



# North American Numbering Plan Planning Letter

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Subject: North American Numbering Plan  
Numbering Plan Area Codes - 1997 Update

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This document is an annual report to the industry on Numbering Plan Area (NPA) codes and provides an update on NPA assignments, geographic NPA relief methods, changes taking place in the North American Numbering Plan (NANP), planning for the expansion of the NANP, and maps showing the locations of all NPAs.

Questions concerning the contents of the attached document may be referred to Jim Deak, Bellcore, at 908-699-6612.

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**NORTH AMERICAN  
NUMBERING PLAN**

**1997 AREA CODE  
UPDATE**

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## 1. Introduction

This report, published annually in January, provides an update on Numbering Plan Area (NPA) code assignments and related activities. Here is a summary of what you will find on the pages that follow.

Section 2 of this report provides a brief history and description of the North American Numbering Plan (NANP). On January 1, 1995, the NANP underwent the most significant change ever since its inception in 1947. Changing the NPA code format made 640 additional NPA codes available for use, substantially extending the life of our current ten-digit telephone numbers.

Section 3 of this report explains the options for providing NPA relief (split, overlay, or boundary realignment) and describes the processes and industry guidelines used in developing relief plans. In the past the great majority of new NPA codes have been introduced through geographic splits. In 1996 a variation to the split option was introduced, in which an exhausting NPA is split into three parts, requiring the assignment of two new area codes.

Section 4 summarizes numbering changes made in 1996 and those expected in 1997. Twenty-one new area codes were introduced in 1996, a record. The new NPA codes included 888 for toll free service, and individual NPA codes for many Caribbean islands. In 1997 Guam and the Commonwealth of the Northern Mariana Islands (CNMI) will join the North American Numbering Plan and introduce their own area codes in place of the international dialing arrangements now in use. Based on current information, it is expected that at least thirty-seven new area codes will be introduced in the NANP during 1997.

Section 6 presents information, in tabular format, about current and projected NPA relief activities.

Section 7 lists the NPAs projected to exhaust within the next ten years. This data is based on an annual survey called the Central Office Code Utilization Survey (COCUS). COCUS is used as a planning tool by NPA coordinators to develop NPA relief plans.

Section 8 discusses the eventual exhaust of the North American Numbering Plan, a growing concern because of the large number of NPA code assignments in recent years. This section explains how the NPA codes are being used, presents some of the reasons for increased demand, and describes the process and assumptions used to predict approximately when the NANP will exhaust. This section also describes briefly the efforts in progress by the industry to identify NANP expansion alternatives and to eventually select an expansion plan.

Sections 9 and 10 provide complete listings of all NPAs in alphabetical and numerical order. These listings include NPAs that have been formally assigned by NANPA and are scheduled to be introduced in 1997 or 1998.

Section 11 provides maps showing the approximate locations of all area code boundaries.

We get many calls asking about the roles of the various groups involved in number administration. Here is some background information we hope will be helpful. When AT&T introduced the NANP in 1947, they established a two-level administrative structure. AT&T itself administered NPA codes centrally, and the local exchange carriers administered the central office codes and line numbers within their service areas. Coincident with the divestiture of the Bell System in 1984, the Court assigned AT&T's responsibility for central number administration to Bellcore.

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Bellcore's role in number administration includes assignment of NPA codes, carrier identification codes, and other numbering resources that lend themselves to centralized administration. The Bellcore group responsible for central administration is known in the industry as NANPA, short for NANP Administration. During 1995, the FCC ordered that NANP administration in the US should be transferred to a "neutral third party" and created a new policy/advisory board called the North American Numbering Council (NANC). It is expected the selection of a new NANPA and the transfer of administration functions will take place sometime during 1997. Information on the NANC can be found by accessing the FCC's internet web site at <http://www.fcc.gov>.

Although seven-digit local telephone numbers are administered by local exchange carriers, Bellcore's Traffic Routing Administration (TRA) group maintains a database of central office code assignments, and publishes this information in many forms for use by the industry under license contract agreements. Call the TRA hot line on 908-699-6700 to request a copy of their product catalog or access their material on Bellcore's internet web site at <http://www.bellcore.com>.

NANPA assigns resources under its control using industry-consensus assignment guidelines developed by the Industry Numbering Committee (INC), a standing committee under the Alliance for Telecommunications Industry Solutions (ATIS) Carrier Liaison Committee (CLC). Information about the INC, its purpose, meeting schedule, meeting notes, assignment guidelines, etc. can be obtained by accessing the ATIS web site <http://www.atis.org>.

The Federal Communications Commission has asserted plenary jurisdiction in numbering in the US and maintains a strong interest in numbering issues. The FCC's Network Services Division may be contacted at 202-418-2320, by TDD at 202-632-6999, or on the internet at <http://www.fcc.gov>.

## 2. North American Numbering Plan

The North American Numbering Plan (NANP) specifies a 10-digit format for telephone numbers, each of which is composed of a 3-digit NPA code, followed by a 3-digit central office code (or prefix), followed by a 4-digit line number. AT&T developed the NANP in 1947, and the first area codes were introduced in the early 1950's.

The format of a NANP number is

**NXX-NXX-XXXX**

where N is any digit 2 through 9 and X is any digit 0 through 9. The NANP conforms to the International Telecommunications Union Telecommunications Sector (ITU-TS) Recommendation E.164, which governs the format and structure of telephone numbers throughout the world.

The NANP is an integrated plan that serves the needs of the United States (including Puerto Rico and the US Virgin Islands), Canada, Bermuda and the following Caribbean countries: Anguilla, Antigua/Barbuda, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Turks & Caicos Islands, and Trinidad & Tobago. In 1997 Guam and the CNMI will also join the NANP.

Dialing the NANP number alone in many cases is not sufficient to place a call. Additional needs such as carrier selection, operator assistance, and toll call identification are not provided for in the NANP number. These needs are met by requiring the caller to dial additional digits, e.g., 1, 0, or 10XXX. Dialing procedures are determined at the local level, e.g., by state regulatory agencies in the US, and vary somewhat throughout the area served by the NANP. A prime example of how these procedures differ is the way callers dial toll calls terminating within their own area code. In some states, such toll calls are dialed on a 7-digit basis, i.e., without an area code, while in other states, such calls are dialed using the digit "1" as a toll indicator followed by the full 10-digit number, i.e., including the area code

Early in 1997, the INC adopted a recommendation for the implementation of a uniform dialing plan throughout the NANP. The benefits of a uniform dialing plan include reducing customer confusion, particularly in today's mobile society, and fostering a more competitive environment. The INC recommends that the long term goal should be the use of 10-digit dialing for all calls, both local and toll. The industry recognizes that this recommendation is subject to regulatory approval; and a resolution of the continued need for "1+" as a toll indicator, or the establishment of an alternate toll indicator, will be required. Included in the recommendation are methods of migrating from current dialing plans to the new recommended plan, which would vary depending on whether or not "1+" is used currently as a toll indicator. A document will be available early in 1997, entitled *Industry Numbering Committee (INC) Uniform Dialing Plan*, which explains the new recommendation.

A complete description of the North American Numbering Plan can be found in Section 3 of *BOC Notes on the LEC Networks 1994*, document SR-TSV-002275, Issue 2, April 1994 which may be obtained by contacting Bellcore's document hotline at 1-800-521-CORE.

### 3. NPA Relief Methods

NANPA assigns additional NPA codes to provide relief in geographic NPAs in which the supply of central office codes is nearing exhaust. Relief can be accomplished in several ways: boundary realignment, split, and overlay. These relief methods are briefly described below.

A *boundary realignment* involves shifting the boundary line between two adjacent NPAs, one nearing exhaust and one with spare capacity. The effect is to shift some central office codes from the NPA that is nearing exhaust to the NPA with spare capacity. Only the subscribers in the geographic area between the old and new NPA boundaries are directly affected by the change, but subscribers may have to accept new 10-digit number changes if their central office code is not available in the new NPA code. Generally speaking, boundary realignments tend to provide short term relief and are seldom used as the primary relief method.

In a *split*, the NPA nearing exhaust is split into two (or more) geographic areas, typically leaving the existing NPA code to serve the area with the highest customer density (in order to minimize number changes), and assigning a new NPA code to the remaining area(s). Historically speaking, the split has been the standard way to introduce new area codes, and it is relatively well understood by the public. The primary disadvantage of a split is that a significant number of subscribers must change to the new area code.

*Overlays* resolve the increasingly difficult problem of finding workable split boundaries in high-growth areas, particularly large metropolitan areas. In an overlay, relief is provided by opening up a new NPA code within the same geographic area served by the NPA code requiring relief. Numbers from the new NPA code are assigned to all service providers to accommodate new growth. Ideally, the overlay method eliminates the need for subscriber number changes, and typically does not require a permissive dialing period. In order to insure dialing parity in the US, the FCC has directed that 10-digit dialing shall be used for all local calls between and within overlay NPAs.

The method of relief to be used, e.g., split or overlay, is determined by the industry at the local level, often with the involvement and/or approval of state or other governmental regulatory agencies. To provide as much consistency as possible, the telecommunications industry has developed guidelines to be used in the development of relief plans and in the assignment of NPA codes to satisfy those relief plans. Key documents in this process are listed below. Information on these documents may be obtained from the ATIS web site mentioned in Section 1 above and some of them are now downloadable.

Document No.	Title
INC 94-1216-004	NPA Code Relief Planning Guidelines
INC 96-0308-011	NPA Allocation Plan and Assignment Guidelines
ICCF 92-1127-006	Industry Notification of NPA Relief Activity Guidelines
ICCF 92-0726-004	Recommended Notification Procedures to Industry for Changes in Access Network Architecture

#### 4. Numbering Changes

In 1995 an important numbering change took place that will continue to have a long term influence on the usefulness of the NANP, i.e., the introduction of a new format for NPA codes, and is therefore mentioned once again in this 1997 annual report. The middle digit of all NPA codes introduced after January 1, 1995 may be any number 0 through 9, not just 0 or 1 as required previously. The change provides 640 new area codes, increasing the capacity of the NANP from slightly less than one billion numbers to more than six billion numbers, enough to last well into the next century. AT&T and Bell Laboratories designed this change in the 1960s.

Implementation of the new NPA code format impacted every segment of the industry. Switching equipment hardware and software (including customer premises equipment such as PBXs), operations support systems, and customer dialing procedures required significant modification. All carriers and customer premises equipment owners needed to ensure that their equipment was ready to process new NPA codes by January 1, 1995.

Early in 1995 it became apparent that some systems, particularly customer-owned PBXs, had not yet been upgraded to accommodate the NPAs in the new format, and the FCC launched a public awareness program to highlight the need for system upgrades. This effort continued into 1996; and, based on the reduction in the number of complaints, it appears that progress is being made. Even so, 100% compliance has not been achieved, and some PBXs and other customer premises equipment still need upgrades. Here are some common problems indicating the need for upgrades:

- Equipment may not recognize the new NPA codes, and may attempt to complete calls after 7 digits have been dialed.
- Toll restriction features may block calls to NPAs in the new format.
- Accounting software may not process the new codes correctly.

If calls to the new area codes cannot be completed, customer premises equipment owners / administrators must contact the manufacturer of their equipment and software to discuss the exact changes required. Manufacturers may have chosen not to update some of their older equipment, and customers with such equipment need to plan for replacements. Lastly, even if equipment has been upgraded to accommodate the new NPA format, ongoing updates will be needed to reflect the introduction of new geographic NPAs, now happening at an average rate of one to two per month. New NPAs are announced in Bellcore Planning Letters which are available on a subscription basis by calling 1-800-521-CORE, or may be ordered from Bellcore's web site at <http://www.bellcore.com>, then click on "Consulting and Engineering." Bellcore's Traffic Routing Administration also publishes the monthly *NPA/NXX Activity Guide*, which summarizes numbering information required by PBX owners and administrators.

Between January 1, 1995 and January 1, 1997, 77 new NPA codes were assigned, and are or will be used as follows:

- 55 were for relief of geographic NPAs exhausting in the US and Canada (52 splits and 3 overlays).
- 16 were assigned to Caribbean countries who have or will be leaving the 809 NPA. The Dominican Republic will retain the use of the 809 NPA after all other Caribbean countries have departed.
- 880 and 881 NPA codes have been assigned for new services in which the calling party pays for the international leg of a call originated within the NANP and the called party pays for the domestic leg.
- 456 NPA code has been assigned to permit callers to select an international carrier for certain types of international calls terminating in the North American Numbering Plan area.



- 867 NPA code was assigned to the Yukon and the Northwest Territories at the request of the Canadian Government.
- 670 and 671 NPA codes were assigned to Guam and the Commonwealth of the Northern Mariana Islands, two US territories that will be joining the NANP in 1997.

As of January 1, 1997, 188 NPA codes are in use, 178 of them associated with specific geographic areas and 10 associated with non-geographic services, such as 800 toll-free services. NANPA has assigned 37 additional geographic NPA codes to be introduced in 1997 and 1998. This brings the total number of NPA codes assigned for all purposes, both activated and planned, to 225.

On December 31, 1996, ITU-TS Recommendation E.164, which specifies the format for world telephone numbers, changed as follows:

- The maximum length of a telephone number, which includes the country code plus the national number, increased from 12 to 15 digits.
- The number of digits that the originating carrier must analyze to determine how to route a call increased from 4 to 7 digits.

As of January 1, 1997, only Finland and Germany have introduced expanded international dialing in certain parts of their networks. The NANP will not be changing in response to Time "T".

Also during 1996, NANPA changed its policy in how new area codes and other NANP changes were announced. Prior to July 1996 these announcements were distributed free of charge as Informational Letters (ILs). However, because of all the new NPAs being assigned and the increased interest in numbering changes, the cost to distribute these letters became prohibitive. In July, the title of these letters was changed to Planning Letters (PL) and distribution began on a subscription basis with a charge of \$10 per letter to cover costs. To place your name on the subscription list, or to receive individual PLs, you should contact Bellcore's documentation hotline at 1-800-521-CORE. A listing of all IL and PL documents issued by Bellcore can be found on Bellcore's web site at the address mentioned above.

In response to a dramatic increase in the demand for toll-free numbers and the imminent exhaust of the number supply within the 800 NPA code, the 888 NPA code was introduced in May, 1996. This new code provides about eight million additional toll-free numbers. At the current rate of toll-free number assignment, this new supply should last about 2-3 years before another toll-free NPA code will be needed. Some issues associated with the assignment and administration of toll-free numbers remain to be resolved by the FCC. For example, holders of approximately 380,000 of the 800 numbers have requested their numbers be assigned to them in the 888 NPA as well. This and other issues related to toll-free numbers are the subject of FCC Docket 95-155, which explores the future use, assignment, conservation and administration of these numbers. It is not known at this writing when the final order will be issued by the FCC on these matters.

A major change that will be taking place in the US during 1997 is the introduction of local number portability, which will allow subscribers to change local exchange carriers without changing their telephone numbers. The telecommunications industry is defining an architecture that will provide local number portability and identifying and resolving issues related to call routing, service provisioning, and directory services, etc. Although the use of numbers in a local number portability environment is likely to reduce the demand for telephone numbers, especially if number pooling is implemented, the reduction has not yet been quantified.

## 5. NPA Code Assignments Since 1984

The NANP was introduced in 1947. At that time 87 NPA codes were assigned to cover the continental United States and Canada. In 1957 Alaska and Hawaii were added, and in 1958 the 809 NPA was assigned to incorporate Bermuda and many Caribbean islands. As time passed, additional NPA codes were assigned to provide relief in NPAs in which the supply of numbers was nearing exhaust. The table below summarizes NPA relief activities completed since Bellcore became administrator of the numbering plan in 1984.

NPA RELIEF DATE	ORIGINAL NPA	NEW NPA	LOCATION
01/07/84	213	818	California
09/01/84	212	718	New York
03/05/88	303	719	Colorado
04/16/88	305	407	Florida
07/16/88	617	508	Massachusetts
11/11/89	312	708	Illinois
11/01/90	201	908	New Jersey
11/04/90	214	903	Texas
09/02/91	415	510	California
10/06/91	301	410	Maryland
11/02/91	213	310	California
01/01/92	212, 718	917 <sup>1</sup>	New York
05/03/92	404	706	Georgia
07/01/92	212 <sup>2</sup>	718 <sup>2</sup>	New York
11/01/92	512	210	Texas
11/14/92	714	909	California
10/04/93	416	905	Ontario
11/14/93	919	910	North Carolina
12/01/93	313	810	Michigan
01/08/94	215	610	Pennsylvania
01/15/95	205	334	Alabama
01/15/95	206	360	Washington
03/19/95	602	520	Arizona
04/02/95	303	970	Colorado
05/28/95	813	941	Florida
07/15/95	703	540	Virginia
08/01/95	404	770	Georgia
08/28/95	203	860	Connecticut
09/11/95	305	954	Florida
09/11/95	615	423	Tennessee
10/01/95	809	441	Bermuda
11/05/95	503	541	Oregon
12/03/95	803	864	South Carolina
12/03/95	904	352	Florida

<sup>1</sup> Indicates 917 is an overlay to NPAs 212 and 718.

<sup>2</sup> The Bronx in New York moved from the 212 NPA to the 718 NPA.

5. NPA Code Assignments Since 1984 (Cont'd)

NPA RELIEF DATE	ORIGINAL NPA	NEW NPA	LOCATION
01/07/96	314	573	Missouri
01/20/96	708	847 <sup>3</sup>	Illinois
03/01/96	809	787	Puerto Rico
03/09/96	216	330	Ohio
03/17/96	612	320	Minnesota
04/01/96	809	268	Antigua
05/13/96	407	561	Florida
07/01/96	809	246	Barbados
07/01/96	809	758	St. Lucia
07/01/96	804	757	Virginia
07/01/96	809	664	Montserrat
08/03/96	708	630 <sup>3</sup>	Illinois
09/01/96	809	345	Cayman Islands
09/14/96	214	972	Texas
09/28/96	513	937	Ohio
10/01/96	809	242	Bahamas
10/01/96	809	869	St. Kitts & Nevis
10/12/96	312	773	Illinois
10/19/96	604	250	British Columbia
11/02/96	713	281 <sup>4</sup>	Texas

<sup>3</sup> The 847 and 630 NPAs were part of a 3-way split of the 708 NPA in Chicago.

<sup>4</sup> In 1995, the 281 NPA was first implemented as an overlay to the 713 NPA, but was changed to a split in 1996.

## 6. NPA Code Relief in Progress or Planned

NPA relief activities currently in progress or planned are shown in the table below.

NPA	LOCATION	RELIEF CODE	RELIEF TYPE	RELIEF DATE & START OF PERMISSIVE PERIOD	END OF PERMISSIVE PERIOD
310	California	562	Split	01/25/97	07/26/97
317	Indiana	765	Split	02/01/97	06/28/97
619	California	760	Split	03/22/97	09/27/97
809	Anguilla	264	New	03/31/97	09/30/97
501	Arkansas	870	Split	04/14/97	10/06/97
206	Washington St.	253 & 425	3-way Split	04/27/97	11/16/97
809	Jamaica	876	New	05/01/97	11/01/97
412	Pennsylvania	724	Overlay	05/01/97	NA
810	Michigan	248	Split	05/10/97	09/13/97
817	Texas	940 & 254	3-way Split	05/25/97	08/24/97
809	Turks & Caicos	649	New	05/31/97	06/30/98
809	Trinidad/Tobago	868	New	06/01/97	05/31/98
301	Maryland	240	Overlay	06/01/97	NA
410	Maryland	443	Overlay	06/01/97	NA
201	New Jersey	973	Split	06/01/97	12/06/97
908	New Jersey	732	Split	06/01/97	12/06/97
809	US Virgin Islands	340	New	06/01/97	06/30/98
818	California	626	Split	06/14/97	02/21/98
NA	Guam	671	New	07/01/97	07/01/98
NA	CNMI	670	New	07/01/97	07/01/98
210	Texas	956 & 830	3-way Split	07/07/97	10/06/97
414	Wisconsin	920	Split	07/26/97	10/25/97
415	California	650	Split	08/02/97	01/31/98
809	Dominica	767	New	10/01/97	09/30/98
809	British Virgin Is.	284	New	10/01/97	09/30/98
403/819	Yukon & NW	867	Split	10/21/97	04/26/98
809	Grenada	473	New	10/31/97	10/31/98
213	California	323	Split	TBD	TBD
510	California	925	Split	TBD	TBD
714	California	949	Split	TBD	TBD
916	California	530	Split	TBD	TBD
313	Michigan	734	Split	TBD	TBD
216	Ohio	440	Split	TBD	TBD
809	St. Vincent/Gren.	784	New	TBD	TBD

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In the above table the "RELIEF DATE" column shows the date when callers can begin dialing the new NPA code. The "END OF PERMISSIVE PERIOD" column shows the date when all calls to the old or new NPAs must be dialed with the correct NPA code. TBD indicates "To Be Determined," i.e., information was not available at the time this report was published. NA indicates "Not Applicable."

The above NPA information is now available on Bellcore's World Wide Web internet site using the following address: <http://www.bellcore.com>, then click on "Consulting and Engineering". Associated with each new NPA on the web page are the old and new NPA codes, the type of relief selected, a brief description of the relief plan, the NPA relief date, the end of permissive dialing date, a test number, and a trouble reporting number (if available). In addition, all area codes in the NANP and their associated state, province or country are listed both in alphabetical and numerical order. Also listed at this web site are all the Information Letters (ILs) and Planning Letters (PL) that have been published by Bellcore announcing numbering plan changes. This information is updated periodically, as necessary, to reflect changes.

## 7. NPA Codes Projected to Exhaust by 2006

NANPA, in its role as administrator of the numbering plan, prepares an annual survey called the Central Office Code Utilization Survey (COCUS) projecting when each existing NPA will exhaust its supply of 792 central office codes. The information is useful in planning for future NPA relief activities. The table below identifies NPAs that are projected to exhaust within the next 10 years based on information forecasted by service providers in each NPA. This information is based on forecasts provided during 1996.

LOCATION	NPA	PROJECTED EXHAUST	LOCATION	NPA	PROJECTED EXHAUST
Massachusetts	617	1996 4Q	Virginia	703	1999 1Q
Pennsylvania	412*	1997 1Q	North Carolina	704	1999 1Q
New Jersey	201*	1997 2Q	Texas	713†	1999 1Q
California	310*	1997 2Q	North Carolina	910	1999 1Q
California	619*	1997 2Q	Missouri	314†	1999 2Q
Michigan	810*	1997 2Q	Pennsylvania	610	1999 2Q
Texas	210*	1997 3Q	Georgia	770	1999 2Q
Massachusetts	508	1997 3Q	South Carolina	803	1999 2Q
Texas	817*	1997 3Q	Kentucky	502	1999 3Q
New Jersey	908*	1997 3Q	Minnesota	612†	1999 3Q
Pennsylvania	215	1997 4Q	California	209	1999 4Q
Indiana	317*	1997 4Q	New York	212	1999 4Q
Maryland	410*	1997 4Q	Texas	214†	1999 4Q
California	415*	1997 4Q	North Carolina	919	1999 4Q
Arkansas	501*	1997 4Q	Alabama	205	2000 1Q
Maryland	301*	1998 1Q	Florida	305	2000 1Q
Washington	206*	1998 2Q	Ontario	416	2000 1Q
Michigan	313*	1998 2Q	Texas	512	2000 1Q
Oklahoma	405	1998 2Q	Arizona	602	2000 1Q
New Jersey	609	1998 2Q	Ohio	614	2000 1Q
California	818*	1998 2Q	Nevada	702	2000 1Q
Florida	904	1998 2Q	Texas	972	2000 1Q
California	916*	1998 2Q	Florida	407†	2000 2Q
Georgia	404	1998 3Q	Tennessee	423	2000 3Q
Wisconsin	414*	1998 3Q	Florida	954	2000 3Q
Louisiana	504	1998 3Q	Florida	813	2000 4Q
California	510*	1998 3Q	Illinois	847	2000 4Q
Pennsylvania	717	1998 3Q	Texas	281	2001 1Q
Missouri	816	1998 3Q	Georgia	912	2001 1Q
Colorado	303	1998 4Q	Florida	561	2001 2Q
Alberta	403	1998 4Q	California	805	2001 2Q
California	714*	1998 4Q	Washington	360	2001 4Q
Utah	801	1998 4Q	Georgia	706	2001 4Q
Kansas	913	1998 4Q	Hawaii	808	2001 4Q
California	213*	1999 1Q	Oregon	503	2002 1Q
California	408	1999 1Q	Kentucky	606	2002 2Q
Quebec	514*	1999 1Q	South Carolina	864	2002 2Q
Mississippi	601	1999 1Q	Indiana	219	2002 3Q
Tennessee	615	1999 1Q	Louisiana	318	2002 3Q

\* Indicates a relief NPA code(s) has been assigned, however, the exhaust projection does not reflect impact of this relief.

† Indicates a relief NPA code(s) has been implemented in 1996 and exhaust projection reflects the impact of this relief.

7. NPA Codes Projected to Exhaust by 2006 (Cont'd)

LOCATION	NPA	PROJECTED EXHAUST	LOCATION	NPA	PROJECTED EXHAUST
New York	917	2002 3Q	Alabama	334	2004 4Q
Connecticut	203	2002 4Q	Saskatchewan	306	2005 1Q
Illinois	630	2002 4Q	Virginia	540	2005 1Q
Florida	941	2002 4Q	Connecticut	860	2005 2Q
New York	516	2003 1Q	Illinois	708†	2005 3Q
Michigan	616	2003 1Q	Illinois	773	2005 3Q
California	909	2003 1Q	Texas	903	2005 3Q
Kansas	316	2003 2Q	New York	914	2005 3Q
Nebraska	402	2003 2Q	New Mexico	505	2006 1Q
Arizona	520	2003 3Q	Ohio	513†	2006 1Q
Texas	409	2003 4Q	Missouri	573	2006 1Q
Texas	915	2003 4Q	Washington	509	2006 2Q
Illinois	312†	2004 1Q	Virginia	757	2006 2Q
New York	716	2004 1Q	Pennsylvania	814	2006 2Q
Tennessee	901	2004 1Q	Illinois	217	2006 3Q
Alaska	907	2004 1Q	Iowa	515	2006 3Q
California	707	2004 2Q	Ontario	905	2006 3Q
Oklahoma	918	2004 3Q			

\* Indicates a relief NPA code(s) has been assigned, however, the exhaust projection does not reflect impact of this relief.

† Indicates a relief NPA code(s) has been implemented in 1996 and exhaust projection reflects the impact of this relief.

## 8. Planning for the Exhaust and Expansion of the NANP

Many people wonder why so many new NPAs are being introduced? What is happening to stimulate the demand for numbers? The most obvious answers are related to the rapid growth in wireless and other services, the tremendous growth in access to the internet, and, very recently, the increase in local telephone competition. The demand for central office codes for new competitive local service providers has advanced the exhaust dates in many NPAs. New service providers need these central office codes to provide the same type of services as the incumbent local service providers. The telecommunications industry is examining how to provide sufficient numbers for all competitors and at the same time slow down the need for new NPAs. Although exhaust of the NANP is not expected to occur anytime soon, the telecommunications industry, through the Industry Numbering Committee (INC), has begun to identify and evaluate alternative ways to expand the supply of numbers in the NANP.

At some point in time, however, it is expected that the supply of area codes will run out. This section describes the methodology used in estimating the life of the NANP and describes efforts by the industry to develop a NANP expansion plan. As mentioned in Section 1, NANPA conducts an annual COCUS to project when each of the NPAs in the NANP will exhaust. When an NPA is nearing exhaust, a relief NPA code is assigned and activated early enough to prevent number exhaust. The NANP itself reaches exhaust when all of the available NPA codes have been used. As mentioned in Section 4, 225 NPA codes have been assigned so far, leaving 575 NPA codes available. However, the industry has set aside 174 NPA codes for various reasons, including expansion of the NANP, and another 200 have been reserved for specific NPA relief of geographic NPAs that will be exhausting within the next twenty years. That leaves about 200 NPA codes.

A linear projection, based on the rate of assignment of numbers in each NPA from COCUS, indicates that the NANP could exhaust its supply of area codes somewhere around the year 2025. The data that was used in the NANP exhaust projection could and almost certainly will change; and, therefore, the projected exhaust date should be viewed with caution. Unknown factors such as the impact of number pooling in a number portability environment, or the entry of new competitors were not factored in the analysis. Many industry experts believe that current estimates do not adequately reflect the number requirements to support the introduction of local competition, leading them to conclude that the NANP will reach exhaust well before 2025.

An INC workshop is developing an expansion plan for the NANP. Alternatives under consideration fall into two categories:

- Expanding the number supply without expanding the 10-digit format, e.g., allowing the fourth digit of the number to be a "0" or a "1", and
- Expanding the number supply by expanding the number of digits beyond the 10-digit format, e.g., increasing the NPAs from 3 to 4 digits.

Many factors must be taken into account before a final expansion plan is selected. At the time of this report, the INC has eliminated some of the options but has not yet reached a decision on the final plan.



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9. NPA Code Listings - Alphabetical

LOCATION/USE	NPA	LOCATION/USE	NPA	LOCATION/USE	NPA	LOCATION/USE	NPA
800 Service	800	Florida	904	Missouri	314	Pennsylvania	814
800 Svc Expan.	888	Florida	941	Missouri	417	Puerto Rico	787
900 Service	900	Florida	954	Missouri	573	Quebec	418
Alabama	205	Georgia	404	Missouri	816	Quebec	514
Alabama	334	Georgia	706	Montana	406	Quebec	819
Alaska	907	Georgia	770	Montserrat	664	Rhode Island	401
Alberta	403	Georgia	912	Nebraska	308	Saskatchewan	306
Anguilla	264	Grenada	473	Nebraska	402	South Carolina	803
Antigua/Barbuda	268	Guam	671	Nevada	702	South Carolina	864
Arizona	520	Hawaii	808	New Brunswick	506	South Dakota	605
Arizona	602	IC Services	700	New Hampshire	603	St. Kitts & Nevis	869
Arkansas	501	Idaho	208	New Jersey	201	St. Lucia	758
Arkansas	870	Illinois	217	New Jersey	609	St. Vincent & Gren.	784
Bahamas	242	Illinois	309	New Jersey	732	Tennessee	423
Barbados	246	Illinois	312	New Jersey	908	Tennessee	615
Bermuda	441	Illinois	618	New Jersey	973	Tennessee	901
British Columbia	250	Illinois	630	New Mexico	505	Texas	210
British Columbia	604	Illinois	708	New York	212	Texas	214
British Virgin Is.	284	Illinois	773	New York	315	Texas	254
California	209	Illinois	815	New York	516	Texas	281
California	213	Illinois	847	New York	518	Texas	409
California	310	Inbound International	456	New York	607	Texas	512
California	323	Indiana	219	New York	716	Texas	512
California	408	Indiana	317	New York	718	Texas	713
California	415	Indiana	765	New York	914	Texas	806
California	510	Indiana	812	New York	917	Texas	817
California	530	Iowa	319	Newfoundland	709	Texas	830
California	562	Iowa	515	North Carolina	704	Texas	903
California	619	Iowa	712	North Carolina	704	Texas	915
California	626	Jamaica	876	North Carolina	910	Texas	940
California	650	Kansas	316	North Carolina	919	Texas	956
California	707	Kansas	913	North Dakota	701	Texas	972
California	714	Kentucky	502	Nova Scotia	902	Trinidad and Tobago	868
California	760	Kentucky	606	Ohio	216	Turks & Caicos	649
California	805	Louisiana	318	Ohio	330	U.S. Government	710
California	818	Louisiana	504	Ohio	419	US Virgin Islands	340
California	909	Maine	207	Ohio	440	Utah	801
California	916	Manitoba	204	Ohio	513	Vermont	802
California	925	Maryland	240	Ohio	614	Virginia	540
California	949	Maryland	301	Ohio	937	Virginia	703
Canada (Services)	600	Maryland	410	Oklahoma	405	Virginia	757
Cayman Islands	345	Maryland	443	Oklahoma	918	Virginia	804
CNMI	670	Massachusetts	413	Ontario	416	Washington	206
Colorado	303	Massachusetts	413	Ontario	519	Washington	253
Colorado	719	Massachusetts	508	Ontario	613	Washington	360
Colorado	970	Massachusetts	617	Ontario	705	Washington	425
Connecticut	203	Michigan	248	Ontario	807	Washington	509
Connecticut	860	Michigan	313	Ontario	905	West Virginia	304
Delaware	302	Michigan	517	Oregon	503	Wisconsin	414
Dist. of Columbia	202	Michigan	616	Oregon	541	Wisconsin	608
Dominica	767	Michigan	734	PAID-800 Serv.	880	Wisconsin	715
Dominican Republic	809	Michigan	810	PAID-888 Serv.	881	Wisconsin	920
Florida	305	Michigan	906	PCS	500	Wyoming	307
Florida	352	Minnesota	218	Pennsylvania	215	Yukon & NW Terr.	867
Florida	407	Minnesota	320	Pennsylvania	412		
Florida	561	Minnesota	507	Pennsylvania	610		
Florida	813	Minnesota	612	Pennsylvania	717		
		Mississippi	601	Pennsylvania	724		

10. NPA Code Listings - Numerical

NPA	LOCATION/USE	NPA	LOCATION/USE	NPA	LOCATION/USE	NPA	LOCATION/USE
201	New Jersey	403	Alberta	608	Wisconsin	808	Hawaii
202	Dist. of Columbia	404	Georgia	609	New Jersey	809	Dominican Republic
203	Connecticut	405	Oklahoma	610	Pennsylvania	810	Michigan
204	Manitoba	406	Montana	612	Minnesota	812	Indiana
205	Alabama	407	Florida	613	Ontario	813	Florida
206	Washington	408	California	614	Ohio	814	Pennsylvania
207	Maine	409	Texas	615	Tennessee	815	Illinois
208	Idaho	410	Maryland	616	Michigan	816	Missouri
209	California	412	Pennsylvania	617	Massachusetts	817	Texas
210	Texas	413	Massachusetts	618	Illinois	818	California
212	New York	414	Wisconsin	619	California	819	Quebec
213	California	415	California	626	California	830	Texas
214	Texas	416	Ontario	630	Illinois	847	Illinois
215	Pennsylvania	417	Missouri	649	Turks & Caicos	860	Connecticut
216	Ohio	418	Quebec	650	California	864	South Carolina
217	Illinois	419	Ohio	664	Montserrat	867	Yukon & NW Terr.
218	Minnesota	423	Tennessee	670	CNMI	868	Trinidad and Tobago
219	Indiana	425	Washington	671	Guam	869	St. Kitts & Nevis
240	Maryland	440	Ohio	700	IC Services	870	Arkansas
242	Bahamas	441	Bermuda	701	North Dakota	876	Jamaica
246	Barbados	443	Maryland	702	Nevada	880	PAID-800 Serv.
248	Michigan	456	Inbound International	703	Virginia	881	PAID-888 Serv.
250	British Columbia	473	Grenada	704	North Carolina	888	800 Svc Expan.
253	Washington	500	PCS	705	Ontario	900	900 Service
254	Texas	501	Arkansas	706	Georgia	901	Tennessee
261	Anguilla	502	Kentucky	707	California	902	Nova Scotia
268	Antigua/Barbuda	503	Oregon	708	Illinois	903	Texas
281	Texas	504	Louisiana	709	Newfoundland	904	Florida
284	British Virgin Is.	505	New Mexico	710	U.S. Government	905	Ontario
301	Maryland	506	New Brunswick	712	Iowa	906	Michigan
302	Delaware	507	Minnesota	713	Texas	907	Alaska
303	Colorado	508	Massachusetts	714	California	908	New Jersey
304	West Virginia	509	Washington	715	Wisconsin	909	California
305	Florida	510	California	716	New York	910	North Carolina
306	Saskatchewan	512	Texas	717	Pennsylvania	912	Georgia
307	Wyoming	513	Ohio	718	New York	913	Kansas
308	Nebraska	514	Quebec	719	Colorado	914	New York
309	Illinois	515	Iowa	724	Pennsylvania	915	Texas
310	California	516	New York	732	New Jersey	916	California
312	Illinois	517	Michigan	734	Michigan	917	New York
313	Michigan	518	New York	757	Virginia	918	Oklahoma
314	Missouri	519	Ontario	758	St. Lucia	919	North Carolina
315	New York	520	Arizona	760	California	920	Wisconsin
316	Kansas	530	California	765	Indiana	925	California
317	Indiana	540	Virginia	767	Dominica	937	Ohio
318	Louisiana	541	Oregon	770	Georgia	940	Texas
319	Iowa	561	Florida	773	Illinois	941	Florida
320	Minnesota	562	California	784	St. Vincent & Gren.	949	California
323	California	573	Missouri	787	Puerto Rico	954	Florida
330	Ohio	600	Canada (Services)	800	800 Service	956	Texas
334	Alabama	601	Mississippi	801	Utah	970	Colorado
340	US Virgin Islands	602	Arizona	802	Vermont	972	Texas
345	Cayman Islands	603	New Hampshire	803	South Carolina	973	New Jersey
352	Florida	604	British Columbia	804	Virginia		
360	Washington	605	South Dakota	805	California		
401	Rhode Island	606	Kentucky	806	Texas		
402	Nebraska	607	New York	807	Ontario		

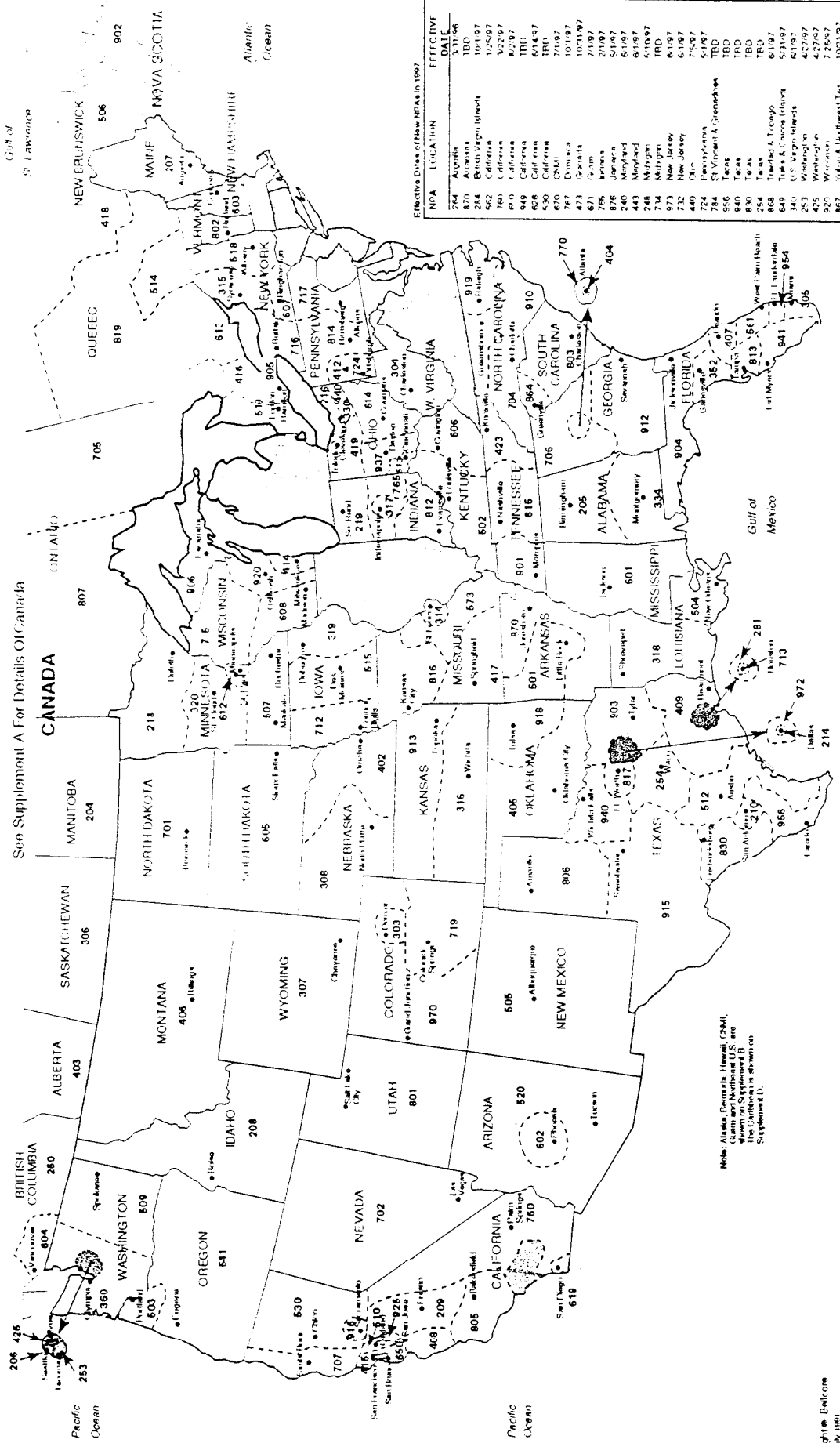
## 11. NPA Maps

The following pages contain maps showing NPA boundaries in the countries that share the NANP. One map displays the NPAs for the US and a separate map of Canada is shown on Supplement A. The complexity of the US map has grown significantly in recent years, and we have found it necessary to provide supplementary maps for some areas. Alaska, Bermuda, Hawaii, Guam, CNMI and northeast United States are shown on Supplement B. Area details of Los Angeles, Illinois and Michigan are shown on Supplement C. Caribbean countries are shown on Supplement D.

The NPA code maps in this report may be reproduced for publication provided that the following statement appears on the copy:

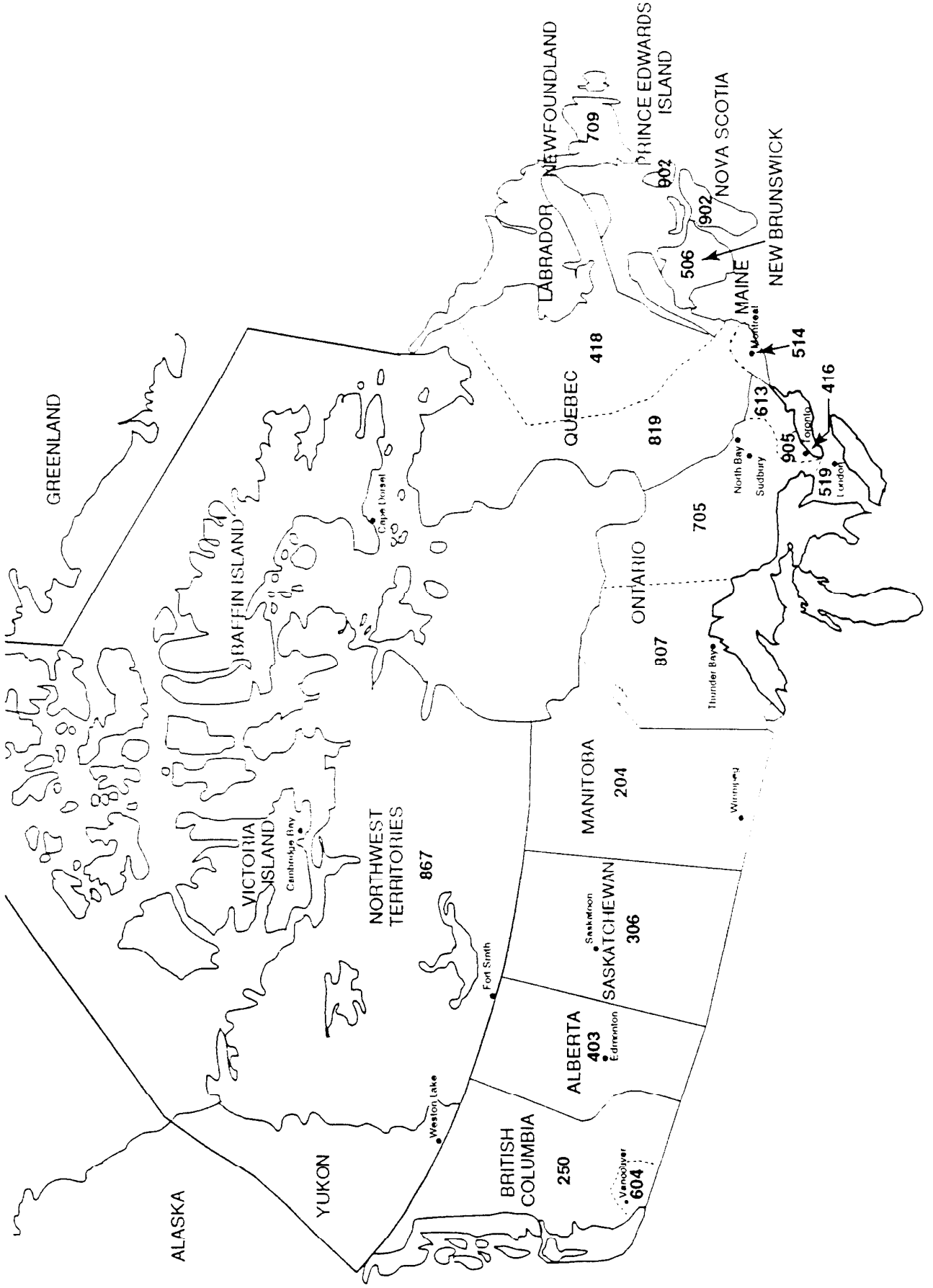
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# Numbering Plan Areas



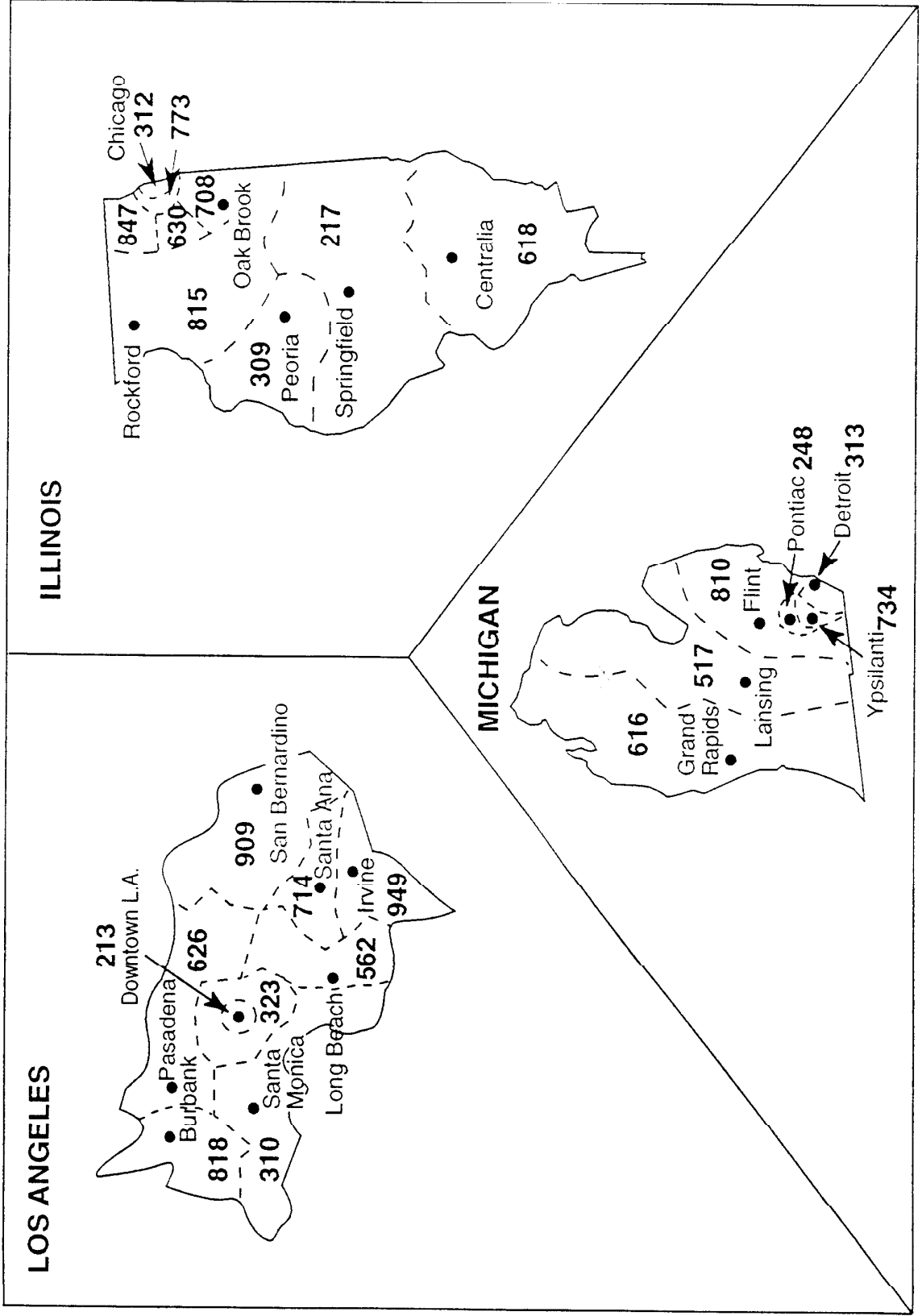
# Supplement A

## Numbering Plan Areas For Canada





**Supplement C**  
**Numbering Plan Areas For Los Angeles, Michigan and Illinois**





# Supplement D

## Numbering Plan Areas For The Caribbean

