



# Canadian Numbering Administrator Annual Report

January 1, 2022  
to  
December 31, 2022

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# Table of Contents

Canadian Numbering Administration Consortium (CNAC) .....	4
CRTC Interconnection Steering Committee (CISC).....	4
Canadian Steering Committee on Numbering (CSCN) .....	4
Canadian Numbering Administrator (CNA) Organization .....	5
Canadian Numbering Administrator Duties and Functions .....	5
CSCN Secretary.....	5
Central Office (CO) Code Administration including NPA Relief Planning .....	5
CNA Role in NANPA Administered Resources.....	5
Administration of Canadian Numbering Resources.....	6
CSCN Secretary.....	7
CSCN Chair .....	8
Geographic Central Office (CO) Code Administration .....	8
Numbering Resource Utilization Forecast (NRUF).....	12
NPA Relief Planning.....	14
CNA Role in NANPA Controlled Resources .....	15
CNA Role in iconectiv® Controlled Resources.....	16
Other Administration Activities .....	16
Other Canadian Numbering Resources.....	16
Industry Fora Participation .....	17
CSCN.....	17
CIGRR .....	18
Canadian CIGGR .....	18
INC.....	18
Website .....	19

# Table of Tables

Table 1 – Summary of 2022 Plenary CSCN Sessions .....	7
Table 2 – Summary of 2022 CSCN Extra-Plenary Virtual Sessions .....	7
Table 3 – Summary of 2022 CISC Meetings Attended .....	8
Table 4 – Summary of CO Code Administration Activity in 2022 .....	10
Table 5 – Summary of Historical CO Code Administration .....	10
Table 6 – Summary of 2022 NRUFs.....	13
Table 7 – Summary of 2022 NRUF Results Conference Calls.....	13
Table 8 – Summary of 2022 RPC Meetings .....	14
Table 9 – Summary of NPAs Assigned to Canada in 2022 .....	16
Table 10 – Summary of 2022 NANPA Controlled Resource Activity.....	16
Table 11 – Summary of 2022 Other Canadian Numbering Resource Activity .....	17
Table 12 – Summary of 2022 CIGRR Meetings Attended .....	18
Table 13 – Summary of 2022 Canadian CIGRR Meetings Attended .....	18
Table 14 – Summary of 2022 INC Meetings Attended .....	19
Table 15 – Summary of 2022 www.cnac.ca Website Analytics .....	20

## Canadian Numbering Administration Consortium (CNAC)

The Canadian Numbering Administration Consortium Inc. (CNAC) was formed in 1998, under the regulatory authority of the Canadian Radio-television & Telecommunications Commission (CRTC), to oversee numbering administration activities in Canada. CNAC is an incorporated entity with a Board of Directors, and shares held by many Canadian Telecommunications Service Providers (TSPs). The primary function of CNAC is to oversee and fund the numbering administration activities of the Canadian Numbering Administrator (CNA).

## CRTC Interconnection Steering Committee (CISC)

The CISC is a committee comprised of various industry representatives that facilitates the implementation of Telecom Decision CRTC 97-8, Local Competition, and related Commission decisions. The mandate of the CISC is to undertake tasks related to technological, administrative, and operational issues on matters assigned by the CRTC or originated by the public, that fall within the CRTC's jurisdiction.

## Canadian Steering Committee on Numbering (CSCN)

The CSCN is an open public forum established in 1991 to consider and resolve numbering resource issues. It became a subtending Working Group of the CISC in 1998. In addition to the mandate defined in Appendix 1, Item 6, of the *CISC Administrative Guidelines*, the CSCN is responsible for:

1. Developing number planning and implementation strategies for the Canadian telecommunications industry;
2. Ensuring the equitable assignment of numbering resources in a competitive Canadian telecommunications industry environment;
3. Ensuring that adequate and appropriate numbering resources are always available for Canadian public telecommunication services and customers;
4. Ensuring that the administration of numbering resources does not confer an undue advantage on any entity nor inhibit the timely introduction of new telecommunication services or competition in these services in Canada;
5. Ensuring the efficient, effective and equitable use of numbering resources in Canada including the assignment, administration, forecasting and conservation of these resources;
6. Providing input and support about Canadian numbering practices to the CRTC via the CISC process;
7. Promoting CISC-agreed positions on numbering issues in the North American telecommunications industry fora; and,
8. Recommending to the CRTC, via the CISC process, allocations of numbering resources for the Canadian telecommunications industry.

Subjects worked on by the CSCN are identified as Tasks. Each Task is given a serialised number and its details are maintained on a Task Information Form (TIF).

# Canadian Numbering Administrator (CNA) Organization

The mandate of the Canadian Numbering Administrator (CNA) is to provide a numbering administration service to the Canadian telecommunications industry under contract to the Canadian Numbering Administration Consortium Inc. The administration of Canadian numbering resources is under the regulatory oversight of the CRTC.

Effective January 1, 2019, the CNA operates via a division of COMsolve Inc. Kelly T. Walsh serves as the Program Manager of the CNA. The CNA office is located at 150 Isabella Street, Suite 605, Ottawa, ON, K1S 5H3.

## Canadian Numbering Administrator Duties and Functions

### CSCN Secretary

The CNA performs the duties of the CSCN Secretary in accordance with the *CSCN Adjunct to the CISC Administrative Guidelines* including:

1. Attends all meetings and conference calls of the CSCN and records the attendance and the proceedings of all such CSCN meetings and conference calls;
2. Maintains centralized files, including logs, of all CSCN documents;
3. Maintains a current and accurate CSCN distribution list;
4. Prepares and ensures the timely distribution of the CSCN meeting minutes;
5. Performs such other duties as may be prescribed from time to time by the CSCN; and,
6. Sends CSCN Minutes, Agendas and other documents identified by the CSCN for posting to the CRTC CISC Website.

### Central Office (CO) Code Administration including NPA Relief Planning

The CNA performs CO Code administration functions in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline* (Canadian COCA Guideline) for geographic Number Plan Areas (NPAs – i.e., Area Codes) assigned for use in Canada including NPA Relief Planning functions in accordance with the *Canadian NPA Relief Planning Guideline* and the *Canadian Adjunct to the INC NPA Allocation Plan and Assignment Guidelines*.

The CNA also performs CO Code administration functions in accordance with the *Canadian NPA 600 NXX Code Assignment Guideline* and the *Canadian Non-Geographic Code Assignment Guideline* for non-geographic NPAs assigned for use in Canada (i.e., 6YY).

### CNA Role in NANPA Administered Resources

The CNA performs the following tasks with respect to North American Numbering Plan (NANP) number resources, which are controlled by the North American Numbering Plan Administrator (NANPA):

- 1) Receives, validates, and forwards applications from Canadian entities to NANPA for assignment of:
  - a. NPA Codes;

- b. ~~International Inbound NPA 456 NXX Codes~~<sup>12</sup>;
  - c. NPA 9YY NXX Codes;
  - d. NPA 800 855-XXXX line numbers; and
  - e. Carrier Identification Codes (CICs).
- 2) Reclaims resources in certain circumstances.

## Administration of Canadian Numbering Resources

The CNA performs the following administrative tasks:

- 1) Receives, validates and processes requests and maintains records for Non-Geographic Code Assignments (e.g., NPA 600 NXX Codes, NPA 6YY, NPA 9YY and PCS 5YY resources), International Mobile Station Identity (IMSI)/Mobile Network Codes (MNCs), System Identifier Codes (SIDs); Emergency Service Routing Digit (ESRD) Blocks and MIN Block Identifier (MBI) Codes;
- 2) Maintains and publishes lists containing assignment information for Canadian numbering resources and approved Implementation Plans & Notices for N11 codes in Canada;
- 3) Prepares and publishes a CNA Annual Report on the status of Canadian numbering resources;
- 4) Seeks clarification of guidelines approved by CRTC and/or the Alliance for Telecommunications Industry Solutions (ATIS) Industry Numbering Committee (INC) from the CSCN, CRTC staff or CRTC, as necessary;
- 5) Provides 'on request' reports to CSCN related to various numbering topics and data;
- 6) Provides clarification to interested parties with respect to the application of numbering resource guidelines, CRTC and Innovation, Science and Economic Development (ISED) regulations applicable in Canada;
- 7) Participates in the CNA performance review process;
- 8) Investigates number assignment and administration issues, as necessary;
- 9) Seeks resolution, as necessary, from CSCN, CRTC staff or CRTC of number assignments and administration issues (including, but not limited to, frequency, format and content of NRUFs; Relief NPA selection; liaising with other numbering forums in North America);
- 10) Participates in and provides supporting data to the CSCN and CSCN Contribution Development Teams on request;
- 11) Liaises and coordinates the CNA's activities with NANPA to ensure effective and efficient use of NANP resources in Canada;
- 12) Establishes and maintains relationships with ISED and the CRTC;
- 13) Develops and maintains knowledge of numbering activities at the INC and assesses the impacts of any INC activities on Canadian numbering administration and CNA functions;

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<sup>1</sup> In 2017, the Industry Numbering Committee (INC) investigated the use of this resource in their networks and determined that there was no longer a need for NPA 456. INC agreed to sunset the ATIS-0300049, International Inbound NPA (INT/NPA/NXX) Assignment Guidelines and age NPA 456 for five years before the NPA is returned to the general-purpose code pool. On 21 January 2019, the CRTC issued Telecom Decision CRTC 2019-16 which followed the INC Decision and, accordingly, NPA 456 numbers are no longer assignable in Canada.

<sup>2</sup> As of November 2022, 456 NPA was made available in the general purpose NPA code pool. (2022 NANPA Annual Report, section 6.5 ([https://nationalnanpa.com/reports/2022\\_NANPA\\_Annual\\_Report.pdf](https://nationalnanpa.com/reports/2022_NANPA_Annual_Report.pdf)))

- 14) Responds to requests from entities, including but not limited to, participants in the Canadian telecommunications industry, ISED, the CRTC and the media about Canadian numbering resources and their administration;
- 15) Is the primary repository for numbering resource information for the Canadian telecommunications industry; and,
- 16) Communicates, orally and in writing, in both official languages, English and French.

## CSCN Secretary

All the CSCN secretary activities were carried out as required. With the COVID-19 pandemic enduring into 2022 and a lack of interest for face-to-face meetings, the CSCN conducted all plenary meetings virtually.

The 3 plenary CSCN sessions were split up into separate virtual sessions on the following dates:

**Table 1 – Summary of 2022 Plenary CSCN Sessions**

Date	CSCN Session
15 February 2022, 16 February 2022, and 17 February 2022	CSCN 122 (4 virtual sessions)
14 June 2022	CSCN 123 (1 virtual session)
12 October 2022, and 13 October 2022	CSCN 124 (2 virtual sessions)

Copies of the meeting minutes are located at <https://crtc.gc.ca/cisc/eng/cisf3fa.htm#minutes>.

In addition to the regular plenary-session CSCN meetings, the CSCN Secretary recorded minutes and updated documentation for the following extra-plenary CSCN virtual sessions<sup>3</sup>:

**Table 2 – Summary of 2022 CSCN Extra-Plenary Virtual Sessions**

Date	Meeting Topic
25 January 2022	Solutions to numbering exhaust discussion
1 February 2022	CSCN 122 Agenda, and TIF 110
8 February 2022	TIF 110
22 February 2022	TIF 110
1 March 2022	TIF 110
15 March 2022	TIF 110
29 March 2022	TIF 110
5 April 2022	TIF 110
12 April 2022	TIF 110
26 April 2022	TIF 110

<sup>3</sup> NRUF result and RPC calls are recorded elsewhere in this annual report. See Tables 7 and 8.

Date	Meeting Topic
17 May 2022	TIF 110
24 May 2022	TIF 110
31 May 2022	TIF 110
1 June 2022	CSCN 123 Agenda
7 June 2022	TIF 110
14 June 2022	TIF 110
21 June 2022	TIF 110
13 September 2022	TIF 112
27 September 2022	TIF 112
28 September 2022	CSCN 124 Agenda
11 October 2022	TIF 112
24 October 2022	TIF 104
25 October 2022	TIF 112
3 November 2022	TIF 109
8 November 2022	TIF 112
22 November 2022	TIF 112
23 November 2022	January 2023 Annual NRUF contribution
6 December 2022	TIF 112

## CSCN Chair

The CSCN Chair is required to chair all CSCN meetings and virtual sessions and attend all CISC meetings and virtual sessions as well as prepare and present reports to the CISC concerning CSCN activities. CNA staff also participated in the following CISC meetings:

***Table 3 – Summary of 2022 CISC Meetings Attended***

Date	Meeting Type
26 January 2022	Email Walkaround
10 March 2022	Virtual Meeting
9 June 2022	Email Walkaround
30 June 2022	Email Walkaround
8 August 2022	Email Walkaround
26 September 2022	Email Walkaround

Two CSCN Chair reports were presented to the CISC during 2022, providing updates about the current CSCN TIFs.

## Geographic Central Office (CO) Code Administration

Canada is a member of the NANP. NANP telephone numbers are in the format NXX-NXX-XXXX where N is equal to 2 through 9 and X is equal to 0 through 9. The first NXX in a telephone number is the Numbering Plan Area (NPA) Code (i.e., Area Code), the second NXX is the CO Code and the XXXX is the line number.



When an eligible TSP in Canada requires the assignment of a block of telephone numbers, an application is submitted to the CNA requesting the assignment of a CO Code and its associated 10,000 line numbers. The CNA reviews the application to ensure that the service provider is eligible for the assignment of the CO Code in accordance with the CRTC-approved Canadian COCA Guideline. Once it is determined that the applicant has met all eligibility criteria and the application is completed with the correct data, a CO Code is selected, and the data is entered into the Canadian Numbering Administration System (CNAS) and the iconectiv® TruOps Telecom Routing Administration (TRA) Business Integrated Routing & Rating Database System (BIRRDs) Assigned Code Record (ACD) screen. After the data is entered, the applicant is officially notified of the assignment using a Part 3 form. A Part 4 form is submitted to the CNA once the CO Code has been placed in service by the Code Holder and the CNA subsequently updates the CNAS with the in-service condition.

The CO Code listings are updated daily on the CNA website at [https://www.cnac.ca/co\\_codes/co\\_code\\_status.htm](https://www.cnac.ca/co_codes/co_code_status.htm). The Canadian COCA Guideline, which was developed by the CSCN and approved by the CRTC, may be found at <https://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>.

An applicant is never denied the assignment of a CO Code due to the improper completion of an application. CNA staff members work with the applicant until the application is completed correctly. However, in 2022, 31 applications were denied, suspended or cancelled because the applicants did not respond to the CNA's requests for additional documentation, had not obtained CRTC staff approval within the fourteen-calendar day processing period allowed by the Canadian COCA Guideline, had cancelled the application themselves or were denied because the applying entity was on the CNAC suspended list.

The following table lists the Geographic CO Code Administration activity by month in 2022. It should be noted that all the CO Code administration activities were completed within the timeframes stipulated in the Canadian COCA Guideline. The average time to process a CO Code application in 2022 was 7.99 calendar days.

**Table 4 – Summary of CO Code Administration Activity in 2022**

Month	Part 1 Initial/Growth	Part 1 Update	Bulk A	Bulk B	Reclaimed	Other	Total
January	121	2	0	0	0	1	124
February	58	13	0	0	3	0	74
March	150	25	0	0	1	2	178
April	80	7	0	0	5	2	94
May	126	54	0	0	0	7	187
June	98	26	0	0	2	1	127
July	85	17	0	0	0	0	102
August	154	76	0	0	2	4	236
September	158	60	0	0	1	15	234
October	128	61	0	0	1	6	196
November	90	26	0	0	2	1	119
December	61	21	0	0	9	0	91
2022 Total	1309	388	0	0	26	39	1762

The following table summarizes CO Code Administration annually from 2001 to 2022.

**Table 5 – Summary of Historical CO Code Administration**

Year	Part 1 Initial/Growth	Part 1 Update	Bulk A	Bulk B	Reclaimed	Other	Total
2001	572	305	110	374	112	56	1529
2002	358	290	0	192	56	68	964
2003	335	343	0	64	30	21	793
2004	453	280	13	45	44	88	923
2005	649	259	116	0	40	30	1094
2006	933	359	330	55	51	41	1769
2007	1028	254	42	0	90	61	1475
2008	992	198	10	0	131	28	1359
2009	645	163	105	19	76	12	1020
2010	1022	180	15	41	54	20	1332
2011	808	214	149	56	29	7	1263
2012	829	122	112	23	27	13	1126
2013	808	134	0	104	48	33	1127
2014	687	167	108	117	63	13	1155
2015	869	103	53	63	36	15	1139
2016	1572	145	150	0	32	17	1916
2017	1149	261	486	0	52	42	1990
2018	1582	186	213	0	12	7	2000
2019	837	723	0	0	55	18	1633
2020	931	186	0	0	15	9	1141
2021	1114	464	0	0	6	79	1663
2022	1309	388	0	0	26	39	1762

Part One Initial/Growth applications are the quantity of CO Code Applications processed by the CNA that resulted in the assignment of new CO Codes. These would include applications for Initial, Additional Codes for Growth or Additional Codes for a Unique Purpose.

Part One Update applications are the quantity of CO Code Applications processed by the CNA to update data in the CNAS and the ACD screens. These applications are made using Part 1 - CO Code Assignment, Reservation, Information Change, or Return forms detailing the appropriate changes for the affected CO Code. This process includes changes such as, but not limited to, the OCN, switching entity/POI and Rate Center/Exchange Area name.

Part One Bulk A applications are the quantity of CO Code Applications processed by the CNA that are received in volume and require a significantly reduced level of effort to process, compared to the Part 1 applications discussed above. The CNAC Board has agreed that Bulk A applications will meet the following criteria:

- A Part One Application is required in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline*;
- The Assigned Code Record (ACD) screen must be already opened;
- One or two identical changes to the same data element;
- No error checking on the part of the CNA is required;
- Applications relate to updated information only;
- There must be at least ten NXXs involved; and,
- The normal fourteen calendar day processing time does not apply.

Part One Bulk B applications are the quantity of CO Code Applications that are processed by the CNA and are received in volume and meet the following criteria as agreed to by the CNAC Board:

- A Part One Application is required in accordance with the *Canadian Central Office Code (NXX) Assignment Guideline*;
- The Assigned Code Record (ACD) screen must be already opened;
- Three or more changes to the same data elements are required; or
- Identical changes to three or more data elements are required; or
- Differing changes made to three or more or numerous data elements are required;
- Error checking is provided by the CNA;
- Applications relate to updated information only;
- There must be at least ten NXXs involved; and,
- The normal fourteen calendar day processing time does not apply.

Part One Recovered CO Code applications are the quantity of CO Code Applications processed by the CNA to reclaim CO Codes for the following reasons:

- a) The CO Code is no longer required by the Code Holder for the purpose originally assigned;
- b) The service for which the CO Code was assigned is discontinued;
- c) The CO Code Holder has ceased operation;

- d) The CO Code was assigned, but not used in conformance with the *Canadian Central Office Code (NXX) Assignment Guideline*; or
- e) The CO Code was not placed In-Service within the time frame specified in the *Canadian Central Office Code (NXX) Assignment Guideline*.

These applications are made using Part 1 - CO Code Assignment, Reservation, Information Change, or Return forms or through the CO Code reclamation process.

The “Other” column generally represents Cancelled, Suspended or Denied CO Code applications tracked as miscellaneous by the CNAS performance tracking.

## Numbering Resource Utilization Forecast (NRUF)

Each NPA Code contains approximately 760 to 780 assignable CO Codes, depending on the NPA. The CNA is required to determine the approximate date when all assignable CO Codes will exhaust in each NPA to begin NPA relief planning activities to ensure that enough telephone numbers and CO Codes remain available for assignment prior to the introduction of a new NPA. This is achieved by conducting the annual NRUF.

In accordance with the *Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline*, during the fourth quarter of each year the CNA requests all existing and prospective CO Code Holders to complete the General Numbering Resource Utilization Forecast (G-NRUF) worksheet and return it to the CNA by February for analysis. On the worksheet, the Code Holders list the number of CO Codes, by NPA complex, that are assigned to them as well as forecast the number of CO Codes they expect to require, by NPA complex, in each of the next six years.

During the CNA's analysis of the data provided on the worksheets, any discrepancy between the CNA database and the number of assigned CO Codes that the Code Holder has indicated on the worksheet is discussed with the Code Holder to ensure that the data is correct. The CNA also scrutinizes the Code Holder's forecast data to compare it against previous years' forecasts to detect any large deviations. The CNA contacts the Code Holder to determine why the deviation has occurred and to ensure that no errors were made. Additionally, the CNA verifies any forecasts from new entrants that appear to be inflated. The CNA discusses the forecast with the new entrant and offers educated assistance to ensure that the forecast is valid. Any large discrepancies or unusual forecasts are reported to CRTC staff for their information and approval/action before the final aggregate data is published by posting on the CNA website and presented to the CSCN. The CNA meets with CRTC staff to discuss the NRUF results in detail before they are released to the CSCN and NANPA.

When the G-NRUF indicates that an NPA will exhaust within or at about 72 months (the Relief Window), the CNA begins conducting Relief Planning NRUFs (R-NRUFs) at six-month intervals in accordance with the current CRTC-approved *Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline*. When the exhaust is forecast to be within 36 months, the CNA request a Notice of Consultation from CRTC staff. The Notice is used to inform the public that NPA relief is required and solicits interested parties to be part of the NPA Relief Planning Committee.

When NRUF results indicate that the forecast demand for CO Codes in an NPA exceeds the supply of CO Codes under situations described in Section 9.1 of the *Canadian NPA Relief Planning Guideline*, a

Jeopardy Condition is declared. Under a Jeopardy Condition, the CNA conducts quarterly Jeopardy NRUFs (J-NRUFs). In the event of a J-NRUF, Code Holders and prospective Code Holders submit two versions of their forecast – one that includes code assignment restrictions based on the Jeopardy Contingency Plan and one that includes no code assignment restrictions.

In cases where detailed forecasts of CO Code growth for a particular NPA is required in circumstances other than those covered by the other types of NRUFs, a Special NRUF (S-NRUF) may be conducted.

During 2022, the CNA conducted the following G-NRUF, R-NRUF, J-NRUF and S-NRUF as indicated in the following table.

**Table 6 – Summary of 2022 NRUFs**

NRUF Type	Due Date	NPA/Complexes
G-NRUF	1 February 2022	All geographic NPAs (excluding exhausting NPAs)
G-NRUF	1 February 2022	Non-Geographic NPAs using numbers in NPAs 5XX, 600, 6YY and 9YY
R-NRUF	1 February 2022	<ul style="list-style-type: none"> <li>• 226/382/519/548 (Southwestern Ontario)</li> <li>• 236/250/604/672/778 (British Columbia)</li> <li>• 249/683/705 (North-Central Ontario)</li> <li>• 263/438/514 (Metro Montréal)</li> <li>• 354/450/579 (Suburban Montréal Area)</li> <li>• 416/437/647 (Metro Toronto)</li> <li>• 428/506 (New Brunswick)</li> <li>• 709/879 (Newfoundland and Labrador)</li> </ul>
S-NRUF	1 February 2022	<ul style="list-style-type: none"> <li>• 204/431/584 (Manitoba)</li> <li>• 343/613/753 (Eastern Ontario)</li> <li>• 468/819/873 (Northern and Western Québec)</li> </ul>
J-NRUF	1 February 2022	<ul style="list-style-type: none"> <li>• 368/403/587/780/825 (Alberta)</li> </ul>
S-NRUF	15 April 2022	<ul style="list-style-type: none"> <li>• 204/431/584 (Manitoba)</li> <li>• 468/819/873 (Northern and Western Québec)</li> </ul>
R-NRUF	29 July 2022	<ul style="list-style-type: none"> <li>• 226/382/519/548 (Southwestern Ontario)</li> <li>• 236/250/604/672/778 (British Columbia)</li> <li>• 416/437/647 (Metro Toronto)</li> <li>• 428/506 (New Brunswick)</li> </ul>

All the 2022 NRUF results may be found at <https://www.cnac.ca/NRUF/NRUF.htm#Results>.

The following joint conference calls were with the CSCN and corresponding RPCs to review NRUF results in 2022:

**Table 7 – Summary of 2022 NRUF Results Conference Calls**

Date	Description
21 March 2022	January 2022 All NRUF results
N/A	April 2022 S-NRUF results (frozen forecasts/not required)
1 September 2022	July 2022 R-NRUF results

# NPA Relief Planning

NPA relief planning is a public process that is described in the *Canadian NPA Relief Planning Guideline*, which may be found at <https://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>. To increase public awareness and participation in the NPA relief planning process, the CRTC has determined that NPA Relief Planning Committees (RPCs) are to be established as ad hoc sub-committees of the CISC. The CNA is required to create and maintain NPA Relief Planning Committee distribution lists, which are frequently updated as participants in the relief planning process are not static.

The information provided by the various NRUFs is used in the development of relief options that are included in the Proposal for Relief of an Overlay [NPA] Complex (PROC) or the Initial Planning Documents (IPDs (in NPAs where 7-digit dialling is still in effect)). The PROC or IPD is posted on the CNA website and a notification is sent to current and prospective CO Code Holders in the affected NPA complex and to any other party that contacted the CNA with an interest in the ensuing NPA relief activities (e.g., municipalities, public interest groups and the Canadian Security Association). Parties are invited to submit contributions suggesting other relief planning options and to participate in the first RPC meeting.

The following table identifies the 9 RPC meetings held in 2022 which were not related to NRUF results<sup>4</sup>:

**Table 8 – Summary of 2022 RPC Meetings**

Date	Committee	Description
18 February 2022	NPA 343/613 & NPA 403/587/780/825 RPCs	Review NITF and CATF Progress Reports
27 April 2022	NPA 249/705 RPC	Review NITF and CATF Progress Reports
11 May 2022	NPA 204/431, NPA 343/613, NPA 438/514, NPA 450/579 & NPA 819/873 RPCs	Review NITF and CATF Progress Reports
3 June 2022	NPA 403/587/780/825 RPC	Review NITF and CATF Progress Reports
3 August 2022	NPA 204/431, NPA 438/514, NPA 450/579 & NPA 819/873 RPCs	Review NITF and CATF Progress Reports
12 September 2022	NPA 204/431 RPC	Review NITF Progress Report
17 October 2022	NPA 236/250/604/672/778 RPC	Initial RPC meeting
20 October 2022	NPA 416/437/647 RPC	Initial RPC meeting
7 December 2022	NPA 204/431, NPA 438/514, NPA 450/579 & NPA 819/873 RPCs	Review NITF and CATF Progress Reports

The initial and all subsequent RPC meetings are chaired by the CNA, which also supplies the NPA Relief Planning Co-ordinator and the RPC secretary. The meeting minutes are prepared by the RPC secretary.

At the initial meeting, IPDs/PROCs are discussed in detail so the Committee members can become familiar with the NPA from a geographic, demographic, Exchange Area and NRUF point of view.

<sup>4</sup> NRUF result calls are recorded elsewhere in this annual report. See Table 7.

Additionally, the Relief Options contained in the IPD/PROC are discussed in detail as are any contributions received by the CNA from any interested party.

During the RPC meetings, the Committee modifies the IPD/PROC or an interested party contribution to become the Planning Document (PD). The Committee will normally come to consensus on a recommended Relief Option. Where an IPD is utilized, the recommended relief option will be compared to other relief options either proposed in the IPD or considered by the RPC and this comparison will be included in the PD, which is forwarded to the CRTC via the CISC process.

There were 2 RPC chair reports prepared for the CISC concerning the ad hoc relief planning committees' activities during 2022.

## CNA Role in NANPA Controlled Resources

In addition to NPA Codes, the NANP contains other numbering resources. These numbering resources are also assigned to Canadian telecommunications providers by the NANPA via the CNA. Applications for these resources are received by the CNA and reviewed for accuracy to ensure that the applicant meets Canadian regulatory requirements. Complete and correct applications are forwarded to the NANPA along with a recommendation for assignment. The CNA will deny the assignment of these resources and return the application where the applicant does not meet Canadian regulatory requirements or the requirements of the applicable assignment guideline or its Canadian adjunct. No application is rejected because it is not completed correctly unless it is impossible to acquire the necessary information from the applicant. The CNA works with the applicant until the application is properly completed. Once the NANPA has assigned a code, it is forwarded to the CNA who informs the applicant of the assignment. The CNA acts as the Canadian telecommunications industry liaison with the NANPA.

The CNA keeps a separate listing of most resources assigned to Canadian entities along with links to the associated Canadian guidelines, INC assignment guidelines and the associated Canadian Adjuncts to those guidelines. These items may be accessed through the CNA website at <https://www.cnac.ca/> by using the "Numbering Resources" drop-down menu item.

The CNA is required to receive, validate, and forward applications from Canadian entities to NANPA for assignment of the following resources:

- NPA Codes (on behalf of Canada);
- NPA 9YY NXX Codes;
- NPA 800 855-XXXX line numbers; and
- Carrier Identification Codes (CICs).

Two Geographic NPA Codes were assigned in 2022 bringing the total quantity of Canadian Geographic NPAs assigned, as of 31 December 2022, to 53. The following table summarizes the NPAs assigned to Canada in 2022.

**Table 9 – Summary of NPAs Assigned to Canada in 2022**

<b>NPA</b>	<b>Purpose</b>	<b>Date of Assignment</b>
NPA 584	Geographic NPA Relief	25 February 2022
NPA 382	Geographic NPA Relief	25 February 2022

During 2022, the following NANPA controlled resource activity occurred (counts during the year represent confirmations that were received back from NANPA):

**Table 10 – Summary of 2022 NANPA Controlled Resource Activity**

<b>NANPA Resource</b>	<b>New Codes</b>	<b>Updated Codes</b>	<b>Recovered Codes</b>	<b>Total</b>
<b>NPAs</b>	2	n/a	0	<b>2</b>
<b>NPA 9YY NXXs</b>	0	0	0	<b>0</b>
<b>NPA 800 855-XXXX</b>	0	0	0	<b>0</b>
<b>CICs</b>	0	16	0	<b>16</b>

## CNA Role in iconectiv® Controlled Resources

SS7 resources are assigned to Canadian telecommunications entities by iconectiv with the assistance of the CNA in its capacity as a facilitator. The CNA does act as the Canadian telecommunications industry liaison with iconectiv when necessary.

A description of SS7 Network Codes and the Global Title Translation (GTT) Point Code Industry Notification Process, which is facilitated by CRTC staff, may be accessed through the CNA website at <https://www.cnac.ca/> by using the “Numbering Resources | Other Codes” drop-down menu item. It should be noted that a list of these resources does not currently appear on the CNA website at the request of the industry, as they are considered proprietary.

## Other Administration Activities

### Other Canadian Numbering Resources

The CNA is required to receive, validate, and process requests and maintain records of other Canadian administered numbering resources. A description of these resources and a listing of assignments may also be found on the CNA website at <https://www.cnac.ca/> by using the “Numbering Resources” drop-down menu item for the following resources:

- 600 NXX Codes
- Canadian Emergency Service Routing Digit (ESRD) Blocks
- Canadian MIN Block Identifier (MBI) Blocks
- System Identifier Codes (SIDs)
- Mobile Network Code (MNC) portion of International Mobile Station Identifier Codes (IMSI)s
- Canadian Non-Geographic Code numbering resources (6YY NXX)



The following table summarizes the 2022 Other Canadian Numbering resource activity that occurred and includes the average time to process in days:

**Table 11 – Summary of 2022 Other Canadian Numbering Resource Activity**

Resource	New Codes	Updated Codes	Recovered Codes	Total	Average Processing Time (days)
600 NXXs	0	0	0	0	n/a
ESRD Blocks	1	0	1	2	0.50
MBI Blocks	171	0	0	171	4.15
SIDs	0	0	0	0	n/a
MNCs	5	8	2	15	4.54
6YY NXXs	147	2	0	149	8.49

**Note on the Requirement of MBI Resource in Canada**

In 2021 the CNA, as the Canadian MBI Administrator (CMA), presented a report at CSCN 120 titled “Canadian MBI Administrator Report on Industry Usage of MBIs” that detailed the results of an industry-wide survey of both users and non-users of MBI resources. Based on the survey and subsequent conversations with block holders, the CMA concluded that it appeared that MBIs are likely no longer required at a network level for wireless operations in Canada. It further concluded that only a single entity had built the MBIs into downstream administrative systems or processes and therefore still required the blocks for that reason.

The CMA made recommendations in the report, that the CSCN may find it prudent to examine sunseting the use of MBIs by the Canadian industry and that the single entity could internally administer their own serial numbers going forward.

During the survey and research period, all MBI resource holders except for the single entity still utilizing the numbers, elected to return all their MBI resources to the CMA resulting in a return of 30,479 blocks as they were no longer required for their intended purpose.

The CMA continued to administer MBI codes throughout 2022 and will continue until such time as the resource is recommended to be sunset by the CSCN through the CISC process. As of 31 December 2022, there were 48,577 MBI blocks assigned to the single remaining code holding entity.

## Industry Fora Participation

### CSCN

CNA staff members participated at the CSCN in reviewing contributions associated with the following TIFs during 2022:

- TIF 109 - Reconcile the approved Appendix B with the Canadian NPA Relief Planning Guideline
- TIF 110 - Identify Solutions to Mitigate NPA and NXX Numbering Exhaust
- TIF 111 - Setting aside of 8(5) reserved Canadian Geographic NPA Codes for relief of exhausting NPA complexes
- TIF 112 - Address assignment rate of Non-Geographic (6YY) CO Codes

In August 2022, the CNA also provided a contribution to the CSCN to address the 2022 NRUF process.

### ***CIGRR***

To ensure that the CNA is up to date with CSCN activities and to ensure that the CSCN can develop and modify number assignment guidelines, the CNA attends a number of industry fora in the United States (US). The CNA attended Common Interest Group on Routing and Rating (CIGRR) meetings to ensure that the Canadian industry is aware of rating and routing changes in the US that affect Canada and Canadian assignment guidelines. The CNA attended the following CIGRR meetings in 2022 as virtual sessions:

***Table 12 – Summary of 2022 CIGRR Meetings Attended***

<b>Date</b>	<b>Meeting</b>
18-19 January 2022	CIGRR Full Session
3 February 2022	Task item C273 - Review/Update LERG Educational Document
5-6 April 2022	CIGRR Full Session
15 June 2022	Proposed Issue - Allow unique routing information to be added to BIRRDs/LERG for non-geographic 5XX-NXXs
12-14 July 2022	CIGRR Full Session
25-27 October 2022	CIGRR Full Session

### ***Canadian CIGRR***

The Canadian Common Interest Group on Routing and Rating (CIGRR) was implemented to ensure that the Canadian industry is aware of routing and rating changes in the US that affect Canada, and to develop Canadian-only solutions to routing and rating issues. The CNA attended the following meetings during 2022 as virtual sessions:

***Table 13 – Summary of 2022 Canadian CIGRR Meetings Attended***

<b>Date</b>	<b>Meeting</b>
3 March 2022	Canadian CIGRR Full Session
8 June 2022	Canadian CIGRR Full Session
15 September 2022	Canadian CIGRR Full Session

The CNA also contributed to drafting the Canadian CIGRR Charter during 2022.

### ***INC***

The CNA is required to develop and maintain knowledge of numbering activities at the ATIS Industry Numbering Committee (INC) and assess the impacts of any of their activities on Canadian numbering administration processes and CNA functions. The CNA (through COMsolve) maintains an ATIS membership and receives all INC working group related correspondence, submissions and draft proposals. The CNA attended several INC meetings by virtual sessions. The CNA delivered four summaries of INC issues that could affect Canadian assignment guidelines to the CSCN following all INC general meetings. The CNA attended the following INC virtual sessions during 2022:

**Table 14 – Summary of 2022 INC Meetings Attended**

Date	Meeting
16 February 2022	INC 177 Part 1 of 3 (Virtual)
22 February 2022	INC 177 Part 2 of 3 (Virtual)
24 February 2022	INC 177 Part 3 of 3 (Virtual)
17 May 2022	INC 178 Part 1 of 2 (Virtual)
26 May 2022	INC 178 Part 2 of 2 (Virtual)
9 August 2022	INC 179 Part 1 of 3 (Virtual)
17 August 2022	INC 179 Part 2 of 3 (Virtual)
18 August 2022	INC 179 Part 3 of 3 (Virtual)
8 September 2022	INC interim meeting to discuss correspondence to Number Portability Industry Forum (NPIF) (Virtual)
7 November 2022	INC 180 Part 1 of 2 (Virtual)
10 November 2022	INC 180 Part 2 of 2 (Virtual)

## Website

The CNA is required to establish and maintain a public Internet website at <https://www.cnac.ca/>. The CNA website contains numbering information, which is unique to Canada, and generally it does not duplicate information that is available on the NANPA website (<https://nationalnanpa.com/>). The CNA website provides a brief description of the information that is contained on the NANPA website, including the NANPA Internet website address.

The following information is available on the CNA Internet website:

1. CNA mandate, mailing address, contact names, telephone numbers, and email addresses;
2. Canadian Numbering Administration Consortium (CNAC) background, mailing address, contact names, telephone numbers, User Service Agreements, and email addresses;
3. Canadian Geographic NPA Information including a Map of Canada showing Canadian Geographic Area Codes (NPAs) and a list of CO Codes and the status of each (e.g., assigned, reserved, protected, test, available) in both a friendly and a downloadable data file format;
4. Canadian Non-Geographic NPA and CO Code information. Non-Geographic NPA CO Codes are not associated with Exchange Areas and cannot be shown on a map. A list of Non-Geographic CO Codes and the status of each (e.g., assigned, reserved, protected, experimental, available) in both a friendly and a downloadable data file format is available;
5. A list of Canadian National Numbering Resources;
6. Unique CRTC-approved Number Resource Assignment Guidelines, including the *CSCN Adjunct to the CISC Administrative Guidelines* and links to the CRTC website;
7. List of INC Number Resource Assignment Guidelines which apply in Canada plus the address of the website where copies may be obtained;
8. Other CNA information or reports as directed by CNAC and the CRTC;
9. CNA Annual Reports;
10. CSCN Information;

11. CSCN Distribution List instructions<sup>5</sup>;
12. Current Schedule of CSCN meetings and conference calls;
13. Most recent Draft CSCN Meeting Minutes;
14. Applicable NPA Relief Planning documentation; and,
15. Historical NRUF results and the latest NRUF forms and instructions.

This information is updated on a timely basis when the CNA receives new information and, at a minimum, once every week. In 2022 the website generated the following statistics from Google Analytics:

**Table 15 – Summary of 2022 *www.cnac.ca* Website Analytics**

Metric	Value
Sessions <sup>6</sup>	145,255
Pageviews <sup>7</sup>	259,003

In the latter half of 2021 and first quarter of 2022, the CNA worked closely with the CNAC executive to develop an update to the CNA website. The changes included new CNA branding, a modernized look-and-feel and added functionality using a modern-day framework. The Website changes were completed by 15 March 2022.

Additionally, the website was updated for accessibility and currently achieves a 98% 'A'-level rating for Web Content Accessibility Guidelines (WCAG) 2.0, with the major exception being 3rd-party documents, which the CNA is required to host.

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<sup>5</sup> In an agreement reached at CSCN 123 (2022-06-14), the committee requested that the CSCN Distribution List no longer be published on the CNA website.

<sup>6</sup> **Session** - "The period of time a user is active on your site or app. By default, if a user is inactive for 30 minutes or more, any future activity is attributed to a new session. Users that leave your site and return within 30 minutes are counted as part of the original session." (<https://support.google.com/analytics/answer/6086069?hl=en>)

<sup>7</sup> **Pageview** - "A pageview (or pageview hit, page tracking hit) is an instance of a page being loaded (or reloaded) in a browser. Pageviews is a metric defined as the total number of pages viewed." (<https://support.google.com/analytics/answer/6086080?hl=en>)