

Quentin Sager Consulting, Inc.

[NALENND™ UNITED STATES, CANADA, MEXICO COMBINED]

North American Local Exchange NPA NXX Database reference manual

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NALENND™ United States, Canada, Mexico Combined Edition Reference Manual
Revised: April 18, 2018

Published by:

Quentin Sager Consulting, Inc.
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Crystal River, FL 34429

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GENERAL INFORMATION

The NALENND™ United States, Canada, Mexico Combined database provides a uniform presentation of the telephone numbering plans and exchange areas for those countries participating in the *North American Numbering Plan* and *Mexico*.

Counties participating in the *North American Numbering Plan (NANP)* include the United States and its territories, Canada, Bermuda, Anguilla, Antigua & Barbuda, the Bahamas, Barbados, the British Virgin Islands, the Cayman Islands, Dominica, the Dominican Republic, Grenada, Jamaica, Montserrat, Sint Maarten, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and Turks & Caicos.

NANP numbers are ten-digit numbers consisting of a three-digit Numbering Plan Area (NPA) code, commonly called an area code, followed by a seven-digit local number. The format is usually represented as

<i>Country Code (CC)</i>	<i>Area Code / NPA</i>	<i>Exchange / Prefix</i>	<i>Subscriber number</i>
1	NXX	NXX	X ₁ X ₂ X ₃ X ₄

where N is any digit from 2 through 9 and X is any digit from 0 through 9.

Like the NANP telephone numbers in Mexico are ten-digit numbers and consist of a two or three-digit Regional Identification Number followed by a seven or eight-digit local number. The format is usually represented as

<i>Country Code (CC)</i>	<i>Area Code / RIN (National Destination Code - NDC)</i>	<i>Local number (SN – subscriber number)</i>
52	(A B) (*)	X ₁ X ₂ X ₃ X ₄ X ₅ X ₆ X ₇ X ₈
52	(A B C) (**)	X ₁ X ₂ X ₃ X ₄ X ₅ X ₆ X ₇

(*) Two digit area codes for cities with a high telephone density. Mexico City, Guadalajara and Monterrey.

(**) Three digit area codes for other cities and localities of the country.

FILE FORMAT

Each table (*file*) in the NALENND™ database is delivered in flat, delimited text file format (commonly referred to as comma-separated-value or CSV format). The NALENND™ database is easily imported to and accessed through most contemporary database engines including (but not limited to) MySQL, PostgreSQL, SQLite, Oracle, IBM DB2, Microsoft SQL Server, Microsoft Access, or similar tool.

The data can be imported as either US-ASCII or Unicode UTF-8 text. For each file in the NALENND™ database; the first row contains field names (column headers), fields are terminated by a single comma “,” character, fields are optionally enclosed using a double quote character, and lines (rows) are terminated with a two character carriage return line feed (CR + LF) sequence.

RECORD LAYOUTS AND FIELD DESCRIPTIONS

FILE: nalennd_uscamx.csv

Field	Description
CC	International Telephone Union ITU-T Recommendation E.164 numeric country code. Commonly referred to as IDD (International Direct Dialing) or ISD (International Subscriber Dialing) code, this code is the combination of one, two or three digits identifying a specific country, countries in an integrated numbering plan, or a specific geographic area.
NPA	Commonly referred to as <i>Area Code</i> or <i>National Destination Code</i> ; for United States and Canadian entries this field represents the North American Numbering Plan Area (NPA) Code, for Mexico this field represents the Region Identification Number (NIR). For those countries participating in the <i>North American Numbering Plan</i> , country code 1, NPA is always 3-digits; for Mexico, country code 52, NPA is 2-digits for metropolitan areas Mexico City, Guadalajara and Monterrey for all other areas NPA is 3-digits.
NXX	This 3 or 4-digit field further defines specific geographic service areas or service type within a particular <i>Area Code</i> . Commonly called the telephone exchange or prefix code, within the North American Numbering Plan it is also referred to as the Central Office Code.
Line_From	The first 4-digits identifying the starting number in the block of numbers served by the particular carrier, service type or switching entity associated with the NPA NXX.
Line_To	The last 4-digits identifying the ending number in the block of numbers served by the particular carrier, service type or switching entity associated with the NPA NXX.
Line_Type	Line or service type associated with the particular telephone exchange or number range. Line type identification is based on original carrier assignments within their particular numbering plan. <ul style="list-style-type: none"> • G – Geographic land line or fixed service, includes POTS, WLL etc. • V – VoIP or location independent fixed land line • M – Mobile, includes cellular, PCS, GSM, etc. • F – Toll free also known as Freephone • S – Special (premium service, data, internet access, etc. which all incur a higher charge rate).
Carrier	Name of telephone carrier providing service for the particular number range.
Country	2-character ISO 3166 Country Code (ISO 3166-1:2006 2006) of the telephone exchange location.
State	Postal abbreviation or code of the state, province, department, territory, or similar division within the country associated with the telephone exchange if any.

	If a standard national abbreviation does not exist for the region the value will be that specified in International Standard ISO 3166-2:2007 Codes for the representation of names of countries and their subdivisions.
Location	The city, town, village, community, zone or similar name identifying the telephone exchange service type or area.
TimeZone	Internet Assigned Numbers Authority (IANA) time zone database time zone identifier or name for the Rate Center geographic location. The IANA time zone database is also referred to as the <i>tz database</i> , the <i>zoneinfo database</i> , and the <i>Olson database</i> .
UTC	Coordinated Universal Time (UTC) offset for the telephone exchange geographic location. Format is +\-HH:MM.
DST	Daylight Savings Time recognized flag. <ul style="list-style-type: none"> • Y – Daylight savings time is recognized. • N – Daylight savings time is not recognized. • X – Daylight savings time not applicable. This applies to certain NPA NXX combinations where there is no specific geographic location associated with the exchange.
Latitude	Latitude in decimal degrees locating the general telephone exchange service area.
Longitude	Longitude in decimal degrees locating the general telephone exchange service area.

SQL SCRIPTS AND SCHEMAS

MySQL

```
CREATE DATABASE if not exists `nalennd_uscamx`;
USE `nalennd_uscamx`;

DROP TABLE IF EXISTS `npanxx`;
CREATE TABLE `npanxx` (
  `CC` char(3) NOT NULL,
  `NPA` char(3) NOT NULL,
  `NXX` char(4) NOT NULL,
  `Line_From` char(4) NOT NULL,
  `Line_To` char(4) NOT NULL,
  `Line_Type` char(1) DEFAULT NULL,
  `Carrier` varchar(128) DEFAULT NULL,
  `Country` char(2) DEFAULT NULL,
  `State` varchar(5) DEFAULT NULL,
  `Location` varchar(128) DEFAULT NULL,
  `TimeZone` varchar(128) DEFAULT NULL,
  `UTC` char(6) DEFAULT NULL,
  `DST` char(1) DEFAULT NULL,
  `Latitude` double NOT NULL DEFAULT '0',
  `Longitude` double NOT NULL DEFAULT '0',
  PRIMARY KEY (`CC`,`NPA`,`NXX`,`Line_From`),
) ENGINE=MyISAM DEFAULT CHARSET=utf8;
```

Microsoft SQL Server

```
CREATE DATABASE [nalennd_uscamx] ON PRIMARY
GO
USE [nalennd_uscamx]
GO
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
SET ANSI_PADDING ON
GO
CREATE TABLE [dbo].[npanxx] (
    [CC] [char](3) NOT NULL,
    [NPA] [char](3) NOT NULL,
    [NXX] [char](4) NOT NULL,
    [Line_From] [char](1) NOT NULL,
    [Line_To] [char](1) NOT NULL,
    [Line_Type] [char](1) NULL,
    [Carrier] [varchar](128) NULL,
    [Country] [char](2) NULL,
    [State] [varchar](5) NULL,
    [Location] [varchar](128) NULL,
    [TimeZone] [varchar](128) NULL,
    [UTC] [char](6) NULL,
    [DST] [char](1) NULL,
    [Latitude] [float] NULL CONSTRAINT [DF_npanxx_LATITUDE] DEFAULT ((0)),
    [Longitude] [float] NULL CONSTRAINT [DF_npanxx_LONGITUDE] DEFAULT ((0)),
    CONSTRAINT [PK_npanxx] PRIMARY KEY CLUSTERED
(
    [CC] ASC,
    [NPA] ASC,
    [NXX] ASC,
    [Line_From] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]

GO
SET ANSI_PADDING OFF
```

ORACLE

```
CREATE TABLE "npanxx" (  
  "CC" CHAR(3) NOT NULL ENABLE,  
  "NPA" CHAR(3) NOT NULL ENABLE,  
  "NXX" CHAR(4) NOT NULL ENABLE,  
  "Line_From" CHAR(4) NOT NULL ENABLE,  
  "Line_To" CHAR(4),  
  "Line_Type" CHAR(1),  
  "Carrier" VARCHAR(128),  
  "Country" CHAR(2),  
  "State" VARCHAR(5),  
  "Location" VARCHAR(128),  
  "TimeZone" VARCHAR(128),  
  "UTC" CHAR(6),  
  "DST" CHAR(1),  
  "Latitude" NUMBER,  
  "Longitude" NUMBER,  
  CONSTRAINT "npanxx_PK" PRIMARY KEY ("CC", "NPA", "NXX", "Line_From") ENABLE  
);
```


Appendix A – State, province, and territory codes

United States - States and territories

AL	Alabama	NJ	New Jersey
AK	Alaska	NM	New Mexico
AZ	Arizona	NY	New York
AR	Arkansas	NC	North Carolina
CA	California	ND	North Dakota
CO	Colorado	OH	Ohio
CT	Connecticut	OK	Oklahoma
DE	Delaware	OR	Oregon
DC	District of Columbia	PA	Pennsylvania
FL	Florida	RI	Rhode Island
GA	Georgia	SC	South Carolina
HI	Hawaii	SD	South Dakota
ID	Idaho	TN	Tennessee
IL	Illinois	TX	Texas
IN	Indiana	UT	Utah
IA	Iowa	VT	Vermont
KS	Kansas	VA	Virginia
KY	Kentucky	WA	Washington
LA	Louisiana	WV	West Virginia
ME	Maine	WI	Wisconsin
MD	Maryland	WY	Wyoming
MA	Massachusetts	AS	American Samoa ¹
MI	Michigan	FM	Micronesia
MN	Minnesota	GU	Guam
MS	Mississippi	MH	Marshall Islands
MO	Missouri	MP	Northern Mariana Islands ²
MT	Montana	PW	Palau
NE	Nebraska	PR	Puerto Rico
NV	Nevada	UM	Minor Islands
NH	New Hampshire	VI	Virgin Islands

Canada - Provinces and territories

AB	Alberta	NU	Nunavut ³
BC	British Columbia	ON	Ontario
MB	Manitoba	PE	Prince Edward Island
NB	New Brunswick	QC	Quebec ⁴
NL	Newfoundland and Labrador ⁵	SK	Saskatchewan
NT	Northwest Territories	YT	Yukon
NS	Nova Scotia		

Mexico - States and territories

AGS	AGUASCALIENTES	MOR	MORELOS
BC	BAJA CALIFORNIA	NAY	NAYARIT

¹ COMMON LANGUAGE® abbreviation for American Samoa is AM

² COMMON LANGUAGE® abbreviation for Northern Mariana Islands is NN

³ COMMON LANGUAGE® abbreviation for Nunavut is VU

⁴ COMMON LANGUAGE® abbreviation for Quebec is PQ

⁵ COMMON LANGUAGE® abbreviation for Newfoundland and Labrador is NF

BCS	BAJA CALIFORNIA SUR	NL	NUEVO LEON
CAM	CAMPECHE	OAX	OAXACA
COAH	COAHUILA	PUE	PUEBLA
COL	COLIMA	QRO	QUERETARO
CHIS	CHIAPAS	QROO	QUINTANA ROO
CHIH	CHIHUAHUA	SLP	SAN LUIS POTOSI
DF	DISTRITO FEDERAL	SIN	SINALOA
DGO	DURANGO	SON	SONORA
GTO	GUANAJUATO	TAB	TABASCO
GRO	GUERRERO	TAM	TAMAULIPAS
HGO	HIDALGO	TLAX	TLAXCALA
JAL	JALISCO	VER	VERACRUZ
MEX	MEXICO	YUC	YUCATAN
MICH	MICHOACAN	ZAC	ZACATECAS

Appendix B – Country codes

ISO 3166-1	FIPS 104-1	Country
US	US	United States
CA	CA	Canada
BS	BA	Bahamas
BB	BD	Barbados
AI	AI	Anguilla
AG	AN	Antigua and Barbuda
VG	BV	Virgin Islands, British
KY	CQ	Cayman Islands
BM	BM	Bermuda
GD	GN	Grenada
TC	TC	Turks and Caicos Islands
MS	RT	Montserrat
SX	SF	Sint Maarten
LC	SA	Saint Lucia
DM	DM	Dominica
VC	ZF	Saint Vincent and the Grenadines
DO	DR	Dominican Republic
TT	TR	Trinidad and Tobago
KN	KA	Saint Kitts and Nevis
JM	JM	Jamaica
MX	MX	Mexico