seven (7) months from the January 2009 G-NRUF result of August 2022, primarily as a result of increased forecast demand in the area
- NPAs 416/647 Projected Exhaust Date is now forecast for July 2015, which moves the Projected Exhaust Date in by six (6) years and three (3) months from the January 2009 G-NRUF result of October 2021, primarily as a result of change of demand in the area.
- NPA 705 Projected Exhaust Date is still forecast for October 2011, which is the same as the October 2009 J-NRUF result.
- NPA 819 Projected Exhaust Date is now forecast for March 2014, which moves the Projected Exhaust Date in by one (1) year from the June 2009 R-NRUF result of March 2015, primarily as a result of change of demand in the area.
- NPA 902 Projected Exhaust Date is now forecast for February 2018, which moves the Projected Exhaust Date in by one (1) year and two (2) months from the January 2009 G-NRUF result of April 2019, primarily as a result of change of demand in the area.

**NPAs in or entering Relief Planning**

<b>NPA</b>	<b>Most recent 2009 (G, R, J) -NRUF View</b>	<b>2010 (G, R, J) -NRUF View</b>	<b>Remarks</b>
204	October 2016	May 2013	In Relief Planning / RPC exists
705	October 2011	October 2011	Overlay NPA 249 on March 19, 2011 iaw Telecom Decision CRTC 2009-622
250 / 604 / 778	December 2019	July 2016	Entering relief planning window in July
289 / 905	October 2016	April 2014	Overlay NPA 365 on March 25, 2013 iaw Telecom Decision CRTC 2010-213
416 / 647	October 2021	July 2015	In relief planning window
450 / 579	October 2010	November 2010	Overlay NPA 579 on August 21, 2010 iaw Telecom Decision CRTC 2009-694.
613	October 2011	July 2011	Overlay NPA 343 on May 17, 2010 iaw Telecom Decision CRTC 2008-89
819	June 2017	February 2015	Overlay NPA 873 on June 1, 2013 iaw Telecom Decision CRTC 2010-94-1

**3. Current and Past G-NRUF Projected Exhaust Dates**

<b>NPA</b>	<b>LOCATION</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
204	Manitoba	Jun. 2020	Nov. 2016	Dec. 2021	Feb.2011	May.2013
226 / 519	S. Ontario	Jan. 2007	Nov. 2021	Apr. 2019	Apr. 2019	Jun. 2021
249 / 705	N. E. Ontario	Aug. 2023	Dec. 2013	Sep. 2014	Oct. 2012	Oct. 2011 Dec. 2027
250	BC (Island & Interior)	Apr. 2010	Jan. 2008	*	*	*
250 / 604 / 778	BC			Nov. 2018	Dec. 2019	Jul. 2016 Jul. 2025
289 / 905	Toronto Fringe	Nov. 2021	Mar. 2017	Aug. 2014	May 2015 Sep. 2028	Apr. 2014 Sep 2024
306	Saskatchewan	Jun. 2028	Dec. 2020	Oct. 2023	Oct. 2022	Apr.-2018
403	S. Alberta	Mar. 2011	Mar. 2009	Jan. 2009	**	**
403 / 587 / 780	Alberta			Nov. 2024	Aug. 2022	Jan. 2020
416 / 647	Toronto	Jun. 2016	Jun. 2018	Jan. 2017	Oct. 2021	Jul.2015 Jul.2024
418 / 581	N. E. Quebec	Dec. 2013	Oct. 2008	Nov. 2008	Beyond 2031	Beyond 2032

<b>NPA</b>	<b>LOCATION</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
438 / 514	Montreal	Feb. 2009	Beyond 2030	Beyond 2030	Beyond 2031	Sep. 2029
450 / 579	Montreal Fringe	Oct. 2019	Sep. 2013	Oct. 2014	Nov. 2010	Dec. 2010 Beyond 2032
506	New Brunswick	Aug. 2019	Nov. 2021	Jan. 2027	Beyond 2031	Beyond 2032
604	Vancouver area	> 20 years	Beyond 2030	*	*	*
343 / 613	Ottawa area	Apr. 2014	Dec. 2013	Aug. 2011	Jul. 2011	Jan. 2011 Feb. 2029
709	Nfld & Labrador	Dec. 2030	Feb. 2028	Feb. 2028	Sep. 2030	Beyond 2032
778	Vancouver EAS	Jun. 2023	May 2025	*	*	*
780	N. Alberta	Feb. 2013	Oct. 2009	Mar. 2009	**	**
807	N.W. Ontario	> 20 years	Beyond 2030	Beyond 2030	Beyond 2031	Beyond 2032
819 / 873	N. E. Quebec	Mar. 2027	Feb. 2015	Aug. 2017	Feb. 2015	Mar. 2014
867	Yukon, NWT, Nunavut	> 20 years	Beyond 2030	Beyond 2030	Beyond 2031	Beyond 2032
902	Nova Scotia & PEI	Feb. 2015	Jul. 2014	Nov. 2018	Apr. 2019	Feb. 2018

\* See 250 / 604 / 778

\*\* See 403 / 587 / 780

#### 4. Schedule of Future NRUF Activities in the Current Year

<b>Due Date</b>	<b>NRUF Type</b>	<b>NRUF Format</b>	<b>NPA(s)</b>
Aug. 3	J-NRUF	As determined by RPC	204
Aug. 3	J-NRUF	As determined by RPC	450
Oct. 29	J-NRUF	As determined by RPC	204
Aug. 9	R-NRUF	Format 2	249 / 705
Aug. 9	R-NRUF	Format 2	250 / 604 / 778
Aug. 9	R-NRUF	Format 2	289 / 905
Aug. 9	R-NRUF	Format 2	416 / 647
Aug. 9	R-NRUF	Format 2	819 / 873

#### 5. Summary of Challenges Encountered during the G-NRUF Process

- a) TSPs confuse the differences between a G-NRUF, an R-NRUF, a J-NRUF and the Reserved and Held Report requirements.

- b) Some companies had problems<sup>1</sup> with completion of the C-NRUF forms, submitted the inappropriate form, or missed submission of a form.
- c) Numerous companies failed to submit explanations for significant changes in their forecasts from previous submissions.

## **6. Potential Solutions Identified by the CNA to Address G-NRUF Process Issues**

- a) There appears to be no serious negative consequence set out for companies that do not forecast accurately. There should be an inducement for the companies to report as accurately as possible, once and on time, to ensure that the G-NRUF is meaningful and timely.
- b) The CSCN should strive to increase the participation of TSPs in its activities, such that they are more conversant with the significance of various numbering requirements (e.g., the G-NRUF process, Reserved and Held reports).
- c) The C-NRUF Guideline establishes the G-NRUF due date, documented discussions take place at the CSCN, and the CNA sends out two requests a month apart, which should be sufficient warning that annual G-NRUF data will be due by a date certain. Based on discussions between the CNA and various TSPs, it would appear that there is too much time between the request for G-NRUF data and the submission date, which allows TSPs to become involved with other projects and to overlook the due date. The CNA recommends a maximum of one month from the date of the initial request to the due date of the G-NRUF.

## **7. G-NRUF Assumptions**

See the attached CSCN letter dated 20 October 2009.

## **Conclusion**

In accordance with Section 4, Item 6 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 2009 C-NRUF results are reasonable and the Projected Exhaust Dates for all NPAs are realistic based upon the data submitted by TSPs and the direction provided by the CSCN on 20 October 2009.

The CNA notes that the Canadian telecommunications environment continues to go through a period of significant change due to competition in local exchange and wireless markets.

The results from the 2010 G-NRUF are difficult to compare with the 2009 G, R, J -NRUF results as most TSPs have submitted a set of data to the CNA that is different from the 2009 data. In addition, there are several "new" WSPs as a result of the spectrum auctions conducted by Industry Canada.

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<sup>1</sup> Not including companies that did not follow submission instructions.

TSPs have modified their market entry and expansion plans as their market and competitive experience affects their business results.

As we move forward into the remainder of 2010 the CNA is concerned that there is still potential for volatility in demand for numbering resources due in part to several changes in the regulatory regime over the past few years. Additionally, the appearance of several new Wireless Service Providers and Local Exchange Carriers may have an unforeseen impact on demand that is difficult to predict. Due to these uncertainties, there is some latitude for determining what is reasonable and realistic.

It is noteworthy that forecasts have generally showed an increase in demand even though more stringent practices were adopted by the CNA with respect to requiring current and potential CO Code Holders to justify the variances in their forecasts in accordance with section 4, item 7 of the Guideline.

Based on this assessment, in the CNA's opinion, the G-NRUF results for this year appear reasonable and the Projected Exhaust Dates for Canadian NPAs are generally realistic.

## January 2010 G–NRUF Aggregate Results

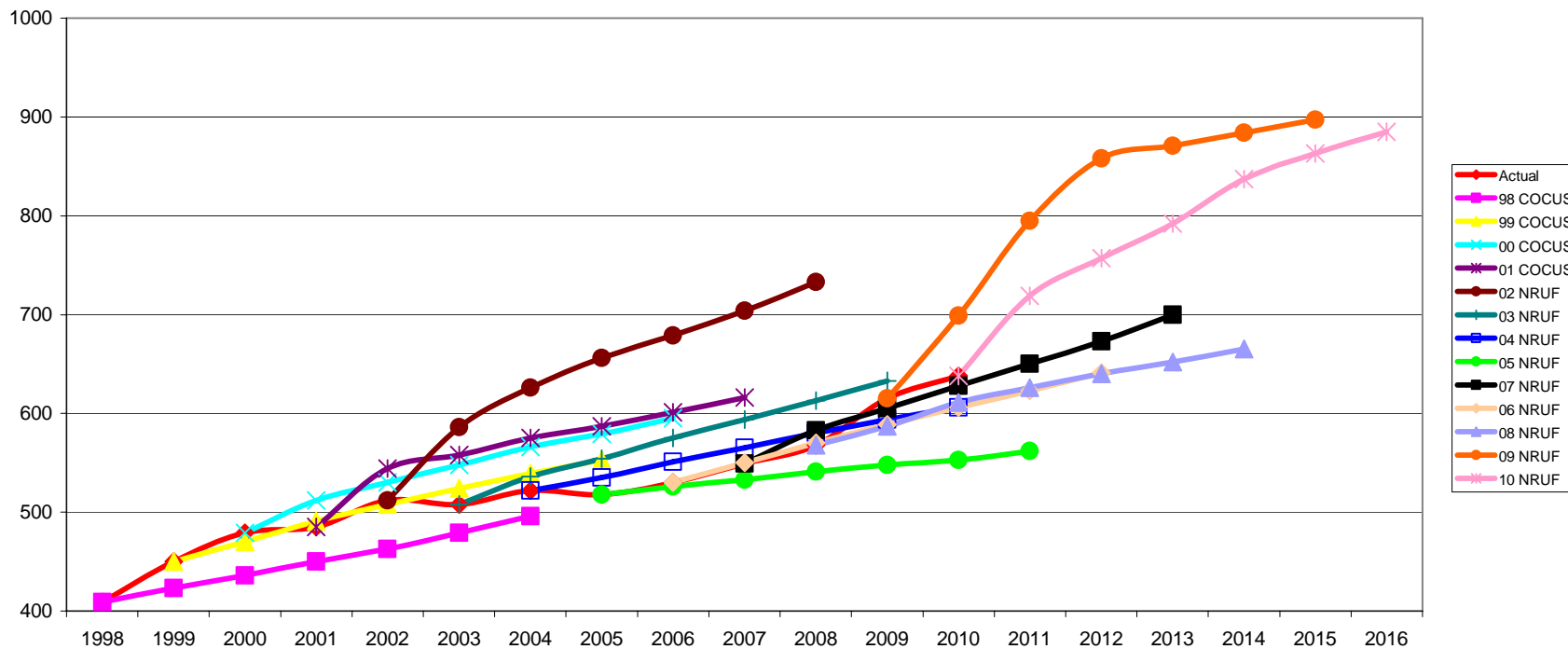
As of January 1																					
<b>NPA / Years</b>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
204	638	719	757	792	837	863	885	914	943	972	1001	1030	1059	1088	1117	1146	1175	1204	1233	1262	1291
226-519	1028	1092	1158	1198	1252	1299	1328	1378	1428	1478	1528	1578	1655	1705	1755	1805	1855	1905	1955	2005	2055
249-705	716	785	853	897	939	988	1016	1065	1114	1163	1212	1261	1310	1359	1408	1457	1506	1555	1644	1693	1742
250-604-778	1807	1922	2018	2095	2194	2281	2356	2460	2547	2634	2721	2808	2895	2982	3069	3156	3264	3351	3438	3525	3612
289-905	1233	1341	1421	1509	1583	1665	1731	1814	1890	1966	2042	2118	2194	2270	2346	2454	2530	2606	2682	2758	2834
306	636	655	682	703	721	737	754	774	794	839	859	879	899	919	939	959	979	999	1019	1039	1059
343-613	762	839	891	936	953	995	1035	1078	1121	1164	1207	1250	1293	1336	1379	1422	1465	1508	1551	1594	1676
403-587-780	1614	1689	1777	1862	1939	2017	2083	2162	2241	2320	2399	2500	2579	2658	2737	2816	2895	2974	3053	3132	3234
416-647	1121	1194	1279	1370	1459	1552	1665	1751	1837	1923	2009	2095	2181	2267	2353	2467	2553	2639	2725	2811	2897
418-581	886	925	957	983	1013	1037	1062	1090	1118	1146	1174	1202	1230	1258	1286	1314	1342	1370	1398	1426	1454
438-514	856	893	935	975	1018	1049	1080	1118	1156	1194	1232	1270	1308	1346	1384	1422	1460	1498	1536	1574	1612
450-579	754	847	897	921	923	939	956	980	1004	1028	1052	1076	1100	1124	1148	1172	1196	1220	1244	1268	1292
506	415	447	464	479	491	503	516	530	544	558	572	586	600	614	628	642	656	670	684	698	712
709	440	507	522	536	550	560	570	583	596	609	622	635	648	661	674	687	700	713	726	739	752
807	197	213	218	223	225	229	232	236	240	244	248	252	256	260	264	268	272	276	280	284	288
819	687	723	750	776	796	854	868	875	897	919	941	963	985	1007	1029	1051	1073	1095	1117	1139	1161
867	157	159	162	166	168	172	173	176	179	182	185	188	191	194	197	200	203	206	209	212	215
902	597	634	660	689	708	725	750	774	798	840	864	888	912	936	960	984	1008	1032	1056	1080	1104
<b>NPA / Years</b>	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030

Quantity of CNA CO Codes as of 1 January 2010

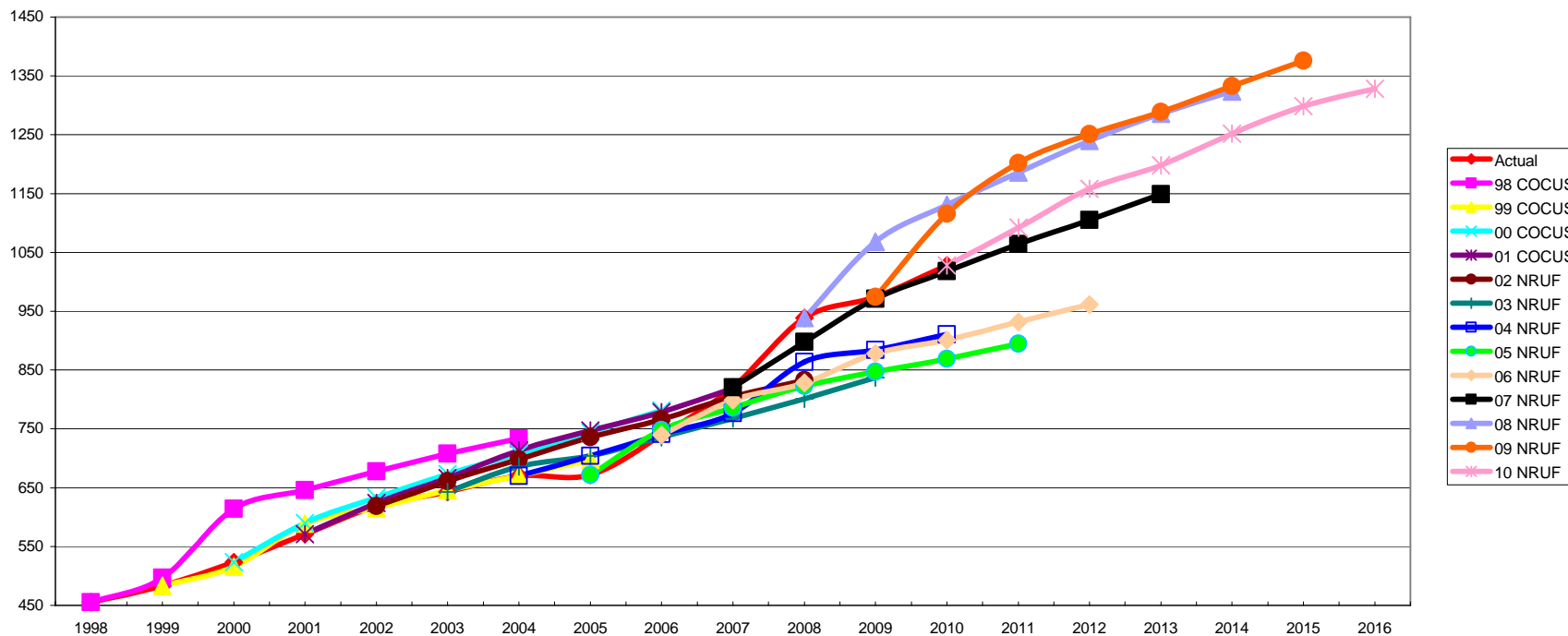
January 1, 2010

<b>NPAs</b>	204	226-519	249-705	250-604-778	289-905	343-613	306	403-587-780	416-647	418-581	438-514	450-579	506	709	807	819	867	902
New Entrants iaw PNs/Decisions			10		15	15				0		10				10		
Initial Code iaw PNs/Decisions			7		7	10				7		7				7		
Protected	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N11 Service Codes	8	16	16	24	16	16	8	24	16	16	16	16	8	8	8	8	8	8
Special Use Codes (555, 950 & 976)	3	5	5	9	6	5	3	9	5	5	5	6	3	3	2	2	3	3
Industry Plant Test Codes	1	4	4	6	4	4	2	6	4	4	4	4	2	2	2	2	2	2
Home NPAs NXX Codes	1	4	4	8	4	4	1	9	4	4	4	4	1	1	1	1	1	1
Neighbour NPAs NXX Codes	2	4	16	0	12	12	2	2	2	6	2	6	3	3	3	6	4	1
Future NPAs NXX Codes	6	8	22	3	16	28	9	3	18	22	26	32	15	14	22	16	28	3
Limited Availability (USA 7D Problem)	0	0	0	0	0	2	0	0	0	0	0	0	1	0	1	2	0	0
911 Misdial Codes (912, 914 & 915)	3	0	0	0	0	0	3	0	0	0	0	0	3	3	3	0	3	3
Special 7 Digit Dialing Codes (310, 610 & 810)	2	5	5	7	5	5	2	7	5	3	5	4	2	2	2	2	3	2
Relief NPA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unforecasted Demand	3	5	0	7	0	0	3	7	6	3	6	0	3	2	2	0	2	3
<b>Total</b>	<b>29</b>	<b>51</b>	<b>89</b>	<b>67</b>	<b>85</b>	<b>101</b>	<b>33</b>	<b>67</b>	<b>60</b>	<b>70</b>	<b>68</b>	<b>89</b>	<b>41</b>	<b>38</b>	<b>46</b>	<b>56</b>	<b>54</b>	<b>26</b>

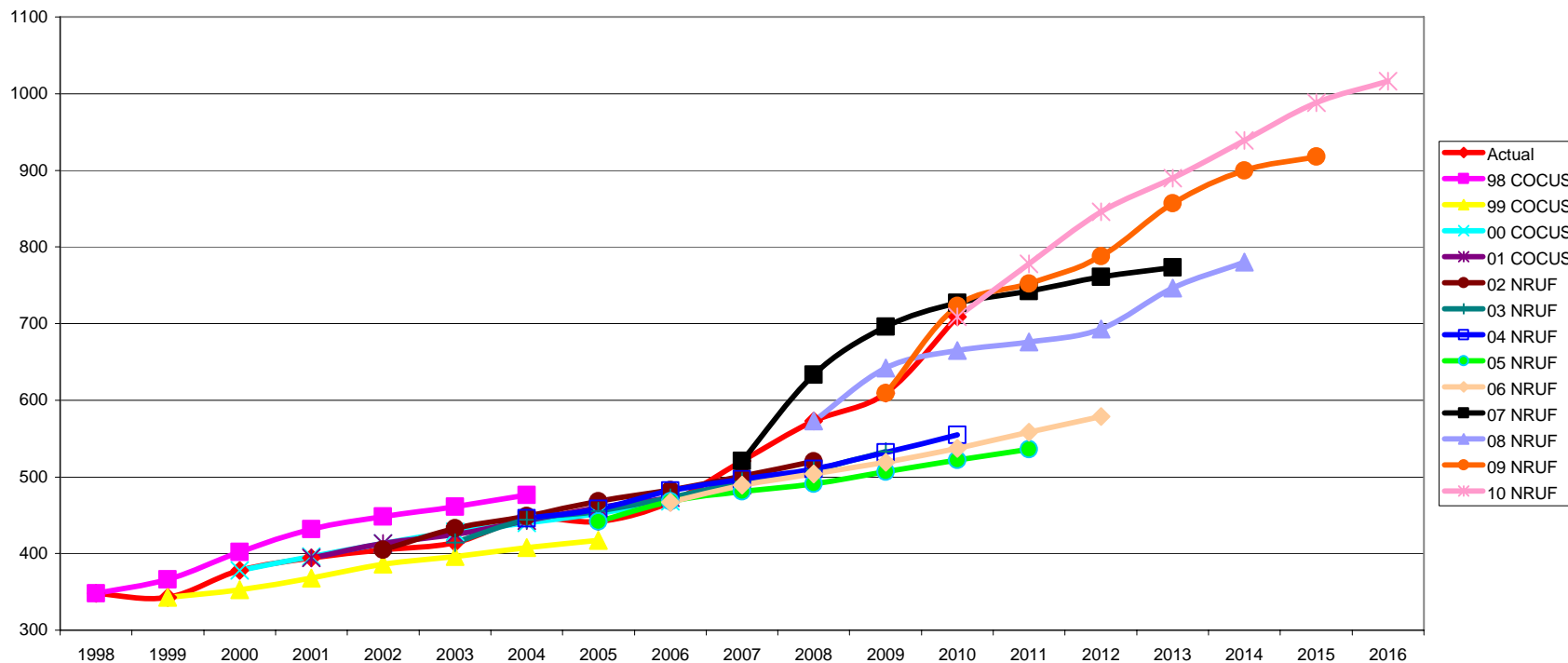
NPA 204 Manitoba



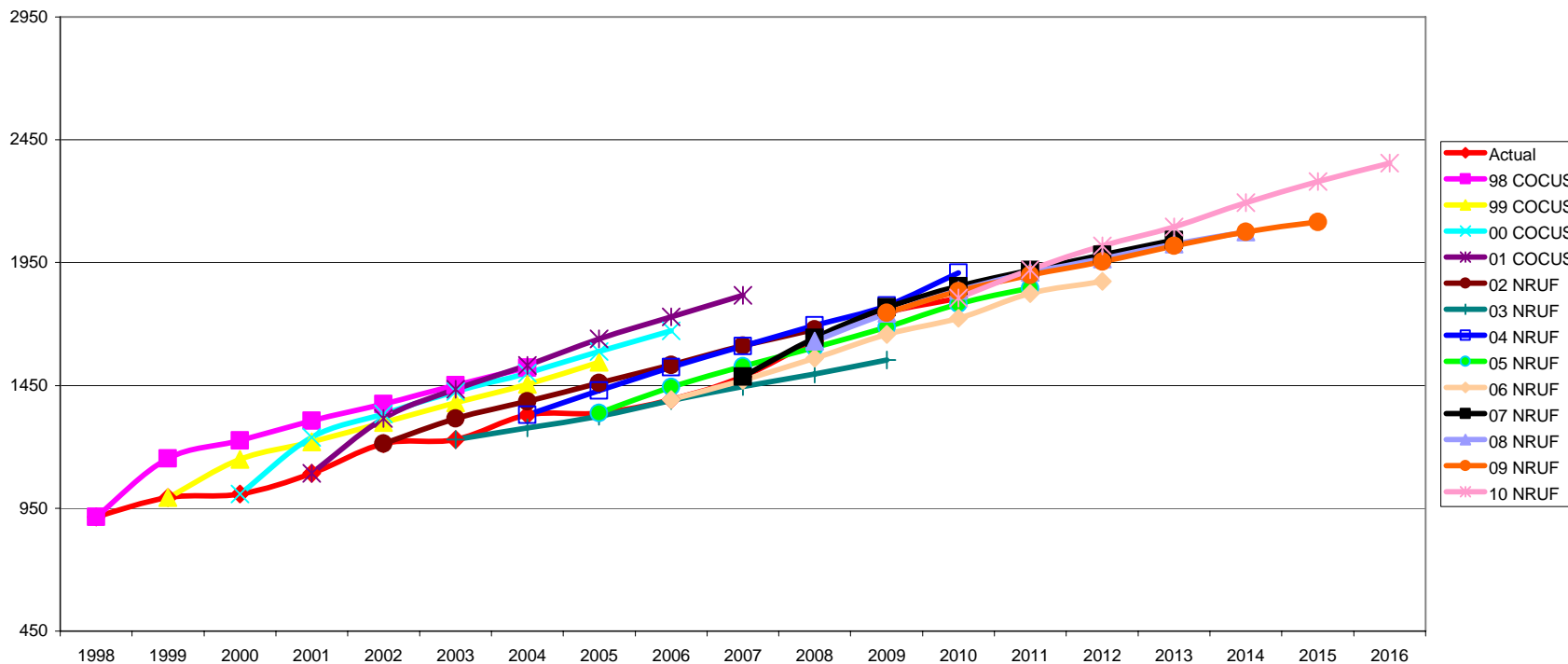
NPA 226-519 Ontario



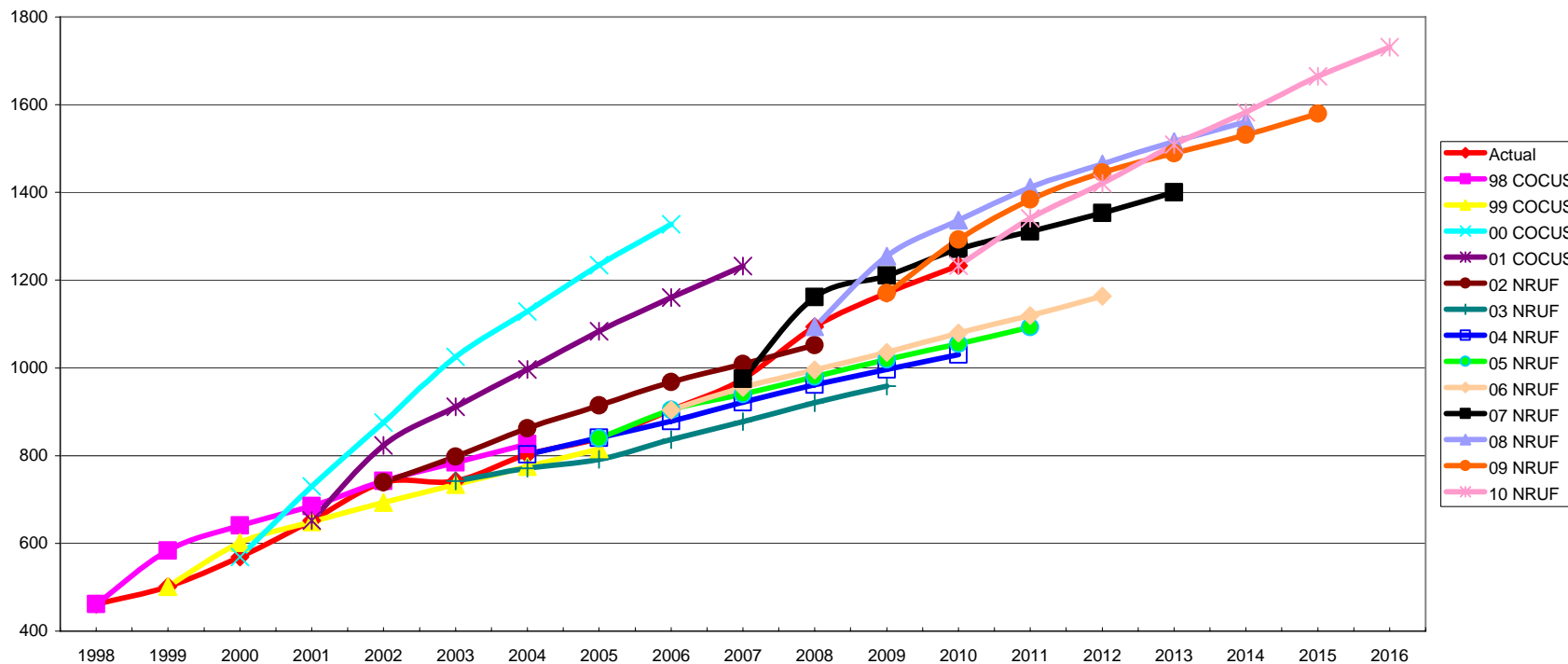
NPA 249-705 Ontario



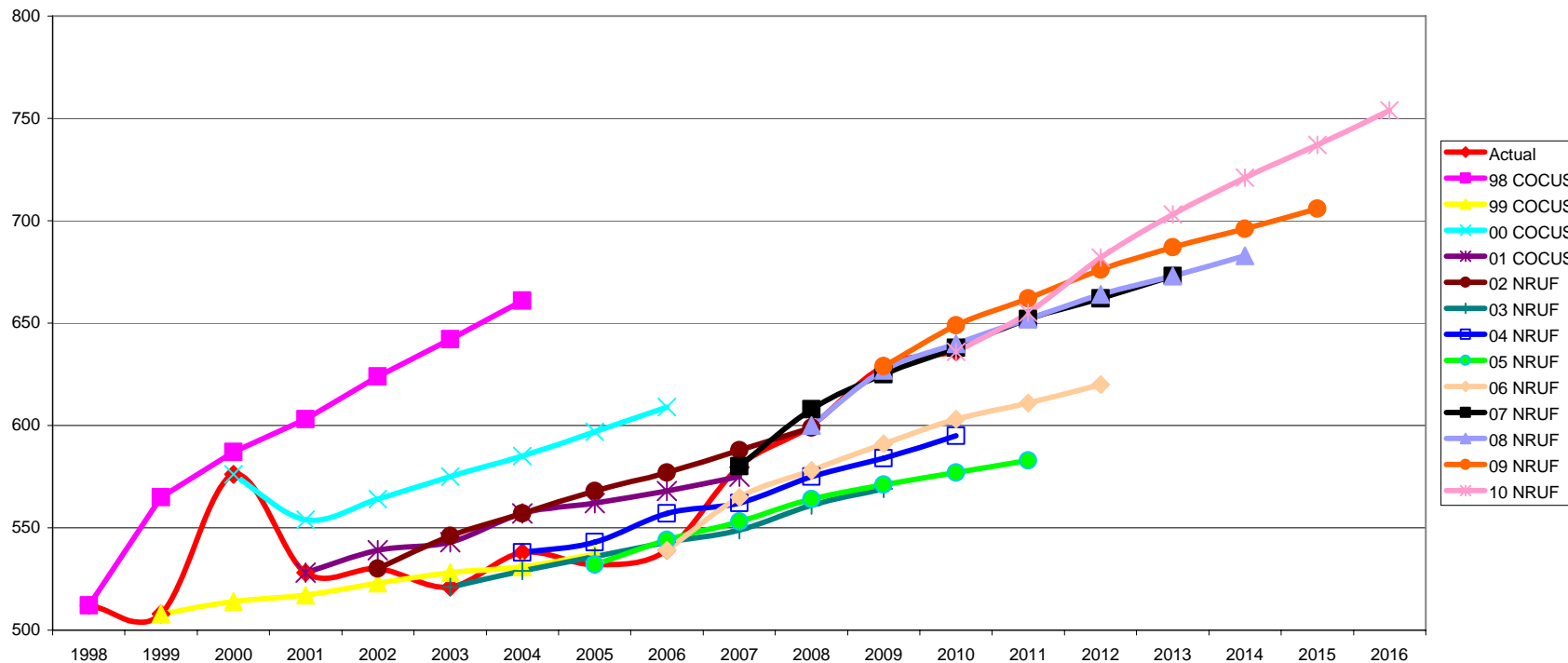
NPA 250-604-778 British Columbia



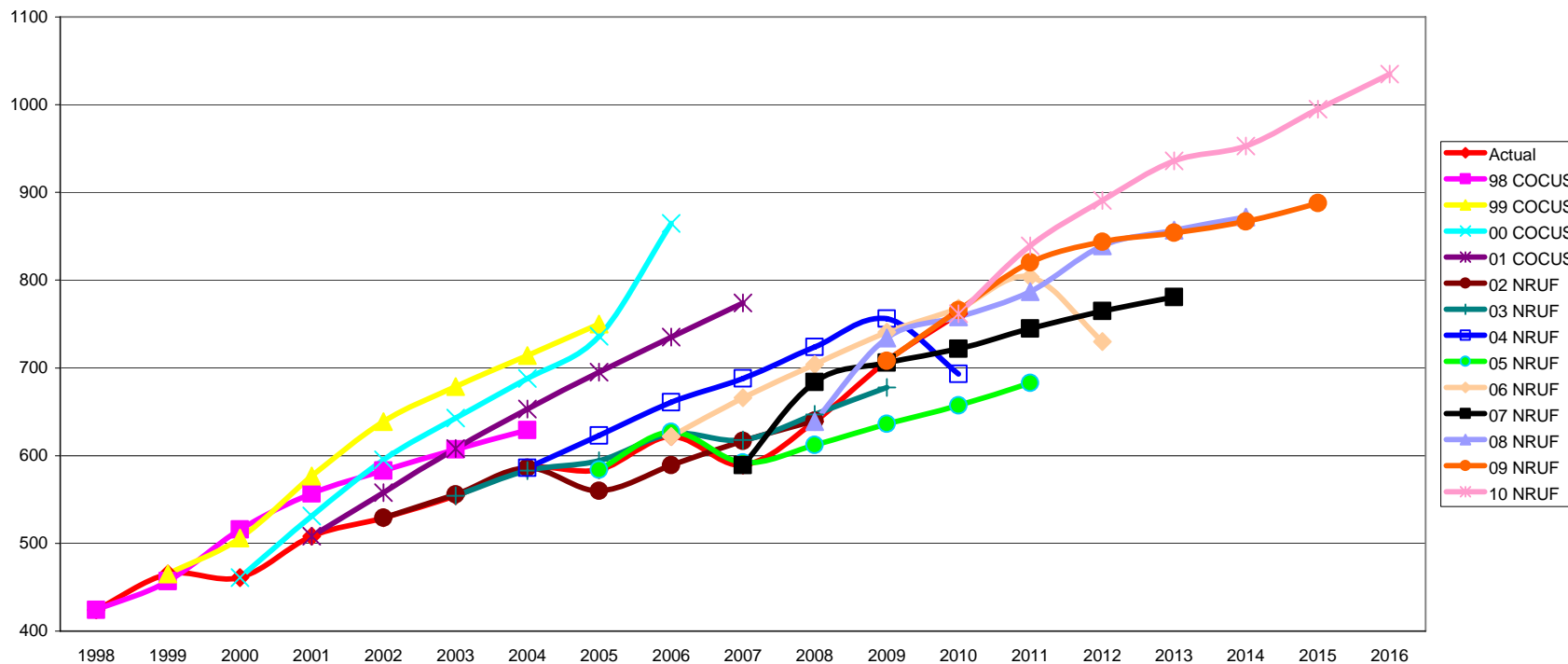
NPA 289-905 Ontario



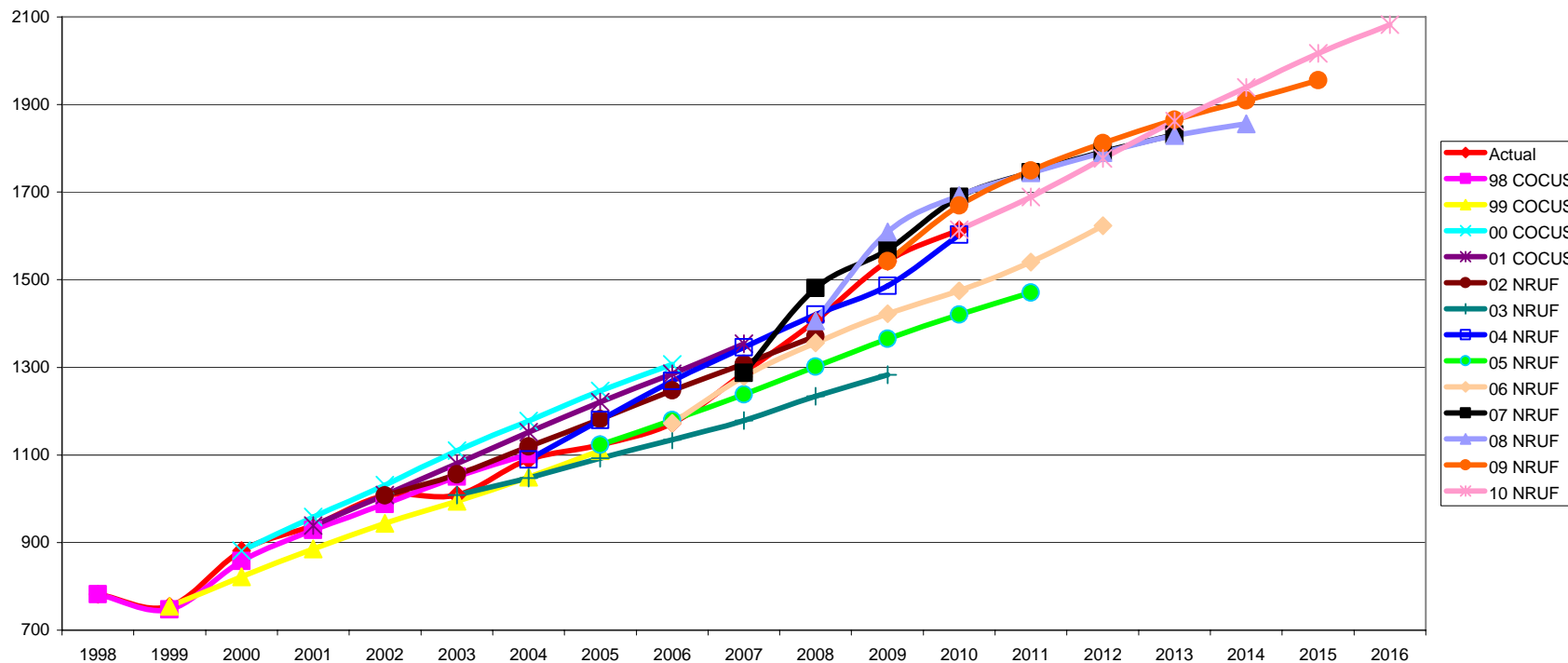
NPA 306 Saskatchewan



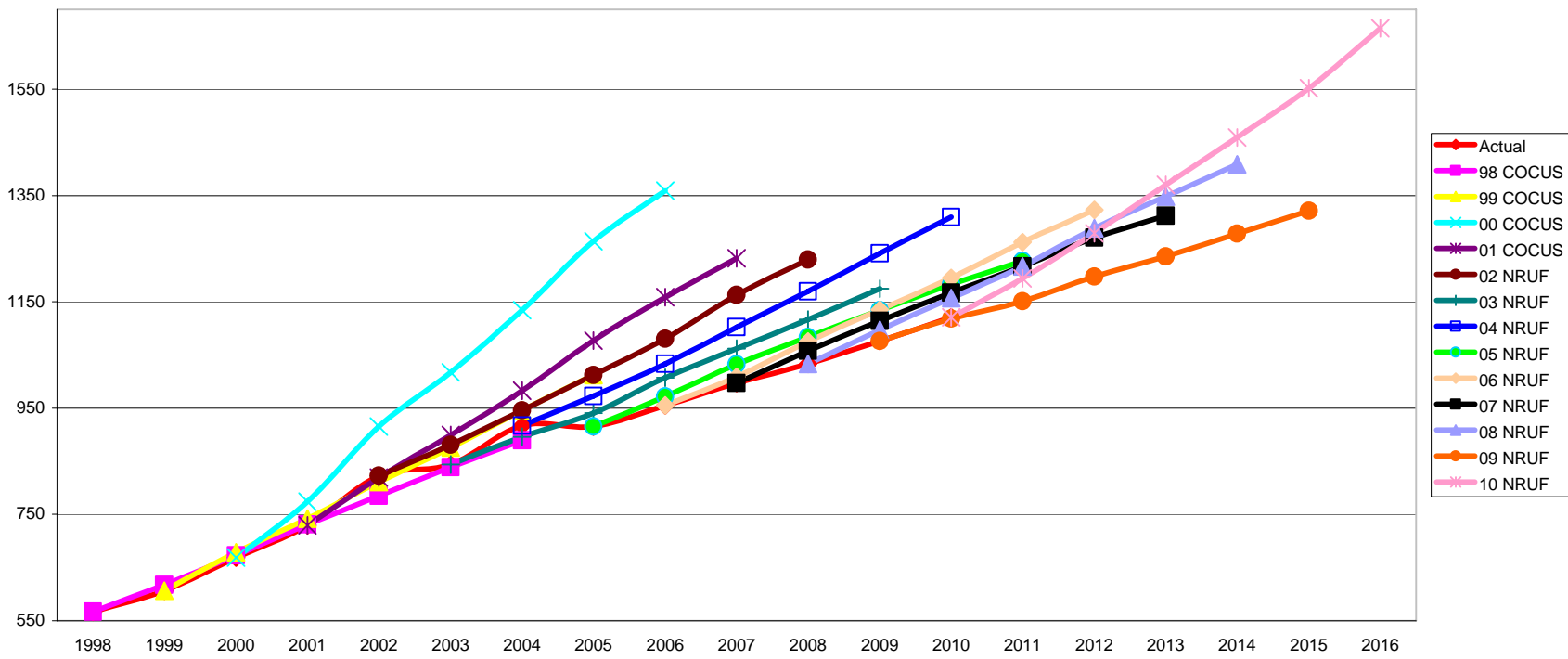
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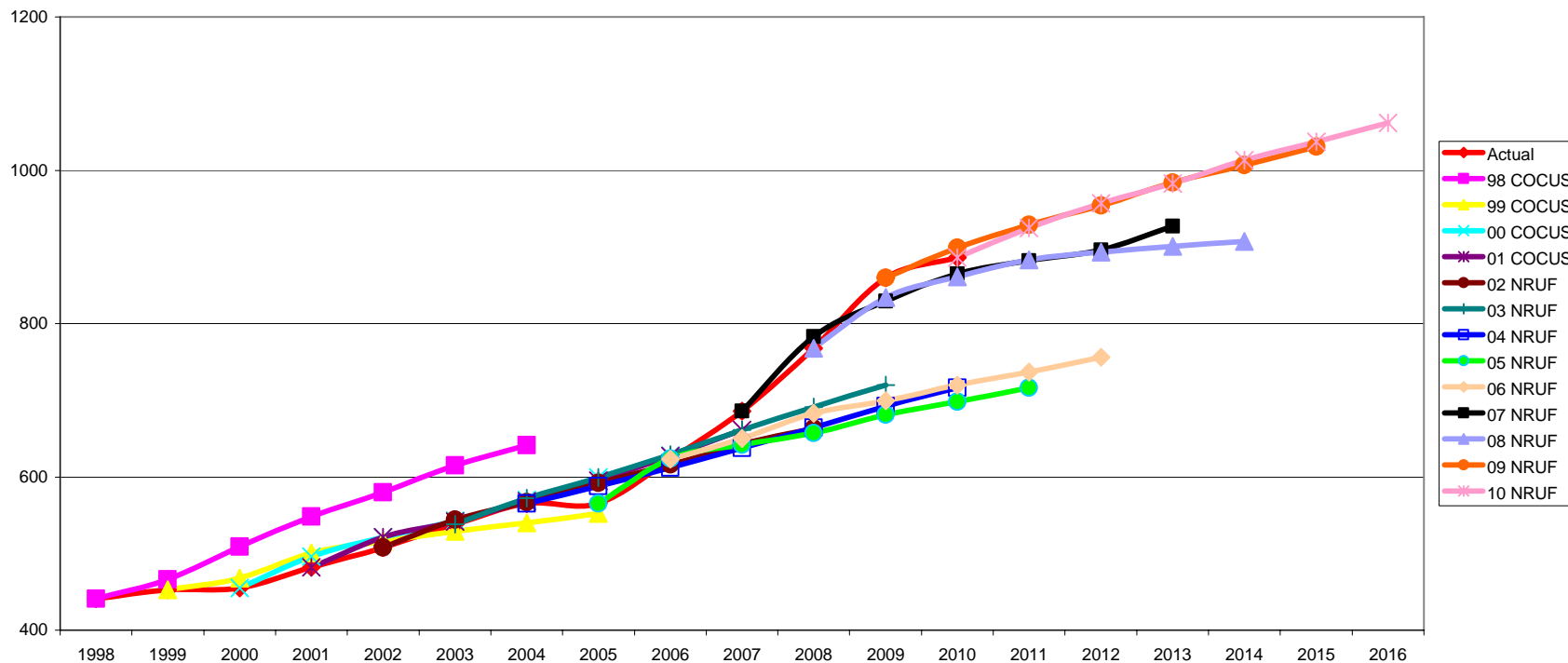
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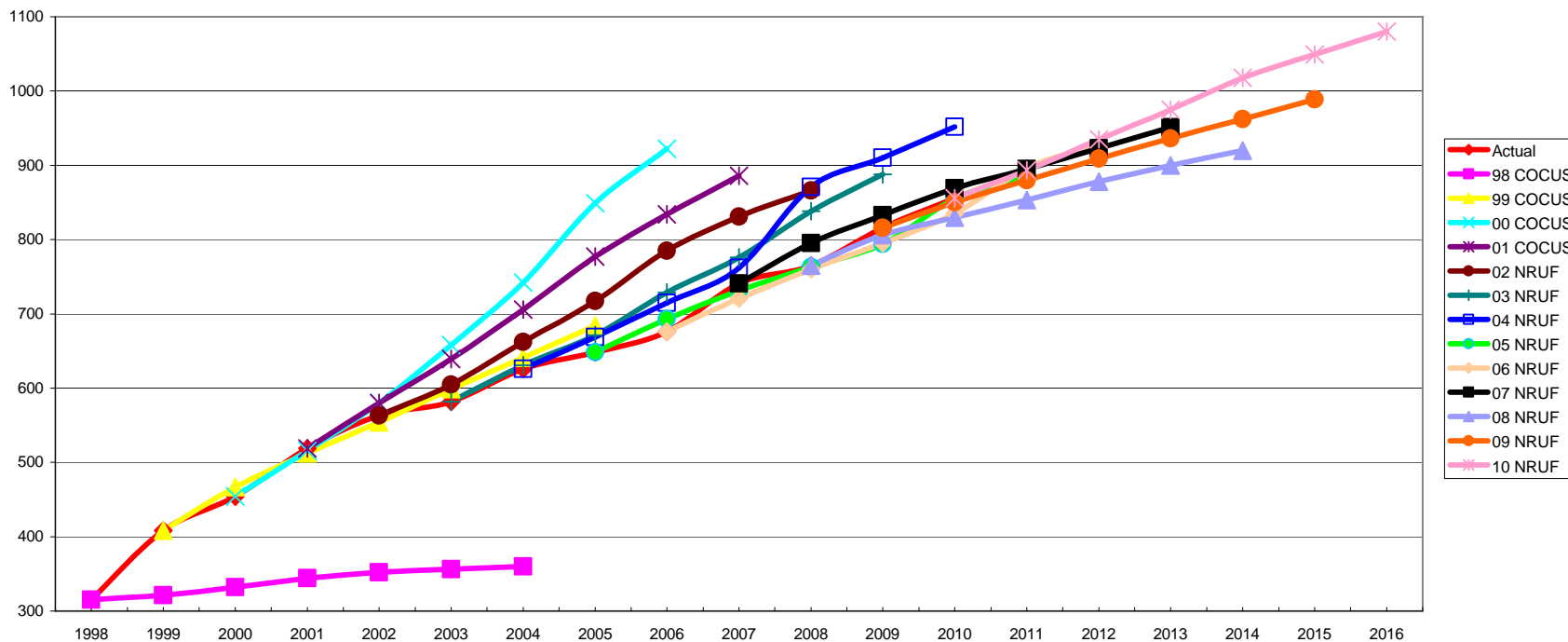
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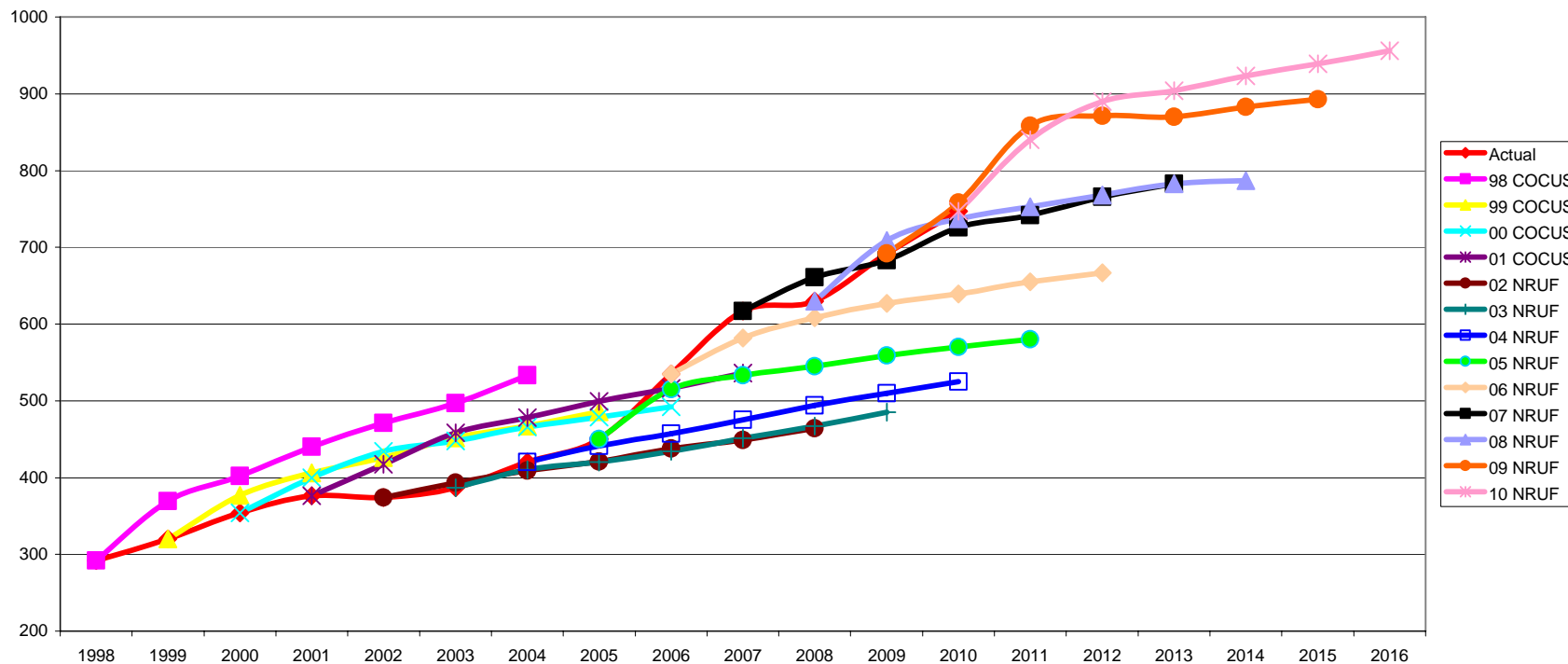
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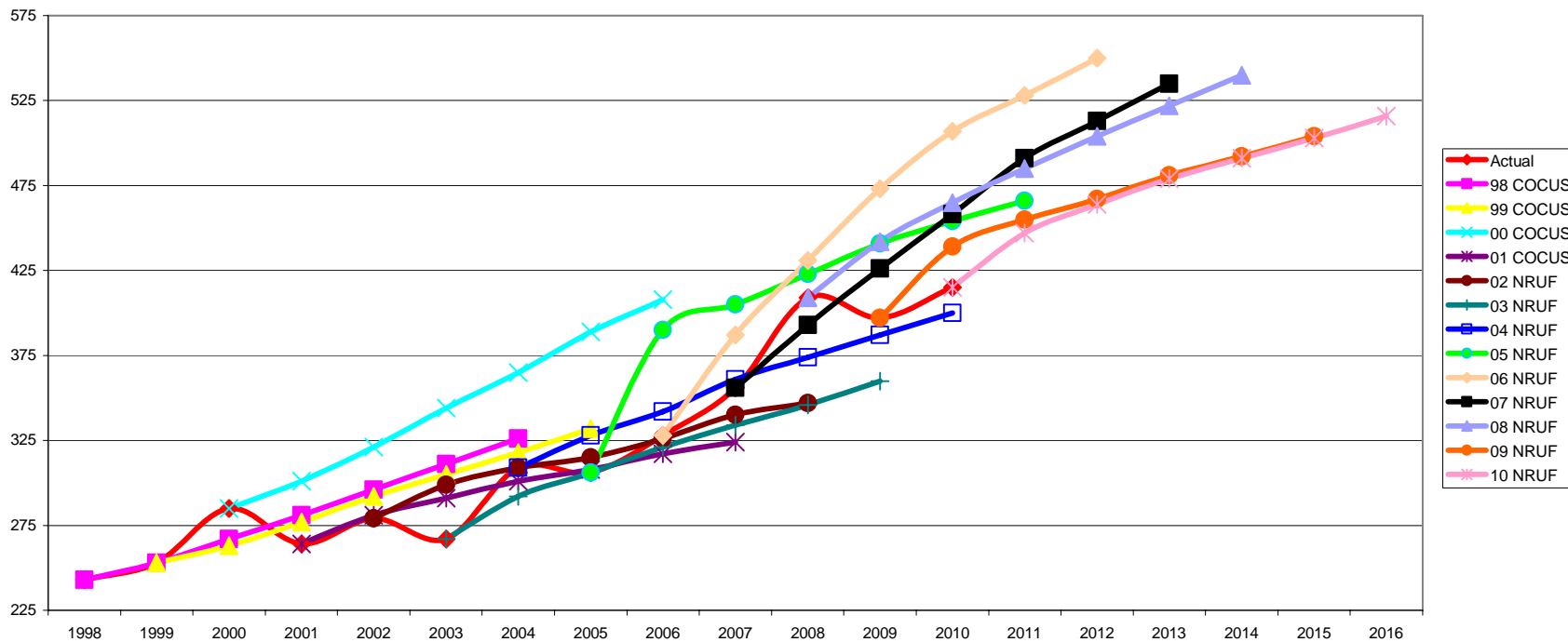
NPA 438-514 Quebec



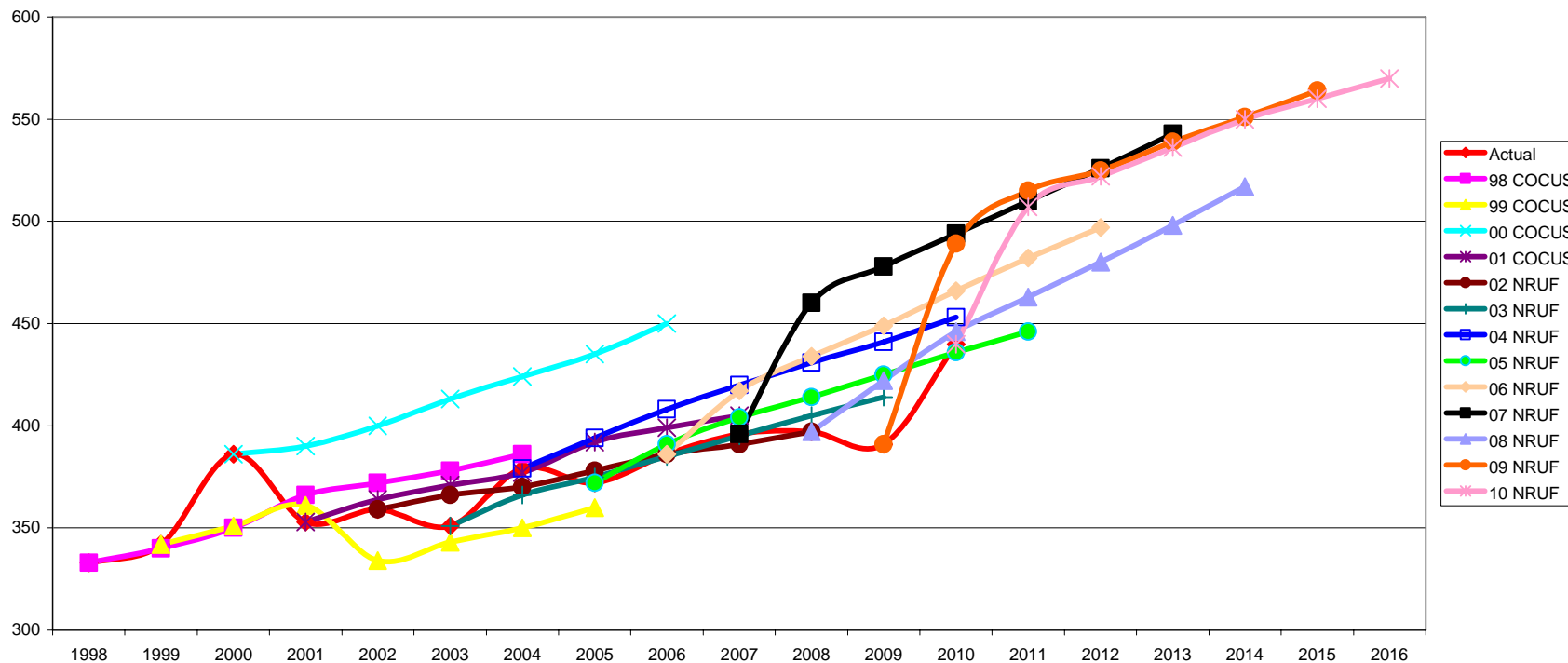
NPA 450-579 Quebec



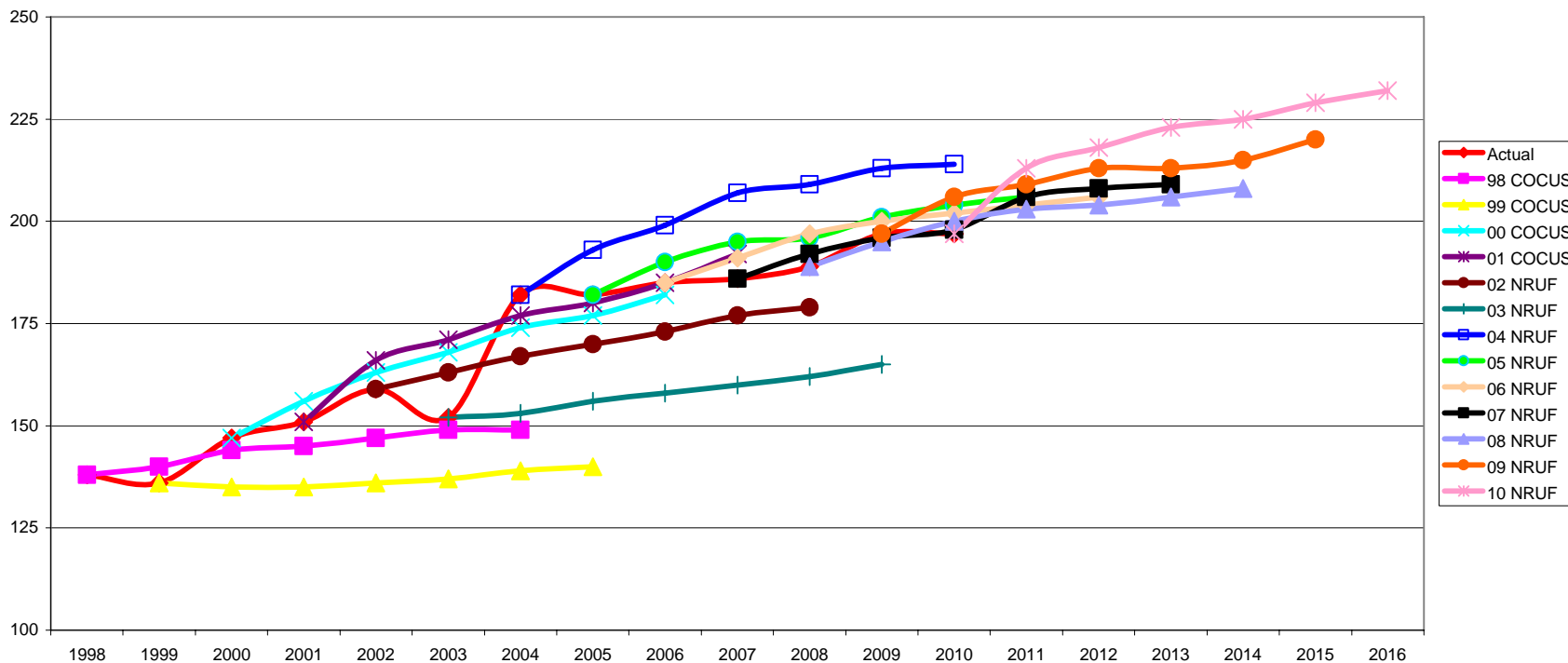
NPA 506 New Brunswick



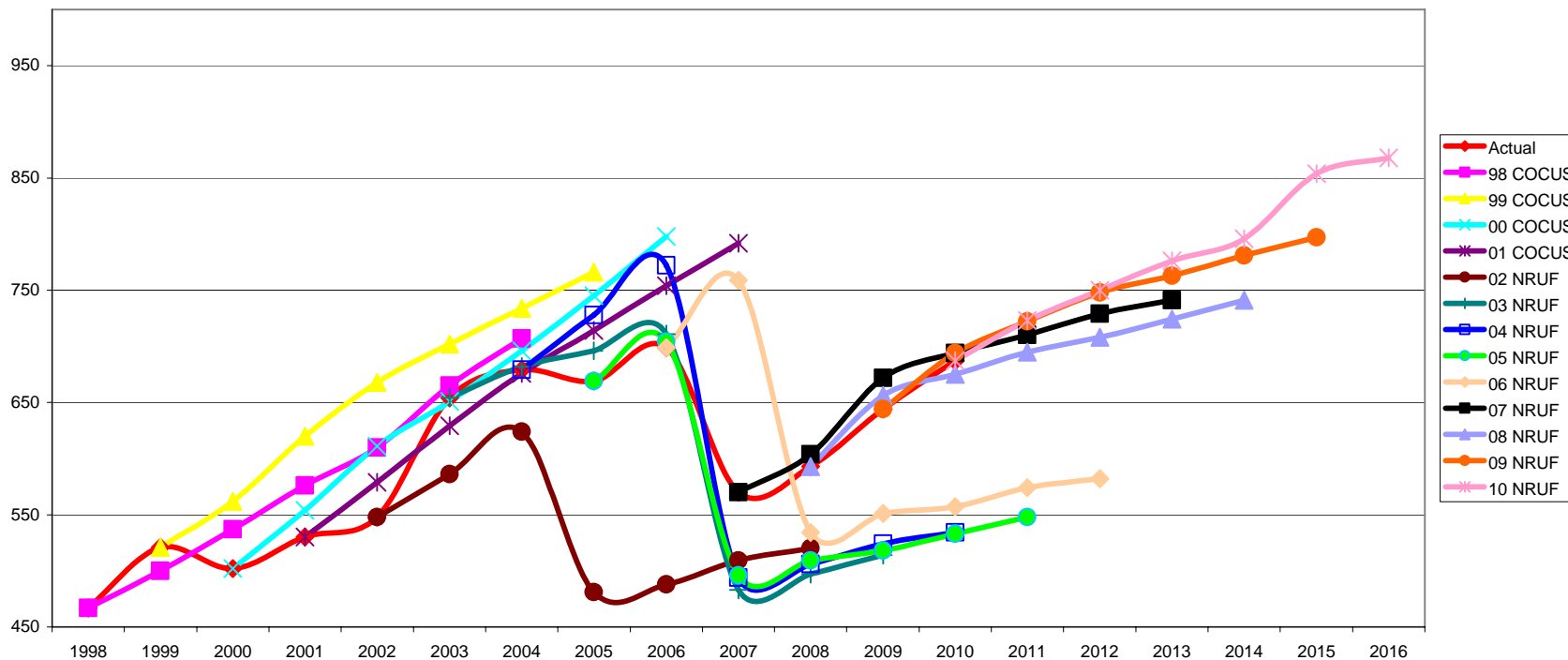
NPA 709 Newfoundland and Labrador



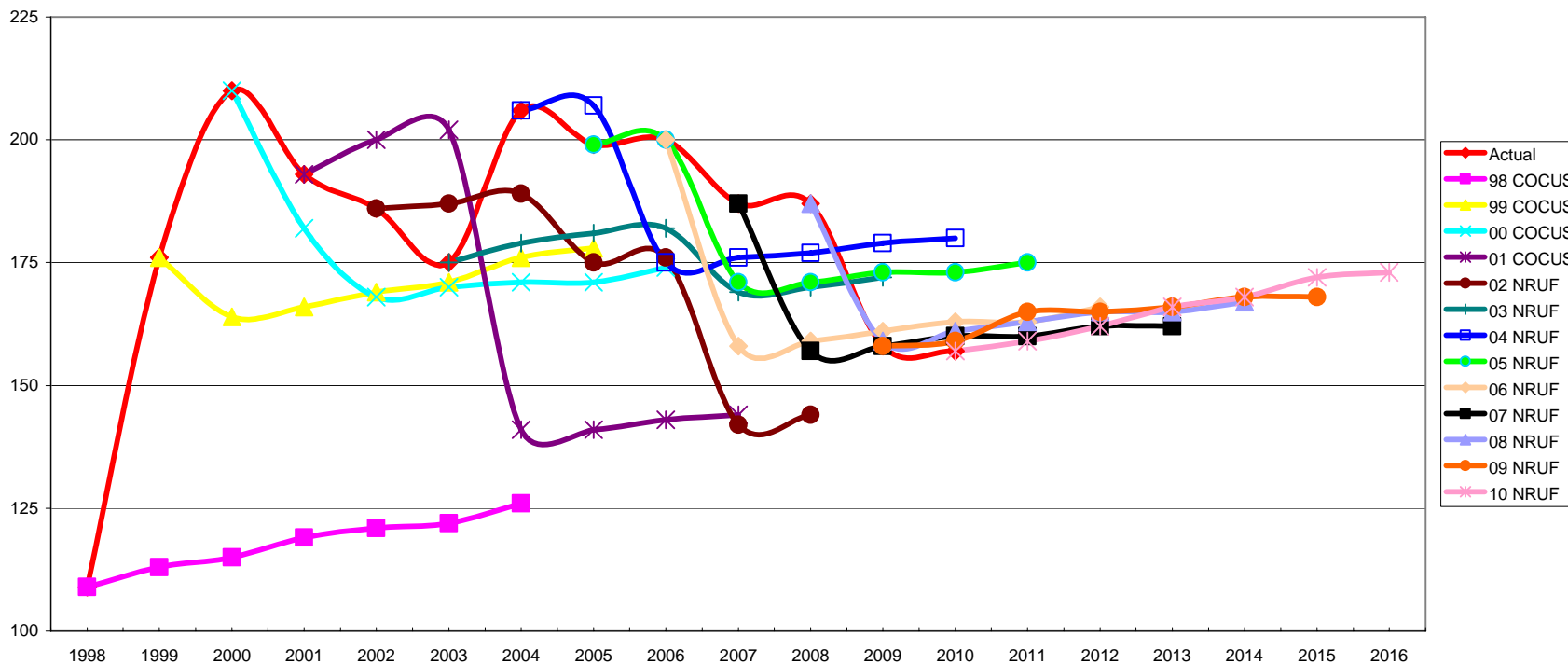
NPA 807 Ontario



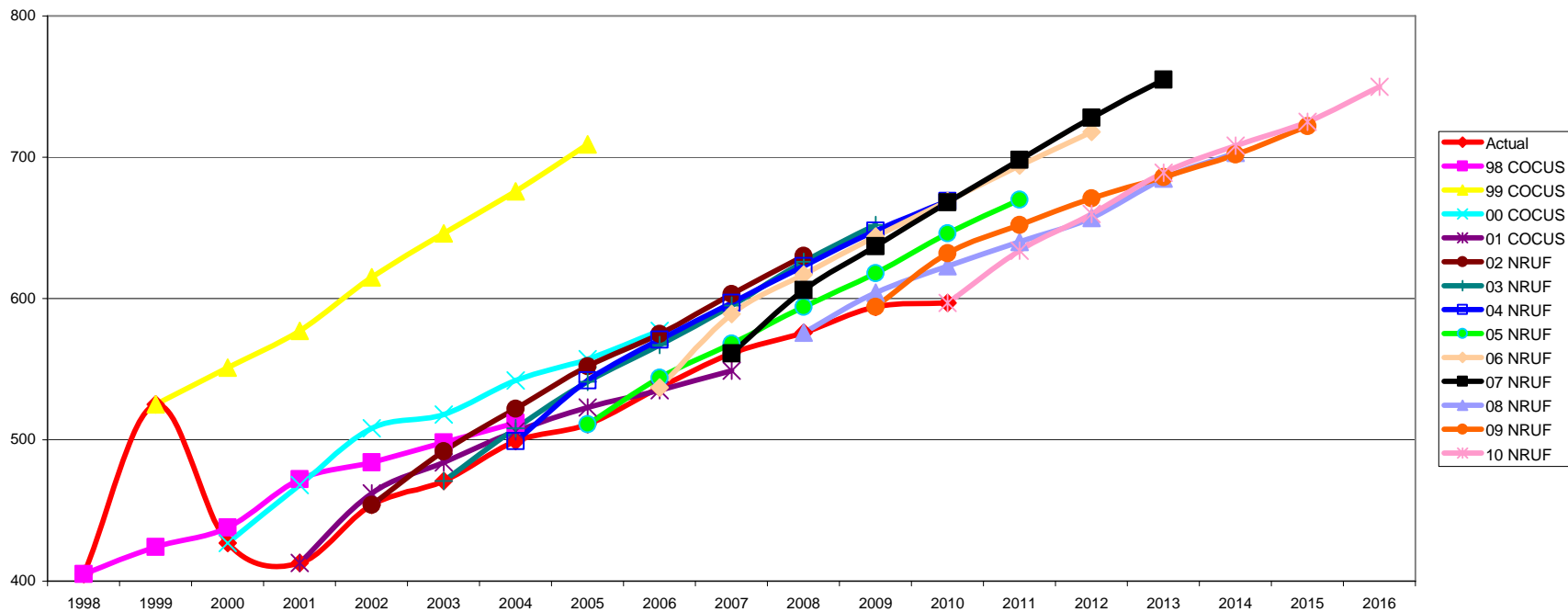
NPA 819-873 Quebec



NPA 867 Northwest Territories-Nunavut-Yukon



NPA 902 Nova Scotia-Prince Edward Island



# CSCN

## Canadian Steering Committee on Numbering

October 20, 2009

Attachment 4

Douglas Birdwise  
Chair - CSCN  
c/o Bell Canada  
Room 4E-009 - 160 Elgin Street  
Ottawa, Ontario, Canada K1G 3J4  
Email: doug.birdwise@bell.ca  
Tel: 613-781-4366  
Fax: 613-569-9675

**TRANSMITTED ELECTRONICALLY**

Glenn Pilley  
Director  
Canadian Numbering Administrator (CNA)  
SAIC Canada  
60 Queen Street, Suite 1516  
Ottawa, Ontario K1P 5Y7

**Subject: CSCN Direction to Canadian Numbering Administrator (CNA) re the 2010 Numbering Resource Utilization Forecast (2010 NRUF) Methodology and Assumptions**

On October 20, 2009, the Canadian Steering Committee on Numbering (CSCN) discussed and agreed to the direction for the CNA with respect to the 2010 NRUF Methodology and Assumptions.

The attached document contains the direction titled "CSCN Direction to CNA re the 2010 NRUF Methodology and Assumptions, October 20, 2009".

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.: Bill Mason - CRTC  
Jeanne Lacombe - CRTC  
CSCN

Attachment

**CSCN Direction to CNA re the 2010 NRUF Methodology and Assumptions  
October 20, 2009**

The CSCN submits the following methodology and assumptions to the CNA for the 2010 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, 2010, 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. A letter from CRTC staff to the CNA, dated 26 March 2003, and copied to the CSCN, directed the CNA to include an allowance for CO Code assignments for new unknown entrants, new technologies and other unforecasted demand in the area code exhausts projected by the 2003 G-NRUF. A table attached to the letter provided the quantities of codes that were to be added to the 2003 data as assigned CO Codes and carried forward throughout the 20 year study period with no growth. The quantities specified for the 2003 G-NRUF were used without changes for NRUFs from 2004 through 2007.

On 16 October 2007, CRTC staff provided quantities of CO Codes to be used in the 2008 NRUF as an allowance for unforecasted demand. These quantities were used also for the 2009 NRUF, except that in NPA 613 the allowance for unforecasted demand was excluded from years during which a pool of CO Codes set aside for initial CO Codes would exist. When conducting the 2010 NRUF the CNA should use the same quantities, except in NPAs where pools of CO Codes have been established for initial CO Code assignments, in which case the allowance for unforecasted demand should only be included for forecast years following the dissolution of the pool for initial CO Code assignments as noted in the table below. In addition, CRTC staff identified during the 20 October 2009 CSCN meeting that the quantities for NPAs 450, 613 and 705 should be used for the new overlay NPAs 450/579, 613/343 and 705/249 respectively.

CRTC Staff Allowance for Unforecasted Demand		Relief year  (est. = estimated)	Allowance to be excluded from forecasted total quantities prior to the year below (= year after the dissolution of the pool, which is 2 years after relief)	CRTC Telecom Decision or Notice establishing pool of CO Codes for initial CO Code assignments
NPA	Quantity of CO Codes			
204	3	n/a	-	Note*
250/604/778	7	n/a	-	-
306	3	n/a	-	-
403/780/587	7	n/a	-	-
416/647	6	n/a	-	-
418/581	3	2008	2011	Decision 2007-71
450/579	5	2010	2013	Decision 2009-225
506	3	n/a	-	-
514/438	6	n/a	-	-
519/226	5	n/a	-	-
613/343	7	2010	2013	Decision 2008-89
705/249	5	2011	2014	Decision 2009-622
709	2	n/a	-	-
807	2	n/a	-	-
819	2	2014 (est.)	2017	Notice 2009-308
867	2	n/a	-	-
902	3	n/a	-	-
905/289	7	2015 (est.)	2018	Notice 2009-310

Note\*: In Telecom Notice of Consultation CRTC 2009-309, *Establishment of a CISC ad hoc committee for area code relief planning for area code 204 in Manitoba*, dated 28 May 2009, the Commission did not direct the CNA to set aside any CO Codes for initial code assignments during the 2 year period following relief.

The quantities of CO Codes in the above table should be carried forward for the 20-year study period with no growth.

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 for assignment to initial CO Code Applicants for a 2-year period after implementation of an Overlay, the CNA shall add such quantities to the actual quantity of CO Codes for January 1 of the current year and carry them forward in the forecasts until the Relief Date, since these set-aside CO codes are unassignable from the date of the Decision until immediately prior to the relief date, after which they become assignable (with limitations). 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 on 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 alternative 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):

6 Year Average Growth of CO Codes per Year =  

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

5. When extending the forecast from 7 to 20 years, the CNA should use the six year forecast average annual growth, 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).
6. Stranded Codes
  - a) The CNA advised the CSCN that there is 1 Stranded Code with ported telephone numbers in NPA 705.
  - b) For the purposes of the 2010 NRUF, the CNA shall assume that the CO Code that is stranded at the beginning of 2010 will remain stranded indefinitely.
7. 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 Guideline, approved by the Commission on 3 December 2007 in Telecom Decision CRTC 2007-121, or as otherwise directed in writing by the CRTC when the draft aggregate results are released, and in the subsequent 2010 NRUF Report to the CSCN after the aggregate results are finalized.
8. 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.
9. The CNA shall not add or include any demand for CO Codes for proposed CLECs that did not submit NRUF forecasts, other than the demand that is already allowed for in the quantity of CO Codes for unforecasted demand specified by CRTC staff.
10. For the purpose of the NRUF the CNA should assume that the overlay method will be used for future NPA Reliefs unless CRTC staff advises otherwise.
11. With respect to NPAs that are due to exhaust approximately in the 2030 timeframe, the CNA should exercise its best judgement in finalizing the forecast for those NPAs.
12. For the purpose of calculating NPA 778 exhaust, the CNA should assume that the remaining NPA 250 and 604 CO Codes will be assigned prior to the exhaust of NPA 778 CO Codes in the NPAs 250 and 604 areas.
13. For the purpose of calculating NPA 587 exhaust, the CNA should assume that the remaining NPA 403 and 780 CO Codes will be assigned prior to the exhaust of NPA 587 CO Codes in the NPAs 403 and 780 areas.