

USER'S GUIDE TO THE PERSONAL COMPUTER VERSION OF THE BIOGENIC EMISSIONS INVENTORY SYSTEM (PC-BEIS)

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ABSTRACT

The Personal Computer version of the Biogenic Emissions Inventory System (PC-BEIS) has been developed to allow users to estimate hourly emissions of biogenic non-methane hydrocarbon emissions for any county in the contiguous United States. PC-BEIS has been compiled using Microsoft FORTRAN and tested on IBM-compatible personal computers. The source code was written in ANSI FORTRAN 77 and should be transportable to most other computers. Emission rates depend on land use, leaf biomass, and emission factors. PC-BEIS also includes adjustments due to temperature and sunlight. A simple leaf energy balance module is included to allow more refined calculations of leaf temperature and sunlight through forest canopies. This user's guide briefly describes the technical background, provides an overview of computer aspects, and shows an example test case.

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SECTION 1

INTRODUCTION

Several recent modeling studies, most notably Chameides et al. (1988), have highlighted the need to include biogenic emissions of hydrocarbons in the prediction of ground-level ozone. Unfortunately, no tool has been readily available for making these estimates of biogenic emissions. Drawing upon our experience with the Regional Oxidant Model (ROM) and the Urban Airshed Model (UAM), we have developed a personal computer-based system for estimating biogenic emissions of non-methane hydrocarbons. The system described in this user's guide allows users to estimate hourly emissions of isoprene, α -pinene, other monoterpenes, and unidentified hydrocarbons for any county in the contiguous United States.

PC-BEIS is intended to meet two specific needs: 1) to provide an estimate of biogenic VOC emissions required for baseline emission inventories mandated by the 1990 Clean Air Act Amendments and 2) to provide hourly estimates of biogenic VOC emissions needed for use with the Empirical Kinetics Modeling Approach (EKMA). For the first need, PC-BEIS gives an estimate of tons per day. In order to meet EKMA's needs, biogenic emissions are output on a kilograms/kilometer²/hour basis for each major species (isoprene, alpha-pinene, monoterpenes and unknowns).

The key question at this point is "What meteorological data (i.e. what day) should be utilized for purposes of computing biogenic emissions?" The answer depends upon which of the two needs, described above, one is intending to meet.

For a baseline inventory the following steps should be followed:

- 1) Select the top ten days with the highest hourly ozone readings over the most recent three years of monitoring data,
- 2) Obtain National Weather Service data for daily maximum temperature for each of the ten days,
- 3) Rank maximum daily temperatures from highest to lowest,
- 4) Select fourth highest based upon maximum daily temperature
- 5) Use hourly meteorological data (cloud cover, relative humidity, wind speed and temperature) for this day as input to PC-BEIS.

An example illustrates application of this guidance. The top ten ozone exceedances during the latest three year period, 1987-89, are shown in Table 1. After the values are ranked by temperature, the fourth highest is selected. In this case it is June 30, 1987. Meteorological values for that day should be input to PC-BEIS. In the event that two days have the same maximum temperature which would be the fourth highest, the one with the lowest average daily wind speed should be selected.

For use with EKMA, numerous days will need to be simulated with PC-BEIS. These will correspond to the days which will be modeled with EKMA.

Table 1. Example of Day Selection for PC-BEIS

<u>Date</u>	<u>Ozone Level (ppm)</u>	<u>Maximum Temperature (F)</u>
6/25/88	0.162	93
6/26/88	0.159	88
7/3/89	0.157	92
8/10/87	0.155	87
9/4/88	0.152	91
6/30/87	0.147	90
8/5/88	0.145	88
8/12/88	0.144	84
7/17/88	0.144	87
6/6/88	0.138	85

Ranked by Temperature

<u>Date</u>	<u>Ozone Level (ppm)</u>	<u>Maximum Temperature (F)</u>
6/25/88	0.162	93
7/3/89	0.157	92
9/4/88	0.152	91
6/30/87	0.147	90 4th highest
6/26/88	0.159	88
8/5/88	0.145	88
8/10/87	0.155	87
7/17/88	0.144	87
6/6/88	0.138	85
8/12/88	0.144	84

This user's guide is organized to provide a brief technical background and sufficient information to run the model. Section 2 reviews the data requirements of the model. Section 3 discusses the technical aspects of the system. Section 4, especially of interest to those installing the program, examines computer aspects. Section 5 provides a test example.

SECTION 2

DATA REQUIREMENTS

The data requirements for PC-BEIS are modest. The user needs to obtain information on the county of interest and hourly meteorological data. To run PC-BEIS, the following data are required:

Site information:

- County Federal Information Processing System (FIPS) code (a list of FIPS codes for every county in the contiguous United States is given in Appendix A)

- Latitude, longitude

- Time zone (5=EST, 6=CST, etc.)

- Month, day, year, hour(s)

Meteorological data (hourly):

- Surface wind speed (m/s)

- Ambient air temperature ($^{\circ}\text{C}$)

- Relative humidity (fraction)

- Opaque sky cover (fraction)

SECTION 3

TECHNICAL DESCRIPTION

In response to regional air pollution modeling needs, the U.S. EPA sponsored development of a Biogenic Emissions Inventory System (BEIS) as described in Pierce et al. (1990). The methodology used in BEIS, with one minor exception, has been used in PC-BEIS. In PC-BEIS, we have opted for a more simplistic algorithm for the reduction of sunlight due to clouds because most users will not have access to the detailed cloud layer data used in regional model applications. We feel that the accuracy sacrificed with this simple algorithm will be minimal.

PC-BEIS combines features of the Lamb et al. (1987) and Novak and Reagan (1986) methodologies. It also includes a simple canopy model (Gay, 1987) for estimating profiles of temperature and sunlight within forest canopies. In calculating biogenic non-methane hydrocarbons (NMHC) emissions, PC-BEIS considers land use, leaf biomass factors, emission factors, and environmental adjustment. For non-forested areas, the basic emission rate equation for a county can be expressed by the following:

$$ER_i = \sum_{j=1}^n \{ A_j EF_{ij} F_{ij}(S,T) \} \quad (1)$$

where ER_i is the emission rate ($\mu\text{g h}^{-1}$) of chemical species i (either isoprene, α -pinene, other monoterpenes, or unidentified hydrocarbons) summed over $j=n$ types of land use, A_j is the area (m^2) of the land use type j , EF_{ij} is the emissions flux factor ($\mu\text{g m}^{-2} \text{h}^{-1}$) for chemical species i and land use type j , and $F_{ij}(S,T)$ is a unitless environmental adjustment factor that varies as a function of sunlight intensity S and leaf temperature T .

The emission rate equation for forested areas is expressed somewhat differently with the following:

$$ER_i = \sum_{j=1}^n \{ A_j BF_{ij} EF_{ij} F_{ij}(S,T) \} \quad (2)$$

where the terms are the same as equation (1) except BF_{ij} is a leaf biomass factor (g m^{-2}) which relates the mass of dry leaf to forest area and the emission factor EF_{ij} is given in terms of $\mu\text{g (g-leaf biomass)}^{-1} \text{h}^{-1}$.

Land Use Areas

Land use data for each county were extracted from the Oak Ridge National Laboratory's GEOECOLOGY data base (Olson et al., 1980). Although some of the land use data date back to the early 1970's, it was the most comprehensive national data base available for this version of PC-BEIS. To correspond to available emission factors, the GEOECOLOGY data were aggregated into 25 land use types. The 104 forest types in the database were designated as either (1) primarily oak, (2) other deciduous, or (3) primarily coniferous to correspond to the emission factors of Lamb et al. (1987).

Leaf Biomass Factors

Leaf biomass factors were taken directly from Lamb et al. (1987). Biomass in each of the three forest groups is partitioned into four emission categories as shown in Table 2.

TABLE 2. Leaf biomass factors (g m^{-2}) for oak, other deciduous, and coniferous groups (from Lamb et al., (1987).

Forest group	Emission category			
	High isoprene deciduous	Low isoprene deciduous	Non-isoprene deciduous	Non-isoprene coniferous
Oak	185	60	60	70
Other deciduous	60	185	90	135
Coniferous	39	26	26	559

Emission Factors

The emission factors in BEIS are largely based on the Lamb et al. (1987) analysis of the Zimmerman (1979) Tampa Bay Study. Some agricultural emission rates were modified using factors given in Novak and Reagan (1986). Emission factors for the 25 land use categories are listed in Table 3. The factors in Table 3 are expressed as standardized fluxes and reflect emission rates assumed for full sunlight and 30°C. Emission fluxes for forests were obtained by multiplying the leaf biomass factor (g m^{-2}) given in Table 2 by the appropriate emission factor ($\mu\text{g (g-leaf biomass)}^{-1} \text{h}^{-1}$) given in Table 4.

TABLE 3. Land use types, NMHC emission fluxes, and species distribution used in the PC-BEIS. Fluxes are standardized to 30°C and full sunlight.

Land use Type	NMHC flux ($\mu\text{g m}^{-2} \text{h}^{-1}$)	Percent contribution (by mass)			
		isoprene	α -pinene	monoterpene	unidentified
Oak	4258	73	3	3	21
Corn	3542	0	10	10	80
Other decid.	3353	63	5	6	26
Coniferous	3106	24	21	23	32
Urban	771	53	10	11	26
Peanuts/Rice	510	20	25	25	30
Tobacco	294	0	10	10	80
Grass/Pasture	281	20	25	25	30
Hay/Scrub/Range	189	20	25	25	30
Potato	48	20	25	25	30
Sorghum	39	20	25	25	30
Alfalfa	38	50	10	10	30
Barley/Cotton/Oats	38	20	25	25	30
Rye/Misc.					
Wheat	30	50	10	10	30
Soybeans	22	100	0	0	0
Water/Barren	0	0	0	0	0

TABLE 4. Forest emission factors ($\mu\text{g (g-leaf biomass)}^{-1} \text{ h}^{-1}$) for each biomass emission category, standardized for full sunlight and 30°C (from Lamb et al., 1987).

Chemical species	Emission category			
	High isoprene deciduous	Low isoprene deciduous	Non-isoprene deciduous	Non-isoprene coniferous
Isoprene	14.69	6.60	0.0	0.0
α -pinene	0.13	0.05	0.07	1.13
Monoterpene	0.11	0.05	0.07	1.29
Unidentified	3.24	1.76	1.91	1.38

Emission fluxes are expressed in terms of total NMHC and are broken down by isoprene, α -pinene, other monoterpenes, and unidentified hydrocarbons. Emission fluxes from forests are generally much higher than other land use areas. One exception is corn, which has considerable uncertainty and is based on only six samples. Recent experimental data by Winer et al. (1990) indicate low emissions from corn. More study is needed for resolving corn's emission rates particularly for areas of the country where land use is largely agricultural.

One striking feature about Table 3 is that a large percentage of the emissions are lumped into the unidentified hydrocarbon category. This is necessary because the original field researchers often were unable to speciate the HC compounds from the gas chromatography and a significant mass of HC's were speciated among many GC peaks whose individual masses were small but the sum was substantial. The identification of these unidentified HC's is an area needing more attention, particularly for ozone modeling.

Environmental Adjustment Factors

Laboratory studies by Tingey et al. (1980, 1981) and Tingey (1981) showed a strong relationship of biogenic NMHC emissions to leaf temperature. For isoprene emissions, they also showed a relationship to sunlight. PC-BEIS computes environmental adjustment factors as a function of temperature and sunlight using the relationships suggested by Tingey and his colleagues. We have also incorporated a simple leaf energy balance model to simulate the vertical profiles of leaf temperature and solar radiation in forest canopies.

For non-forest canopies and urban forests, PC-BEIS assumes that the leaf temperature equals ambient temperature and that solar intensity impacts all leaves equally. PC-BEIS adjusts non-isoprene emissions with the following exponential relationship:

$$F(T) = \exp[a (T - 30)] \quad (3)$$

where $F(T)$ is the unitless environmental adjustment factor, a is an empirical coefficient whose values are given in Table 5, and T is the leaf temperature (°C).

TABLE 5. Empirical coefficients used for adjusting the emission rate for non-isoprene compounds.

Compound	a
Alpha-pinene	0.067
Monoterpene	0.0739
Unidentified	0.0739

The adjustment factor for isoprene emissions is modeled with the following equation:

$$F(S, T) = \left\{ 10^{\left(\frac{a}{1 + \exp[-b(T-c)]} - d \right)} \right\} / e \quad (4)$$

where a, b, c, d, and e are empirical coefficients whose values are given in Table 6. Leaf temperature T is expressed in °C. Solar intensity S is given in units of $\mu\text{E m}^{-2} \text{s}^{-1}$ and refers to the photon flux density in the visible (or photosynthetic) portion of the spectrum (.4-.7 μm). We have assumed that 50% of the sun's energy is in the visible spectrum. This implies that 1 langley min^{-1} (visible solar energy) equals $2916 \mu\text{E m}^{-2} \text{s}^{-1}$. Thus, the light saturation value of $800 \mu\text{E m}^{-2} \text{s}^{-1}$ is approximately equal to 0.55 langley min^{-1} of total solar energy, a level which is easily reached by mid-morning on a sunny summer day. PC-BEIS estimates solar intensity based upon day of year, time of day, latitude, longitude and amount of cloud cover, all of which are inputs to PC-BEIS.

TABLE 6. Empirical coefficients used in the environmental factor for adjusting the isoprene emission rate.

Light intensity ($\mu\text{E m}^{-2} \text{s}^{-1}$)	Empirical coefficients				
	a	b	c	d	e
800	1.200	0.400	28.30	0.796	1.00
400	0.916	0.239	29.93	0.462	1.95
200	0.615	0.696	32.79	0.077	4.75
100	0.437	0.312	31.75	0.160	10.73

The calculation of solar intensity is based on Iqbal (1983), and the cloud attenuation factor comes from Holtslag and Van Ulden (1983).

For non-urban forest canopies, sunlight and leaf temperature are computed as a function of height. Solar radiation is assumed to decrease exponentially through the forest canopy and is modeled with the following equation:

$$S = S_0 \exp(-k \text{ LAI}) \quad (5)$$

where S is the solar intensity (both the total solar intensity in langley min^{-1} and the visible [PAR] flux in $\mu\text{E m}^{-2} \text{s}^{-1}$ are computed), S_0 is the value of S at the top of the canopy, k is an extinction coefficient, and LAI is the leaf area index ($\text{m}^2 \text{m}^{-2}$) which is summed through the forest canopy. Leaf area index represents the meters^2 of leaf surface per meter^2 of land area. Values for k were adapted from Baldocchi et al. (1984) and are assumed to be 0.42 for PAR and 0.18 for total solar intensity. Values of LAI summed down through the forest canopies are listed in Table 7. Individual layers are assumed to be 1.5m thick for deciduous forest and 2.0m thick for coniferous following the formulation of Gay (1987). This is represented graphically in Figure 1.

FIGURE 1
Forest Canopy Model

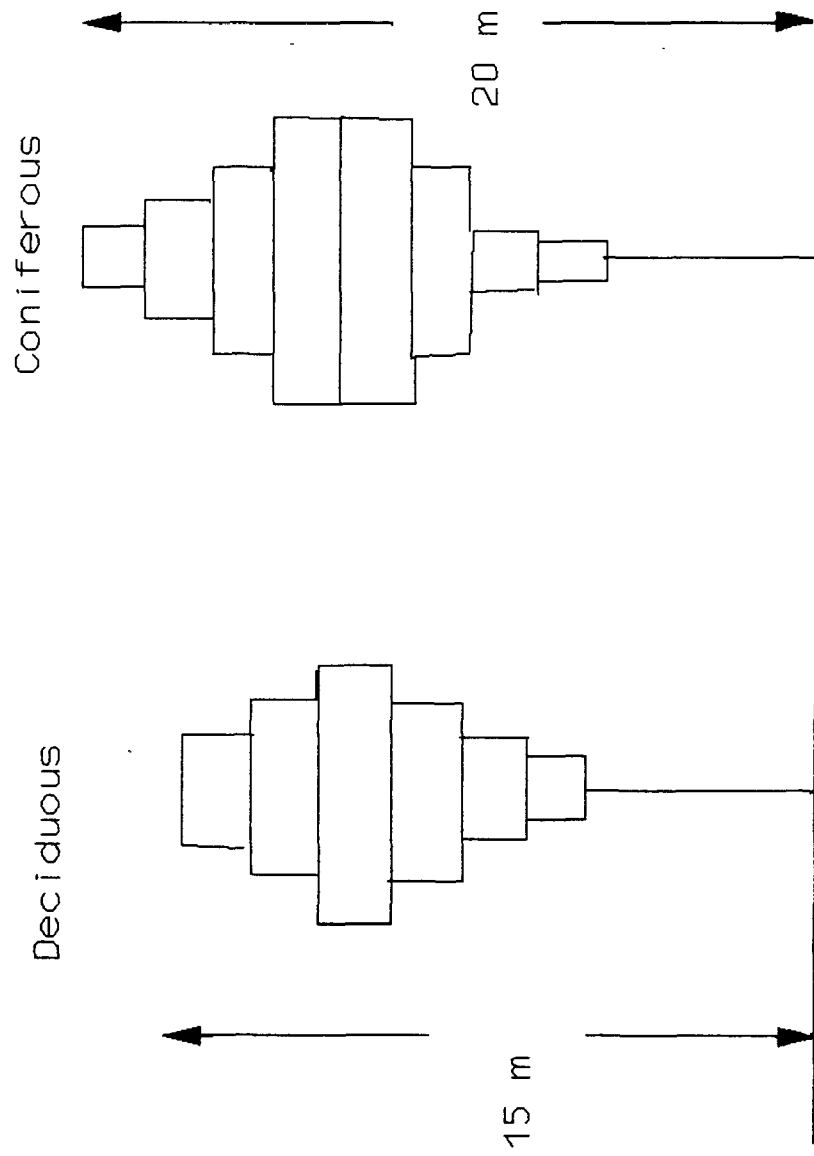


TABLE 7. Assumed values of leaf area index ($\text{m}^2 \text{m}^{-2}$) summed down through the deciduous and coniferous forest types.

Layer	LAI ($\text{m}^2 \text{m}^{-2}$)	
	Deciduous	Coniferous
8	0.54	0.46
7	1.85	1.56
6	3.93	3.07
5	5.25	5.04
4	5.90	7.01
3	6.01	8.39
2	6.01	8.83
1	6.01	9.08

The total solar energy computed for each layer is used to compute the leaf temperature. We have adapted the canopy model of Gay (1987). Gay's model is based on a leaf energy balance equation given by Gates and Papian (1971) which can be expressed simply as follows:

$$Q = IR + L + C \quad (6)$$

where Q is the radiant energy absorbed by the leaf (including solar energy S and infrared energy from the ground and nearby leaves), IR is the infrared energy emitted by the leaf, L is the latent heat loss or gain which depends mostly on the relative humidity and somewhat on the wind speed, and C is the convective heat loss or gain which depends on the wind speed and the difference between leaf temperature and air temperature. Equation (6) is solved iteratively to determine a value for the leaf temperature which causes the equation to balance.

In general, modeled leaf temperatures near the top of the canopy on sunny, light wind days can be -8°C warmer than the ambient temperature. Leaf temperatures in the lower portion of the canopy tend to be a couple of degrees cooler than the ambient temperature.

Values of leaf temperature and PAR for each layer are used in equation (3) and (4) to compute the appropriate environmental adjustment factors. The biomass of each forest type is scaled vertically to match the vertical variations in LAI. Emission rates in each layer are computed separately and then summed over the entire canopy.

It should be noted that we consider the canopy model to be a first-order, semi-empirical scheme. Although it is based on equations and coefficients found in the literature, it has not been subjected to a rigorous validation. The model is undergoing further research and development and it will be updated as improvements become available.

SECTION 4

COMPUTER ASPECTS

This section discusses installation procedures, machine requirements, software design, and data structures associated with PC-BEIS.

Installation Procedures

The executable file, source code, and necessary data files are available on EPA's CHIEF (Clearinghouse for Inventories and Emission Factors) electronic bulletin board. The access number for CHIEF is 919/541-5742. To install the program, simply follow the procedures given on the bulletin board.

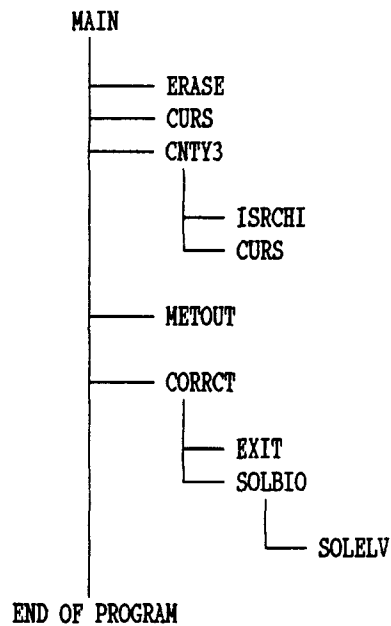
Model Requirements

PC-BEIS is written to conform with the FORTRAN 77 standard and has been compiled on the PC with Microsoft FORTRAN version 4.1. The source code, however, should be easily adapted to most FORTRAN compilers. PC-BEIS has been compiled to allow its use on IBM-compatible personal computers. The current executable version does not require the use of a math co-processor.

The executable and land use data files needed to run PC-BEIS will take up approximately 2 MB of memory. It is recommended that PC-BEIS users have a math co-processor, although it is not required.

Software Design

PC-BEIS has been written in a modular fashion and to the extent possible conforms to the ANSI FORTRAN 77 standard. It consists of a main program and nine other subroutines or functions. The relationship of the main program and the other routines is shown below.



A brief description of each module is given below.

MAIN	- Controls user inputs and outputs; calls routines that perform calculations
ERASE	- Utility routine to erase the terminal screen
CURS	- Utility routine to control cursor movements
CNTY3	- Reads in county land use data and computes standardized emission rates
ISRCHI	- Function which determines what address to access in the county land use file
METOUT	- Outputs a meteorological file after a user has entered data on the terminal
CORRCT	- Computes hourly environmental adjustment factors; includes the canopy model
EXIT	- Utility routine to terminate the program if an error is found
SOLBIO	- Computes hourly total and visible solar radiation
SOLELV	- Computes solar angle

Data Structure

Although the user data input requirements are minimal, PC-BEIS employs several data files that are critical to its operation. PC-BEIS also outputs several files for the user. A brief description of each data file used in PC-BEIS is given below.

- CNTYPTR.DAT - Data that establishes a link between the county FIPS code input by the user and the address location in the county land use file (CNTY.DAT)
- OUTNAM - Output file named by the user (unit 25)
- METNAM - Optional input file containing hourly meteorological data (unit 10) for up to 24 hours; it can also optionally be used to output meteorological data (unit 14) that have been entered through the on-screen menu
- CNTY.DAT - Direct-access, binary file that contains land use data for the counties in the contiguous U.S.

A more complete description of each file, except for OUTNAM which is a general output file, is given in Tables 8-10.

Table 8. Description of the county pointer file
CNTYPTR.DAT (unit 12)*.

<u>Variable name</u>	<u>Description</u>
ITABLE	Integer array dimensioned to 3106. Each element consists of a county FIPS code whose position in the array corresponds to the record number in the county land use data file

* File CNTYPTR.DAT is binary and consists of one record whose length is 12,500 characters.

Table 9. Description of the meteorological data file
METNAM.*

<u>Variable name</u>	<u>Columns</u>	<u>Format</u>	<u>Description</u>
IHR**	2-5	I3	Hour, local standard time (e.g., 12)
CLDCVR	6-11	F6.2	Opaque sky cover (fraction)
RH	12-19	F6.2	Relative humidity (fraction)
U	21-28	F6.2	Wind speed (m s^{-1})
TSFC	30-37	F6.2	Ambient air temperature ($^{\circ}\text{C}$)

* METNAM may be used for input and/or output
(unit 10 for input, unit 14 for output)

** Up to 24 records (hours) are allowed

Table 10. Description of the county land use data file
CNTY.DAT (unit 10).*

<u>Variable name</u>	<u>Variable type</u>	<u>Description</u>
FIPS	Integer	County FIPS code
STATE	CHAR * 2	State abbreviation
CNTYID	CHAR * 30	County or municipality id
CNTYARE	Real	Total county area (ha)
URBAN	Real	Urban area (ha)
WATER	Real	Water area (ha)
BARN	Real	Barren area (ha)
SCRUB	Real	Scrub area (ha)
GRASS	Real	Grassland or pasture (ha)
OAK	Real	Oak forest (ha)
DECD	Real	Other deciduous forest (ha)
CONF	Real	Coniferous forest (ha)
ALFA	Real	Alfalfa (ha)
SORG	Real	Sorghum (ha)
HAY	Real	Hay (ha)
SOYBN	Real	Soybean (ha)
CORN	Real	Corn (ha)
POTAT	Real	Potato (ha)
TOBAC	Real	Tobacco (ha)
WHEAT	Real	Wheat (ha)
COTT	Real	Cotton (ha)
RYE	Real	Rye (ha)
RICE	Real	Rice (ha)
PEANUT	Real	Peanut (ha)
BARL	Real	Barley (ha)
OATS	Real	Oats (ha)
MSCRP	Real	Miscellaneous cropland (ha)
OTHER	Real	Other unidentified land use (ha)

* File CNTY.DAT is a direct access, binary file with a record length of 224 characters. Each record contains information for a single county.

CNTY.ASC is an ASCII file which contains the land use data. If, land use data are to be changed from the values provided, CNTY.ASC must be modified and a program ASCCON.FOR executed to create a new CNTY.DAT file. The format for CNTY.ASC is:

Record			
1	FIPS	Integer	I6
			1X
	STATE	CHAR*2	
			2X
	CNTYID	CHAR*30	
2	Land Use	Free Format	(categories CNTYARE - SOYBN)
3	Land Use	Free Format	(categories CORN - OTHER)

SECTION 5

TEST EXAMPLE

In this section, we not only describe the test case, we also step through the test example so that users can gain some familiarity with the menu-driven system.

In this example, we apply PC-BEIS to Wake County, North Carolina, for a 24-hour period. Meteorological data were obtained from the National Climatic Data Center for the weather reporting station at Raleigh-Durham (RDU) airport. The day chosen for simulation, 19 August 1988, had a maximum temperature of 103°F (313K) and light to moderate winds.

Before beginning the model simulation, we assemble the data required as noted in Section 2. Site information includes the county FIPS code (available in Appendix A) and the latitude and longitude of Wake County (35.8°N, 78.6°W).

We now begin the model simulation by typing the command "PCBEIS". The first screen which appears is the following:

Please enter the output filename for this run:

We enter "TEST.OUT" and the Site Input Screen appears as follows:

PCBEIS version 2.2

Site Input Screen

1. FIPS	:	37183
2. Site description	:	
3. Latitude	:	35.80
4. Longitude	:	78.60
5. Day	:	19
6. Month	:	8
7. Year	:	88
8. Time Zone	:	5
9. Begin Hour	:	1
10. End Hour	:	24
11. Continue	:	
12. Quit	:	

Enter selection number to change and hit RETURN

The default values listed above are for the Wake County example, so we do not modify any of the values. If the user wishes to modify a value, however, he/she would select the variable number (for example, enter an "8" for the Time Zone). The program will position the cursor in the appropriate location, whereupon the user may enter a new value. Once the Site Input Screen is finalized, the user should enter "11" to continue.

The next screen displays standardized emission rates for our test case. These values represent an hour with a temperature of 30 deg C and full sunlight. This screen can also be used to verify that the proper FIPS code has been entered.

BIOGENIC HC EMISSIONS BY COUNTY
 BASED ON BEIS
 *** STANDARDIZED EMISSION RATES ***
 Assuming 30 deg C & bright Sun

```

***** Wake Co NC *****
NON-FOREST EMISSIONS:
ISOPRENE (kg/hr) = 25.69
ALPHA-PINENE (kg/hr) = 46.25
MONOTERPENE (kg/hr) = 46.25
UNKNOWN (kg/hr) = 170.12
FOREST EMISSIONS:
ISOPRENE (kg/hr) = 4141.13
ALPHA-PINENE (kg/hr) = 155.54
MONOTERPENE (kg/hr) = 166.77
UNKNOWN (kg/hr) = 1231.22
*** TOTAL HC EMISSIONS FOR Wake Co NC
COUNTY AREA (km2) = 2157.62
ISOPRENE (kg/hr) = 4166.81 FLUX (kg/km2/hr): 1.931
ALPHA-PINENE (kg/hr) = 201.79 FLUX (kg/km2/hr): .094
MONOTERPENE (kg/hr) = 213.02 FLUX (kg/km2/hr): .099
UNKNOWN (kg/hr) = 1401.34 FLUX (kg/km2/hr): .649
Hit RETURN TO CONTINUE

```

The next screen asks:

Do you wish to use a MET file for hourly met parameters:

If you have already created a meteorological file, answer YES. The next screen will ask for the name of your meteorological file:

Enter the MET filename:

We then enter "TEST.MET" for our example, and the screen below is shown.

PCBEIS version 2.2
 Hourly Met Input Screen

Hour	CLDCVR	RELH	WS	TpSf	Hour	CLDCVR	RELH	WS	TpSf
1	.30	.56	3.10	26.70	13	.10	.31	3.60	35.60
2	.50	.58	.00	26.10	14	.10	.28	4.60	37.20
3	.60	.63	.00	25.60	15	.30	.16	4.60	38.90
4	1.00	.61	3.60	26.10	16	.40	.15	6.70	38.30
5	1.00	.61	3.60	26.70	17	.40	.15	8.20	37.80
6	.80	.66	3.10	25.60	18	.30	.25	5.70	35.60
7	.80	.63	4.10	25.60	19	.30	.24	5.10	35.00
8	.50	.66	3.60	25.60	20	.30	.25	4.10	33.30
9	.00	.56	4.60	28.30	21	.30	.38	5.10	30.60
10	.10	.47	4.10	30.60	22	.30	.45	4.10	30.00
11	.10	.42	4.10	32.80	23	.60	.49	4.10	29.40
12	.10	.35	3.60	35.00	24	.60	.54	3.60	28.30

OPTIONS
 CLDCVR : "C" DUP Hour : "D"
 RH : "R" NEXT HOUR : "N"
 WS : "W" GO : "G"
 TPRS : "T" QUIT : "Q"

Cloud cover (Fraction 50% = .50)
 Rel Hum (Fraction 50% = .50)
 Wind speed (meters /second)
 Surface Temp. (Degrees C)

Hit RETURN to continue

Initially, only one line of meteorological data is displayed. One line at a time may be modified with the options in the left-hand corner of the screen. Enter a "C" and RETURN to enter a different cloud cover value, or an "R" for relative humidity, a "W" for wind speed, or a "T" for temperature. Proceed to the next hour with an "N" for NEXT or the "D" to DUPLICATE the previous line. If no changes are desired, you may use the "G" for GO to fill in the entire meteorological file. Then push RETURN to continue the program.

If you want to use PC-BEIS to build your meteorological file from scratch, answer NO to "Do you wish to use a MET file for hourly met parameters?" One line of default meteorological data will be displayed. The values may be modified using the options in the left-hand corner. New values may be entered until your file is complete. Then push RETURN to continue the program.

Preparation of a meteorological file is cumbersome using the procedure in PC-BEIS. These files can also be built outside of PC-BEIS using a text editor, word processing or spreadsheet program.

The format consists of five columns of data which include: hour, sky cover (fraction), relative humidity (fraction), wind speed (meters per second) and temperature (deg C). Columns should be separated by a space and must be in ASCII format. Table 9 describes this format, which is illustrated below:

Hour	Sky Cover	Rel Hum	Wind Speed	Temp
1	0.3	0.56	3.1	26.7
2	0.5	0.58	0.0	26.1
3	0.6	0.63	0.0	25.6
4	1.0	0.61	3.6	26.1
5	1.0	0.61	3.6	26.7
6	0.8	0.66	3.1	25.6
7	0.8	0.63	4.1	25.6
8	0.5	0.66	3.6	25.6
9	0.0	0.56	4.6	28.3
10	0.1	0.47	4.1	30.6
11	0.1	0.42	4.1	32.8
12	0.1	0.35	3.6	35.
13	0.1	0.31	3.6	35.6
14	0.1	0.28	4.6	37.2
15	0.3	0.16	4.6	38.9
16	0.4	0.15	6.7	38.3
17	0.4	0.15	8.2	37.8
18	0.3	0.25	5.7	35.6
19	0.3	0.24	5.1	35.0
20	0.3	0.25	4.1	33.3
21	0.3	0.38	5.1	30.6
22	0.3	0.45	4.1	30.0
23	0.6	0.49	4.1	29.4
24	0.6	0.54	3.6	28.3

Next there is the option of saving the meteorological data file as the following is displayed:

Do you want to save the MET file for later use?:

In our example, we answer "no" because the data file was not modified. If we had answered "yes", the following command would have been displayed:

Enter the MET filename:

PC-BEIS now begins its computations and displays a status line like the following:

Processing HOUR: 3

The last query from the program is as follows:

Do you wish to make another selection? (Y/N):

We answer "no" and the final screen is displayed:

Program output is located in TEST.OUT

Program finished.

A listing of this output file is shown below.

EMISSION RATES CORRECTED FOR MET INPUTS

*****Wake Co

NC*****

Simulation Date : 8/19/88

Latitude : 35.80

Longitude : 78.60

Time Zone : .5

HR	CLD	RELH	WIND	TMPSRF	ISOPRENE	ISO FLUX	ALPHA-P	APH FLUX	MONOTERP	MON FLUX	UNKQWN	UNK FLUX
	frac	frac	m/s	C	kg/h	kg/km2-h	kg/h	kg/km2-h	kg/h	kg/km2-h	kg/h	kg/km2-h
1	.30	.56	3.10	26.70	.00	.000	134.34	.062	135.98	.063	857.56	.397
2	.50	.58	.00	26.10	.00	.000	116.69	.054	116.28	.054	713.08	.330
3	.60	.63	.00	25.60	.00	.000	112.94	.052	112.18	.052	688.06	.319
4	1.00	.61	3.60	26.10	.00	.000	129.99	.060	131.14	.061	828.54	.384
5	1.00	.61	3.60	26.70	.00	.000	135.03	.063	136.76	.063	863.58	.400
6	.80	.66	3.10	25.60	19.98	.009	123.67	.057	124.12	.058	780.92	.362
7	.80	.63	4.10	25.60	326.14	.151	131.21	.061	132.49	.061	845.98	.392
8	.50	.66	3.60	25.60	854.17	.396	144.52	.067	147.43	.068	962.15	.446
9	.00	.56	4.60	28.30	1852.56	.859	181.45	.084	189.57	.088	1249.09	.579
10	.10	.47	4.10	30.60	3233.63	1.499	215.26	.100	228.93	.106	1513.46	.701
11	.10	.42	4.10	32.80	4294.84	1.991	249.62	.116	269.56	.125	1782.37	.826
12	.10	.35	3.60	35.00	5055.92	2.343	283.24	.131	309.82	.144	2040.00	.945
13	.10	.31	3.60	35.60	5095.43	2.362	289.51	.134	317.33	.147	2081.72	.965
14	.10	.28	4.60	37.20	5142.11	2.383	308.48	.143	340.20	.158	2211.13	1.025
15	.30	.16	4.60	38.90	4863.67	2.254	322.21	.149	356.81	.165	2282.23	1.058
16	.40	.15	6.70	38.30	3769.11	1.747	302.88	.140	333.31	.154	2120.81	.983
17	.40	.15	8.20	37.80	2418.45	1.121	286.95	.133	314.09	.146	1988.46	.922
18	.30	.25	5.70	35.60	7308.88	.339	243.88	.113	262.55	.122	1655.80	.767
19	.30	.24	5.10	35.00	.00	.000	233.70	.108	250.55	.116	1579.24	.732
20	.30	.25	4.10	33.30	.00	.000	207.96	.096	220.26	.102	1387.25	.643
21	.30	.38	5.10	30.60	.00	.000	175.66	.081	182.84	.085	1155.19	.535
22	.30	.45	4.10	30.00	.00	.000	167.86	.078	173.88	.081	1097.08	.508
23	.60	.49	4.10	29.40	.00	.000	161.59	.075	166.74	.077	1052.59	.488
24	.60	.54	3.60	28.30	.00	.000	149.79	.069	153.34	.071	967.46	.448
Total Species					: 37656.87	17.453	4808.44	2.229	5106.14	2.367	32703.77	15.157
Total of all species					: 80275.23	kg						
Total of all species					: 88.50	US short tons						

This file is automatically saved using the user specified file name which was specified at the outset. For this example, it is TEST.OUT. The viewer can use the DOS TYPE command to view the data on the screen. The PRINT command can be used to print a hard copy of the results. Please note that the output results exceed 80 characters in width. The user must refer to a DOS manual to make the appropriate modifications for either screen or printing for his/her particular system. The output can also be viewed or printed through use of a text editor, word processing or spreadsheet program.

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APPENDIX A

COUNTY AND MUNICIPALITY FIPS CODES

*** AL ***

1001 Autauga Co
 1003 Baldwin Co
 1005 Barbour Co
 1007 Bibb Co
 1009 Blount Co
 1011 Bullock Co
 1013 Butler Co
 1015 Calhoun Co
 1017 Chambers Co
 1019 Cherokee Co
 1021 Chilton Co
 1023 Choctaw Co
 1025 Clarke Co
 1027 Clay Co
 1029 Cleburne Co
 1031 Coffee Co
 1033 Colbert Co
 1035 Conecuh Co
 1037 Coosa Co
 1039 Covington Co
 1041 Crenshaw Co
 1043 Cullman Co
 1045 Dale Co
 1047 Dallas Co
 1049 De Kalb Co
 1051 Elmore Co
 1053 Escambia Co
 1055 Etowah Co
 1057 Fayette Co
 1059 Franklin Co
 1061 Geneva Co
 1063 Greene Co
 1065 Hale Co
 1067 Henry Co
 1069 Houston Co
 1071 Jackson Co
 1073 Jefferson Co
 1075 Lamar Co
 1077 Lauderdale Co
 1079 Lawrence Co
 1081 Lee Co
 1083 Limestone Co
 1085 Lowndes Co
 1087 Macon Co
 1089 Madison Co
 1091 Marengo Co
 1093 Marion Co
 1095 Marshall Co
 1097 Mobile Co

1099 Monroe Co
 1101 Montgomery Co
 1103 Morgan Co
 1105 Perry Co
 1107 Pickens Co
 1109 Pike Co
 1111 Randolph Co
 1113 Russell Co
 1115 St Clair Co
 1117 Shelby Co
 1119 Sumter Co
 1121 Talladega Co
 1123 Tallapoosa Co
 1125 Tuscaloosa Co
 1127 Walker Co
 1129 Washington Co
 1131 Wilcox Co
 1133 Winston Co

*** AZ ***

4001 Apache Co
 4003 Cochise Co
 4005 Coconino Co
 4007 Gila Co
 4009 Graham Co
 4011 Greenlee Co
 4013 Maricopa Co
 4015 Mohave Co
 4017 Navajo Co
 4019 Pima Co
 4021 Pinal Co
 4023 Santa Cruz Co
 4025 Yavapai Co
 4027 Yuma Co

*** AR ***

5001 Arkansas Co
 5003 Ashley Co
 5005 Baxter Co
 5007 Benton Co
 5009 Boone Co
 5011 Bradley Co
 5013 Calhoun Co
 5015 Carroll Co
 5017 Chicot Co
 5019 Clark Co
 5021 Clay Co
 5023 Cleburne Co
 5025 Cleveland Co
 5027 Columbia Co
 5029 Conway Co

5031 Craighead Co
5033 Crawford Co
5035 Crittenden Co
5037 Cross Co
5039 Dallas Co
5041 Desha Co
5043 Drew Co
5045 Faulkner Co
5047 Franklin Co
5049 Fulton Co
5051 Garland Co
5053 Grant Co
5055 Greene Co
5057 Hempstead Co
5059 Hot Springs Co
5061 Howard Co
5063 Independence Co
5065 Izard Co
5067 Jackson Co
5069 Jefferson Co
5071 Johnson Co
5073 Lafayette Co
5075 Lawrence Co
5077 Lee Co
5079 Lincoln Co
5081 Little River Co
5083 Logan Co
5085 Lonoke Co
5087 Madison Co
5089 Marion Co
5091 Miller Co
5093 Mississippi Co
5095 Monroe Co
5097 Montgomery Co
5099 Nevada Co
5101 Newton Co
5103 Ouachita Co
5105 Perry Co
5107 Phillips Co
5109 Pike Co
5111 Poinsett Co
5113 Polk Co
5115 Pope Co
5117 Prairie Co
5119 Pulaski Co
5121 Randolph Co
5123 St Francis Co
5125 Saline Co
5127 Scott Co
5129 Searcy Co
5131 Sebastian Co
5133 Sevier Co

5135 Sharp Co
5137 Stone Co
5139 Union Co
5141 Van Buren Co
5143 Washington Co
5145 White Co
5147 Woodruff Co
5149 Yell Co

*** CA ***

6001 Alameda Co
6003 Alpine Co
6005 Amador Co
6007 Butte Co
6009 Calaveras Co
6011 Colusa Co
6013 Contra Costa Co
6015 Del Norte Co
6017 El Dorado Co
6019 Fresno Co
6021 Glenn Co
6023 Humboldt Co
6025 Imperial Co
6027 Inyo Co
6029 Kern Co
6031 Kings Co
6033 Lake Co
6035 Lassen Co
6037 Los Angeles Co
6039 Madera Co
6041 Marin Co
6043 Mariposa Co
6045 Mendocino Co
6047 Merced Co
6049 Modoc Co
6051 Mono Co
6053 Monterey Co
6055 Napa Co
6057 Nevada Co
6059 Orange Co
6061 Placer Co
6063 Plumas Co
6065 Riverside Co
6067 Sacramento Co
6069 San Benito Co
6071 San Bernardino Co
6073 San Diego Co
6075 San Francisco Co
6077 San Joaquin Co
6079 San Luis Obispo Co
6081 San Mateo Co

6083 Santa Barbara Co
6085 Santa Clara Co
6087 Santa Cruz Co
6089 Shasta Co
6091 Sierra Co
6093 Siskiyou Co
6095 Solano Co
6097 Sonoma Co
6099 Stanislaus Co
6101 Sutter Co
6103 Tehama Co
6105 Trinity Co
6107 Tulare Co
6109 Tuolumne Co
6111 Ventura Co
6113 Yolo Co
6115 Yuba Co

*** CO ***

8001 Adams Co
8003 Alamosa Co
8005 Arapahoe Co
8007 Archuleta Co
8009 Baca Co
8011 Bent Co
8013 Boulder Co
8015 Chaffee Co
8017 Cheyenne Co
8019 Clear Creek Co
8021 Conejos Co
8023 Costilla Co
8025 Crowley Co
8027 Custer Co
8029 Delta Co
8031 Denver Co
8033 Dolores Co
8035 Douglas Co
8037 Eagle Co
8039 Elbert Co
8041 El Paso Co
8043 Fremont Co
8045 Garfield Co
8047 Gilpin Co
8049 Grand Co
8051 Gunnison Co
8053 Hinsdale Co
8055 Huerfano Co
8057 Jackson Co
8059 Jefferson Co
8061 Kiowa Co
8063 Kit Carson Co

8065 Lake Co
8067 La Plata Co
8069 Larimer Co
8071 Las Animas Co
8073 Lincoln Co
8075 Logan Co
8077 Mesa Co
8079 Mineral Co
8081 Moffat Co
8083 Montezuma Co
8085 Montrose Co
8087 Morgan Co
8089 Otero Co
8091 Ouray Co
8093 Park Co
8095 Phillips Co
8097 Pitkin Co
8099 Prowers Co
8101 Pueblo Co
8103 Rio Blanco Co
8105 Rio Grande Co
8107 Routt Co
8109 Saguache Co
8111 San Juan Co
8113 San Miguel Co
8115 Sedgwick Co
8117 Summit Co
8119 Teller Co
8121 Washington Co
8123 Weld Co
8125 Yuma Co

*** CT ***

9001 Fairfield Co
9003 Hartford Co
9005 Litchfield Co
9007 Middlesex Co
9009 New Haven Co
9011 New London Co
9013 Tolland Co
9015 Windham Co

*** DE ***

10001 Kent Co
10003 New Castle Co
10005 Sussex Co

*** DC ***

11001 Washington

*** FL ***

12001 Alachua Co
 12003 Baker Co
 12005 Bay Co
 12007 Bradford Co
 12009 Brevard Co
 12011 Broward Co
 12013 Calhoun Co
 12015 Charlotte Co
 12017 Citrus Co
 12019 Clay Co
 12021 Collier Co
 12023 Columbia Co
 12025 Dade Co
 12027 De Soto Co
 12029 Dixie Co
 12031 Duval Co
 12033 Escambia Co
 12035 Flagler Co
 12037 Franklin Co
 12039 Gadsden Co
 12041 Gilchrist Co
 12043 Glades Co
 12045 Gulf Co
 12047 Hamilton Co
 12049 Hardee Co
 12051 Hendry Co
 12053 Hernando Co
 12055 Highlands Co
 12057 Hillsborough Co
 12059 Holmes Co
 12061 Indian River Co
 12063 Jackson Co
 12065 Jefferson Co
 12067 Lafayette Co
 12069 Lake Co
 12071 Lee Co
 12073 Leon Co
 12075 Levy Co
 12077 Liberty Co
 12079 Madison Co
 12081 Manatee Co
 12083 Marion Co
 12085 Martin Co
 12087 Monroe Co
 12089 Nassau Co
 12091 Okaloosa Co
 12093 Okeechobee Co
 12095 Orange Co
 12097 Osceola Co
 12099 Palm Beach Co

12101 Pasco Co
 12103 Pinellas Co
 12105 Polk Co
 12107 Putnam Co
 12109 St Johns Co
 12111 St Lucie Co
 12113 Santa Rosa Co
 12115 Sarasota Co
 12117 Seminole Co
 12119 Sumter Co
 12121 Suwannee Co
 12123 Taylor Co
 12125 Union Co
 12127 Volusia Co
 12129 Wakulla Co
 12131 Walton Co
 12133 Washington Co

*** GA ***

13001 Appling Co
 13003 Atkinson Co
 13005 Bacon Co
 13007 Baker Co
 13009 Baldwin Co
 13011 Banks Co
 13013 Barrow Co
 13015 Bartow Co
 13017 Ben Hill Co
 13019 Berrien Co
 13021 Bibb Co
 13023 Bleckley Co
 13025 Brantley Co
 13027 Brooks Co
 13029 Bryan Co
 13031 Bulloch Co
 13033 Burke Co
 13035 Butts Co
 13037 Calhoun Co
 13039 Camden Co
 13043 Candler Co
 13045 Carroll Co
 13047 Catoosa Co
 13049 Charlton Co
 13051 Chatham Co
 13053 Chattahoochee Co
 13055 Chattooga Co
 13057 Cherokee Co
 13059 Clarke Co
 13061 Clay Co
 13063 Clayton Co
 13065 Clinch Co

13067	Cobb Co	13171	Lamar Co
13069	Coffee Co	13173	Lanier Co
13071	Colquitt Co	13175	Laurens Co
13073	Columbia Co	13177	Lee Co
13075	Cook Co	13179	Liberty Co
13077	Coweta Co	13181	Lincoln Co
13079	Crawford Co	13183	Long Co
13081	Crisp Co	13185	Lowndes Co
13083	Dade Co	13187	Lumpkin Co
13085	Dawson Co	13189	Mc Duffie Co
13087	Decatur Co	13191	Mc Intosh Co
13089	De Kalb Co	13193	Nacon Co
13091	Dodge Co	13195	Madison Co
13093	Dooly Co	13197	Marion Co
13095	Dougherty Co	13199	Meriwether Co
13097	Douglas Co	13201	Miller Co
13099	Early Co	13205	Mitchell Co
13101	Echols Co	13207	Monroe Co
13103	Effingham Co	13209	Montgomery Co
13105	Elbert Co	13211	Morgan Co
13107	Emanuel Co	13213	Murray Co
13109	Evans Co	13217	Newton Co
13111	Fannin Co	13219	Oconee Co
13113	Fayette Co	13221	Oglethorpe Co
13115	Floyd Co	13223	Paulding Co
13117	Forsyth Co	13225	Peach Co
13119	Franklin Co	13227	Pickens Co
13121	Fulton Co	13229	Pierce Co
13123	Gilmer Co	13231	Pike Co
13125	Glascock Co	13233	Polk Co
13127	Glynn Co	13235	Pulaski Co
13129	Gordon Co	13237	Putnam Co
13131	Grady Co	13239	Quitman Co
13133	Greene Co	13241	Rabun Co
13135	Gwinnett Co	13243	Randolph Co
13137	Habersham Co	13245	Richmond Co
13139	Hall Co	13247	Rockdale Co
13141	Hancock Co	13249	Schley Co
13143	Haralson Co	13251	Screven Co
13145	Harris Co	13253	Seminole Co
13147	Hart Co	13255	Spalding Co
13149	Heard Co	13257	Stephens Co
13151	Henry Co	13259	Stewart Co
13153	Houston Co	13261	Sumter Co
13155	Irwin Co	13263	Talbot Co
13157	Jackson Co	13265	Taliaferro Co
13159	Jasper Co	13267	Tattnall Co
13161	Jeff Davis Co	13269	Taylor Co
13163	Jefferson Co	13271	Telfair Co
13165	Jenkins Co	13273	Terrell Co
13167	Johnson Co	13275	Thomas Co
13169	Jones Co	13277	Tift Co

13279 Toombs Co
13281 Towns Co
13283 Treutlen Co
13285 Troup Co
13287 Turner Co
13289 Twiggs Co
13291 Union Co
13293 Upson Co
13295 Walker Co
13297 Walton Co
13299 Ware Co
13301 Warren Co
13303 Washington Co
13305 Wayne Co
13307 Webster Co
13309 Wheeler Co
13311 White Co
13313 Whitfield Co
13315 Wilcox Co
13317 Wilkes Co
13319 Wilkinson Co
13321 Worth Co
13510

*** ID ***

16001 Ada Co
16003 Adams Co
16005 Bannock Co
16007 Bear Lake Co
16009 Benewah Co
16011 Bingham Co
16013 Blaine Co
16015 Boise Co
16017 Bonner Co
16019 Bonneville Co
16021 Boundary Co
16023 Butte Co
16025 Camas Co
16027 Canyon Co
16029 Caribou Co
16031 Cassia Co
16033 Clark Co
16035 Clearwater Co
16037 Custer Co
16039 Elmore Co
16041 Franklin Co
16043 Fremont Co
16045 Gem Co
16047 Gooding Co
16049 Idaho Co
16051 Jefferson Co

16053 Jerome Co
16055 Kootenai Co
16057 Latah Co
16059 Lemhi Co
16061 Lewis Co
16063 Lincoln Co
16065 Madison Co
16067 Minidoka Co
16069 Nez Perce Co
16071 Oneida Co
16073 Owyhee Co
16075 Payette Co
16077 Power Co
16079 Shoshone Co
16081 Teton Co
16083 Twin Falls Co
16085 Valley Co
16087 Washington Co

*** IL ***

17001 Adams Co
17003 Alexander Co
17005 Bond Co
17007 Boone Co
17009 Brown Co
17011 Bureau Co
17013 Calhoun Co
17015 Carroll Co
17017 Cass Co
17019 Champaign Co
17021 Christian Co
17023 Clark Co
17025 Clay Co
17027 Clinton Co
17029 Coles Co
17031 Cook Co
17033 Crawford Co
17035 Cumberland Co
17037 De Kalb Co
17039 De Witt Co
17041 Douglas Co
17043 Du Page Co
17045 Edgar Co
17047 Edwards Co
17049 Effingham Co
17051 Fayette Co
17053 Ford Co
17055 Franklin Co
17057 Fulton Co
17059 Gallatin Co
17061 Greene Co

17063 Grundy Co
17065 Hamilton Co
17067 Hancock Co
17069 Hardin Co
17071 Henderson Co
17073 Henry Co
17075 Iroquois Co
17077 Jackson Co
17079 Jasper Co
17081 Jefferson Co
17083 Jersey Co
17085 Jo Daviess Co
17087 Johnson Co
17089 Kane Co
17091 Kankakee Co
17093 Kendall Co
17095 Knox Co
17097 Lake Co
17099 La Salle Co
17101 Lawrence Co
17103 Lee Co
17105 Livingston Co
17107 Logan Co
17109 Mc Donough Co
17111 Mc Henry Co
17113 Mc Lean Co
17115 Macon Co
17117 Macoupin Co
17119 Madison Co
17121 Marion Co
17123 Marshall Co
17125 Mason Co
17127 Massac Co
17129 Menard Co
17131 Mercer Co
17133 Monroe Co
17135 Montgomery Co
17137 Morgan Co
17139 Moultrie Co
17141 Ogle Co
17143 Peoria Co
17145 Perry Co
17147 Piatt Co
17149 Pike Co
17151 Pope Co
17153 Pulaski Co
17155 Putnam Co
17157 Randolph Co
17159 Richland Co
17161 Rock Island Co
17163 St Clair Co
17165 Saline Co

17167 Sangamon Co
17169 Schuyler Co
17171 Scott Co
17173 Shelby Co
17175 Stark Co
17177 Stephenson Co
17179 Tazewell Co
17181 Union Co
17183 Vermilion Co
17185 Wabash Co
17187 Warren Co
17189 Washington Co
17191 Wayne Co
17193 White Co
17195 Whiteside Co
17197 Will Co
17199 Williamson Co
17201 Winnebago Co
17203 Woodford Co

*** IN ***

18001 Adams Co
18003 Allen Co
18005 Bartholomew Co
18007 Benton Co
18009 Blackford Co
18011 Boone Co
18013 Brown Co
18015 Carroll Co
18017 Cass Co
18019 Clark Co
18021 Clay Co
18023 Clinton Co
18025 Crawford Co
18027 Daviess Co
18029 Dearborn Co
18031 Decatur Co
18033 De Kalb Co
18035 Delaware Co
18037 Dubois Co
18039 Elkhart Co
18041 Fayette Co
18043 Floyd Co
18045 Fountain Co
18047 Franklin Co
18049 Fulton Co
18051 Gibson Co
18053 Grant Co
18055 Greene Co
18057 Hamilton Co
18059 Hancock Co

18061 Harrison Co
18063 Hendricks Co
18065 Henry Co
18067 Howard Co
18069 Huntington Co
18071 Jackson Co
18073 Jasper Co
18075 Jay Co
18077 Jefferson Co
18079 Jennings Co
18081 Johnson Co
18083 Knox Co
18085 Kosciusko Co
18087 Lagrange Co
18089 Lake Co
18091 La Porte Co
18093 Lawrence Co
18095 Madison Co
18097 Marion Co
18099 Marshall Co
18101 Martin Co
18103 Miami Co
18105 Monroe Co
18107 Montgomery Co
18109 Morgan Co
18111 Newton Co
18113 Noble Co
18115 Ohio Co
18117 Orange Co
18119 Owen Co
18121 Parke Co
18123 Perry Co
18125 Pike Co
18127 Porter Co
18129 Posey Co
18131 Pulaski Co
18133 Putnam Co
18135 Randolph Co
18137 Ripley Co
18139 Rush Co
18141 St Joseph Co
18143 Scott Co
18145 Shelby Co
18147 Spencer Co
18149 Starke Co
18151 Steuben Co
18153 Sullivan Co
18155 Switzerland Co
18157 Tippecanoe Co
18159 Tipton Co
18161 Union Co
18163 Vanderburgh Co

18165 Vermillion Co
18167 Vigo Co
18169 Wabash Co
18171 Warren Co
18173 Warrick Co
18175 Washington Co
18177 Wayne Co
18179 Wells Co
18181 White Co
18183 Whitley Co

*** IA ***

19001 Adair Co
19003 Adams Co
19005 Allamakee Co
19007 Appanoose Co
19009 Audubon Co
19011 Benton Co
19013 Black Hawk Co
19015 Boone Co
19017 Bremer Co
19019 Buchanan Co
19021 Buena Vista Co
19023 Butler Co
19025 Calhoun Co
19027 Carroll Co
19029 Cass Co
19031 Cedar Co
19033 Cerro Gordo Co
19035 Cherokee Co
19037 Chickasaw Co
19039 Clarke Co
19041 Clay Co
19043 Clayton Co
19045 Clinton Co
19047 Crawford Co
19049 Dallas Co
19051 Davis Co
19053 Decatur Co
19055 Delaware Co
19057 Des Moines Co
19059 Dickinson Co
19061 Dubuque Co
19063 Emmet Co
19065 Fayette Co
19067 Floyd Co
19069 Franklin Co
19071 Fremont Co
19073 Greene Co
19075 Grundy Co
19077 Guthrie Co

19079 Hamilton Co
19081 Hancock Co
19083 Hardin Co
19085 Harrison Co
19087 Henry Co
19089 Howard Co
19091 Humboldt Co
19093 Ida Co
19095 Iowa Co
19097 Jackson Co
19099 Jasper Co
19101 Jefferson Co
19103 Johnson Co
19105 Jones Co
19107 Keokuk Co
19109 Kossuth Co
19111 Lee Co
19113 Linn Co
19115 Louisa Co
19117 Lucas Co
19119 Lyon Co
19121 Madison Co
19123 Mahaska Co
19125 Marion Co
19127 Marshall Co
19129 Mills Co
19131 Mitchell Co
19133 Monona Co
19135 Monroe Co
19137 Montgomery Co
19139 Muscatine Co
19141 O'Brien Co
19143 Osceola Co
19145 Page Co
19147 Palo Alto Co
19149 Plymouth Co
19151 Pocahontas Co
19153 Polk Co
19155 Pottawattamie Co
19157 Poweshiek Co
19159 Ringgold Co
19161 Sac Co
19163 Scott Co
19165 Shelby Co
19167 Sioux Co
19169 Story Co
19171 Tama Co
19173 Taylor Co
19175 Union Co
19177 Van Buren Co
19179 Wapello Co
19181 Warren Co

19183 Washington Co
19185 Wayne Co
19187 Webster Co
19189 Winnebago Co
19191 Winneshiek Co
19193 Woodbury Co
19195 Worth Co
19197 Wright Co

*** KS ***

20001 Allen Co
20003 Anderson Co
20005 Atchison Co
20007 Barber Co
20009 Barton Co
20011 Bourbon Co
20013 Brown Co
20015 Butler Co
20017 Chase Co
20019 Chautauqua Co
20021 Cherokee Co
20023 Cheyenne Co
20025 Clark Co
20027 Clay Co
20029 Cloud Co
20031 Coffey Co
20033 Comanche Co
20035 Cowley Co
20037 Crawford Co
20039 Decatur Co
20041 Dickinson Co
20043 Doniphan Co
20045 Douglas Co
20047 Edwards Co
20049 Elk Co
20051 Ellis Co
20053 Ellsworth Co
20055 Finney Co
20057 Ford Co
20059 Franklin Co
20061 Geary Co
20063 Gove Co
20065 Graham Co
20067 Grant Co
20069 Gray Co
20071 Greeley Co
20073 Greenwood Co
20075 Hamilton Co
20077 Harper Co
20079 Harvey Co
20081 Haskell Co

21075 Fulton Co
 21077 Gallatin Co
 21079 Garrard Co
 21081 Grant Co
 21083 Graves Co
 21085 Grayson Co
 21087 Green Co
 21089 Greenup Co
 21091 Hancock Co
 21093 Hardin Co
 21095 Harlan Co
 21097 Harrison Co
 21099 Hart Co
 21101 Henderson Co
 21103 Henry Co
 21105 Hickman Co
 21107 Hopkins Co
 21109 Jackson Co
 21111 Jefferson Co
 21113 Jessamine Co
 21115 Johnson Co
 21117 Kenton Co
 21119 Knott Co
 21121 Knox Co
 21123 Larue Co
 21125 Laurel Co
 21127 Lawrence Co
 21129 Lee Co
 21131 Leslie Co
 21133 Letcher Co
 21135 Lewis Co
 21137 Lincoln Co
 21139 Livingston Co
 21141 Logan Co
 21143 Lyon Co
 21145 Mc Cracken Co
 21147 Mc Creary Co
 21149 Mc Lean Co
 21151 Madison Co
 21153 Magoffin Co
 21155 Marion Co
 21157 Marshall Co
 21159 Martin Co
 21161 Mason Co
 21163 Meade Co
 21165 Menifee Co
 21167 Mercer Co
 21169 Metcalfe Co
 21171 Monroe Co
 21173 Montgomery Co
 21175 Morgan Co
 21177 Muhlenberg Co

21179 Nelson Co
 21181 Nicholas Co
 21183 Ohio Co
 21185 Oldham Co
 21187 Owen Co
 21189 Owsley Co
 21191 Pendleton Co
 21193 Perry Co
 21195 Pike Co
 21197 Powell Co
 21199 Pulaski Co
 21201 Robertson Co
 21203 Rockcastle Co
 21205 Rowan Co
 21207 Russell Co
 21209 Scott Co
 21211 Shelby Co
 21213 Simpson Co
 21215 Spencer Co
 21217 Taylor Co
 21219 Todd Co
 21221 Trigg Co
 21223 Trimble Co
 21225 Union Co
 21227 Warren Co
 21229 Washington Co
 21231 Wayne Co
 21233 Webster Co
 21235 Whitley Co
 21237 Wolfe Co
 21239 Woodford Co

*** LA ***

22001 Acadia Par
 22003 Allen Par
 22005 Ascension Par
 22007 Assumption Par
 22009 Avoyelles Par
 22011 Beauregard Par
 22013 Bienville Par
 22015 Bossier Par
 22017 Caddo Par
 22019 Calcasieu Par
 22021 Caldwell Par
 22023 Cameron Par
 22025 Catahoula Par
 22027 Claiborne Par
 22029 Concordia Par
 22031 De Soto Par
 22033 East Baton Rouge Par
 22035 East Carroll Par

22037 East Feliciana Par
 22039 Evangeline Par
 22041 Franklin Par
 22043 Grant Par
 22045 Iberia Par
 22047 Iberville Par
 22049 Jackson Par
 22051 Jefferson Par
 22053 Jefferson Davis Par
 22055 Lafayette Par
 22057 Lafourche Par
 22059 La Salle Par
 22061 Lincoln Par
 22063 Livingston Par
 22065 Madison Par
 22067 Morehouse Par
 22069 Natchitoches Par
 22071 Orleans Par
 22073 Ouachita Par
 22075 Plaquemines Par
 22077 Pointe-Coupee Par
 22079 Rapides Par
 22081 Red River Par
 22083 Richland Par
 22085 Sabine Par
 22087 St Bernard Par
 22089 St Charles Par
 22091 St Helena Par
 22093 St James Par
 22095 St John The Baptist
 22097 St Landry Par
 22099 St Martin Par
 22101 St Mary Par
 22103 St Tammany Par
 22105 Tangipahoa Par
 22107 Tensas Par
 22109 Terrebonne Par
 22111 Union Par
 22113 Vermilion Par
 22115 Vernon Par
 22117 Washington Par
 22119 Webster Par
 22121 West Baton Rouge Par
 22123 West Carroll Par
 22125 West Feliciana Par
 22127 Winn Par

*** ME ***

23001 Androscoggin Co
 23003 Aroostook Co
 23005 Cumberland Co

23007 Franklin Co
 23009 Hancock Co
 23011 Kennebec Co
 23013 Knox Co
 23015 Lincoln Co
 23017 Oxford Co
 23019 Penobscot Co
 23021 Piscataquis Co
 23023 Sagadahoc Co
 23025 Somerset Co
 23027 Waldo Co
 23029 Washington Co
 23031 York Co

*** MD ***

24001 Allegany Co
 24003 Anne Arundel Co
 24005 Baltimore Co
 24009 Calvert Co
 24011 Caroline Co
 24013 Carroll Co
 24015 Cecil Co
 24017 Charles Co
 24019 Dorchester Co
 24021 Frederick Co
 24023 Garrett Co
 24025 Harford Co
 24027 Howard Co
 24029 Kent Co
 24031 Montgomery Co
 24033 Prince Georges Co
 24035 Queen Annes Co
 24037 St Marys Co
 24039 Somerset Co
 24041 Talbot Co
 24043 Washington Co
 24045 Wicomico Co
 24047 Worcester Co

24510 Baltimore

*** MA ***

25001 Barnstable
 25003 Berkshire
 25005 Bristol
 25007 Dukes
 25009 Essex
 25011 Franklin
 25013 Hampden
 25015 Hampshire

25017 Middlesex
25019 Nantucket
25021 Norfolk
25023 Plymouth
25025 Suffolk
25027 Worcester

*** MI ***

26001 Alcona Co
26003 Alger Co
26005 Allegan Co
26007 Alpena Co
26009 Antrim Co
26011 Arenac Co
26013 Baraga Co
26015 Barry Co
26017 Bay Co
26019 Benzie Co
26021 Berrien Co
26023 Branch Co
26025 Calhoun Co
26027 Cass Co
26029 Charlevoix Co
26031 Cheboygan Co
26033 Chippewa Co
26035 Clare Co
26037 Clinton Co
26039 Crawford Co
26041 Delta Co
26043 Dickinson Co
26045 Eaton Co
26047 Emmet Co
26049 Genesee Co
26051 Gladwin Co
26053 Gogebic Co
26055 Grand Traverse Co
26057 Gratiot Co
26059 Hillsdale Co
26061 Houghton Co
26063 Huron Co
26065 Ingham Co
26067 Ionia Co
26069 Iosco Co
26071 Iron Co
26073 Isabella Co
26075 Jackson Co
26077 Kalamazoo Co
26079 Kalkaska Co
26081 Kent Co
26083 Keweenaw Co
26085 Lake Co

26087 Lapeer Co
26089 Leelanau Co
26091 Lenawee Co
26093 Livingston Co
26095 Luce Co
26097 Mackinac Co
26099 Macomb Co
26101 Manistee Co
26103 Marquette Co
26105 Mason Co
26107 Mecosta Co
26109 Menominee Co
26111 Midland Co
26113 Missaukee Co
26115 Monroe Co
26117 Montcalm Co
26119 Montmorency Co
26121 Muskegon Co
26123 Newaygo Co
26125 Oakland Co
26127 Oceana Co
26129 Ogemaw Co
26131 Ontonagon Co
26133 Osceola Co
26135 Oscoda Co
26137 Otsego Co
26139 Ottawa Co
26141 Presque Isle Co
26143 Roscommon Co
26145 Saginaw Co
26147 St Clair Co
26149 St Joseph Co
26151 Sanilac Co
26153 Schoolcraft Co
26155 Shiawassee Co
26157 Tuscola Co
26159 Van Buren Co
26161 Washtenaw Co
26163 Wayne Co
26165 Wexford Co

*** MN ***

27001 Aitkin Co
27003 Anoka Co
27005 Becker Co
27007 Beltrami Co
27009 Benton Co
27011 Big Stone Co
27013 Blue Earth Co
27015 Brown Co
27017 Carlton Co

27019 Carver Co
27021 Cass Co
27023 Chippewa Co
27025 Chisago Co
27027 Clay Co
27029 Clearwater Co
27031 Cook Co
27033 Cottonwood Co
27035 Crow Wing Co
27037 Dakota Co
27039 Dodge Co
27041 Douglas Co
27043 Faribault Co
27045 Fillmore Co
27047 Freeborn Co
27049 Goodhue Co
27051 Grant Co
27053 Hennepin Co
27055 Houston Co
27057 Hubbard Co
27059 Isanti Co
27061 Itasca Co
27063 Jackson Co
27065 Kanabec Co
27067 Kandiyohi Co
27069 Kittson Co
27071 Koochiching Co
27073 Lac Qui Parle Co
27075 Lake Co
27077 Lake Of The Woods Co
27079 Le Sueur Co
27081 Lincoln Co
27083 Lyon Co
27085 Mc Leod Co
27087 Mahanomen Co
27089 Marshall Co
27091 Martin Co
27093 Meeker Co
27095 Mille Lacs Co
27097 Morrison Co
27099 Mower Co
27101 Murray Co
27103 Nicollet Co
27105 Nobles Co
27107 Norman Co
27109 Olmsted Co
27111 Otter Tail Co
27113 Pennington Co
27115 Pine Co
27117 Pipestone Co
27119 Polk Co
27121 Pope Co

27123 Ramsey Co
27125 Red Lake Co
27127 Redwood Co
27129 Renville Co
27131 Rice Co
27133 Rock Co
27135 Roseau Co
27137 St Louis Co
27139 Scott Co
27141 Sherburne Co
27143 Sibley Co
27145 Stearns Co
27147 Steele Co
27149 Stevens Co
27151 Swift Co
27153 Todd Co
27155 Traverse Co
27157 Wabasha Co
27159 Wadena Co
27161 Waseca Co
27163 Washington Co
27165 Watonwan Co
27167 Wilkin Co
27169 Winona Co
27171 Wright Co
27173 Yellow Medicine Co

*** MS ***

28001 Adams Co
28003 Alcorn Co
28005 Amite Co
28007 Attala Co
28009 Benton Co
28011 Bolivar Co
28013 Calhoun Co
28015 Carroll Co
28017 Chickasaw Co
28019 Choctaw Co
28021 Claiborne Co
28023 Clarke Co
28025 Clay Co
28027 Coahoma Co
28029 Copiah Co
28031 Covington Co
28033 De Soto Co
28035 Forrest Co
28037 Franklin Co
28039 George Co
28041 Greene Co
28043 Grenada Co
28045 Hancock Co

28047 Harrison Co
28049 Hinds Co
28051 Holmes Co
28053 Humphreys Co
28055 Issaquena Co
28057 Itawamba Co
28059 Jackson Co
28061 Jasper Co
28063 Jefferson Co
28065 Jefferson Davis Co
28067 Jones Co
28069 Kemper Co
28071 Lafayette Co
28073 Lamar Co
28075 Lauderdale Co
28077 Lawrence Co
28079 Leake Co
28081 Lee Co
28083 Leflore Co
28085 Lincoln Co
28087 Lowndes Co
28089 Madison Co
28091 Marion Co
28093 Marshall Co
28095 Monroe Co
28097 Montgomery Co
28099 Neshoba Co
28101 Newton Co
28103 Noxubee Co
28105 Oktibbeha Co
28107 Panola Co
28109 Pearl River Co
28111 Perry Co
28113 Pike Co
28115 Pontotoc Co
28117 Prentiss Co
28119 Quitman Co
28121 Rankin Co
28123 Scott Co
28125 Sharkey Co
28127 Simpson Co
28129 Smith Co
28131 Stone Co
28133 Sunflower Co
28135 Tallahatchie Co
28137 Tate Co
28139 Tippah Co
28141 Tishomingo Co
28143 Tunica Co
28145 Union Co
28147 Walthall Co
28149 Warren Co

28151 Washington Co
28153 Wayne Co
28155 Webster Co
28157 Wilkinson Co
28159 Winston Co
28161 Yalobusha Co
28163 Yazoo Co

*** MO ***

29001 Adair Co
29003 Andrew Co
29005 Atchison Co
29007 Audrain Co
29009 Barry Co
29011 Barton Co
29013 Bates Co
29015 Benton Co
29017 Bollinger Co
29019 Boone Co
29021 Buchanan Co
29023 Butler Co
29025 Caldwell Co
29027 Callaway Co
29029 Camden Co
29031 Cape Girardeau Co
29033 Carroll Co
29035 Carter Co
29037 Cass Co
29039 Cedar Co
29041 Chariton Co
29043 Christian Co
29045 Clark Co
29047 Clay Co
29049 Clinton Co
29051 Cole Co
29053 Cooper Co
29055 Crawford Co
29057 Dade Co
29059 Dallas Co
29061 Daviess Co
29063 De Kalb Co
29065 Dent Co
29067 Douglas Co
29069 Dunklin Co
29071 Franklin Co
29073 Gasconade Co
29075 Gentry Co
29077 Greene Co
29079 Grundy Co
29081 Harrison Co
29083 Henry Co

29085 Hickory Co
 29087 Holt Co
 29089 Howard Co
 29091 Howell Co
 29093 Iron Co
 29095 Jackson Co
 29097 Jasper Co
 29099 Jefferson Co
 29101 Johnson Co
 29103 Knox Co
 29105 Laclede Co
 29107 Lafayette Co
 29109 Lawrence Co
 29111 Lewis Co
 29113 Lincoln Co
 29115 Linn Co
 29117 Livingston Co
 29119 Mc Donald Co
 29121 Macon Co
 29123 Madison Co
 29125 Maries Co
 29127 Marion Co
 29129 Mercer Co
 29131 Miller Co
 29133 Mississippi Co
 29135 Moniteau Co
 29137 Monroe Co
 29139 Montgomery Co
 29141 Morgan Co
 29143 New Madrid Co
 29145 Newton Co
 29147 Nodaway Co
 29149 Oregon Co
 29151 Osage Co
 29153 Ozark Co
 29155 Pemiscot Co
 29157 Perry Co
 29159 Pettis Co
 29161 Phelps Co
 29163 Pike Co
 29165 Platte Co
 29167 Polk Co
 29169 Pulaski Co
 29171 Putnam Co
 29173 Ralls Co
 29175 Randolph Co
 29177 Ray Co
 29179 Reynolds Co
 29181 Ripley Co
 29183 St Charles Co
 29185 St Clair Co
 29187 St Francois Co

29189 St Louis Co
 29193
 29195 Saline Co
 29197 Schuyler Co
 29199 Scotland Co
 29201 Scott Co
 29203 Shannon Co
 29205 Shelby Co
 29207 Stoddard Co
 29209 Stone Co
 29211 Sullivan Co
 29213 Taney Co
 29215 Texas Co
 29217 Vernon Co
 29219 Warren Co
 29221 Washington Co
 29223 Wayne Co
 29225 Webster Co
 29227 Worth Co
 29229 Wright Co

 29510 St Louis

*** MT ***

30001 Beaverhead Co
 30003 Big Horn Co
 30005 Blaine Co
 30007 Broadwater Co
 30009 Carbon Co
 30011 Carter Co
 30013 Cascade Co
 30015 Chouteau Co
 30017 Custer Co
 30019 Daniels Co
 30021 Dawson Co
 30023 Deer Lodge Co
 30025 Fallon Co
 30027 Fergus Co
 30029 Flat Head Co
 30031 Gallatin Co
 30033 Garfield Co
 30035 Glacier Co
 30037 Golden Valley Co
 30039 Granite Co
 30041 Hill Co
 30043 Jefferson Co
 30045 Judith Basin Co
 30047 Lake Co
 30049 Lewis And Clark Co
 30051 Liberty Co
 30053 Lincoln Co

30055 Mc Cone Co
 30057 Madison Co
 30059 Meagher Co
 30061 Mineral Co
 30063 Missoula Co
 30065 Musselshell Co
 30067 Park Co
 30069 Petroleum Co
 30071 Phillips Co
 30073 Pondera Co
 30075 Powder River Co
 30077 Powell Co
 30079 Prairie Co
 30081 Ravalli Co
 30083 Richland Co
 30085 Roosevelt Co
 30087 Rosebud Co
 30089 Sanders Co
 30091 Sheridan Co
 30093 Silver Bow Co
 30095 Stillwater Co
 30097 Sweet Grass Co
 30099 Teton Co
 30101 Toole Co
 30103 Treasure Co
 30105 Valley Co
 30107 Wheatland Co
 30109 Wibaux Co
 30111 Yellowstone Co

*** NE ***

31001 Adams Co
 31003 Antelope Co
 31005 Arthur Co
 31007 Banner Co
 31009 Blaine Co
 31011 Boone Co
 31013 Box Butte Co
 31015 Boyd Co
 31017 Brown Co
 31019 Buffalo Co
 31021 Burt Co
 31023 Butler Co
 31025 Cass Co
 31027 Cedar Co
 31029 Chase Co
 31031 Cherry Co
 31033 Cheyenne Co
 31035 Clay Co
 31037 Colfax Co
 31039 Cuming Co

31041 Custer Co
 31043 Dakota Co
 31045 Dawes Co
 31047 Dawson Co
 31049 Deuel Co
 31051 Dixon Co
 31053 Dodge Co
 31055 Douglas Co
 31057 Dundy Co
 31059 Fillmore Co
 31061 Franklin Co
 31063 Frontier Co
 31065 Furnas Co
 31067 Gage Co
 31069 Garden Co
 31071 Garfield Co
 31073 Gosper Co
 31075 Grant Co
 31077 Greeley Co
 31079 Hall Co
 31081 Hamilton Co
 31083 Harlan Co
 31085 Hayes Co
 31087 Hitchcock Co
 31089 Holt Co
 31091 Hooker Co
 31093 Howard Co
 31095 Jefferson Co
 31097 Johnson Co
 31099 Kearney Co
 31101 Keith Co
 31103 Keya Paha Co
 31105 Kimball Co
 31107 Knox Co
 31109 Lancaster Co
 31111 Lincoln Co
 31113 Logan Co
 31115 Loup Co
 31117 Mc Pherson Co
 31119 Madison Co
 31121 Merrick Co
 31123 Morrill Co
 31125 Nance Co
 31127 Nemaha Co
 31129 Nuckolls Co
 31131 Otoe Co
 31133 Pawnee Co
 31135 Perkins Co
 31137 Phelps Co
 31139 Pierce Co
 31141 Platte Co
 31143 Polk Co

31145 Red Willow Co
31147 Richardson Co
31149 Rock Co
31151 Saline Co
31153 Sarpy Co
31155 Saunders Co
31157 Scotts Bluff Co
31159 Seward Co
31161 Sheridan Co
31163 Sherman Co
31165 Sioux Co
31167 Stanton Co
31169 Thayer Co
31171 Thomas Co
31173 Thurston Co
31175 Valley Co
31177 Washington Co
31179 Wayne Co
31181 Webster Co
31183 Wheeler Co
31185 York Co

*** NV ***

32001 Churchill Co
32003 Clark Co
32005 Douglas Co
32007 Elko Co
32009 Esmeralda Co
32011 Eureka Co
32013 Humboldt Co
32015 Lander Co
32017 Lincoln Co
32019 Lyon Co
32021 Mineral Co
32023 Nye Co
32027 Pershing Co
32029 Storey Co
32031 Washoe Co
32033 White Pine Co
32510 Carson City

*** NH ***

33001 Belknap Co
33003 Carroll Co
33005 Cheshire Co
33007 Coos Co
33009 Grafton Co
33011 Hillsborough Co
33013 Merrimack Co
33015 Rockingham Co

33017 Strafford Co
33019 Sullivan Co

*** NJ ***

34001 Atlantic Co
34003 Bergen Co
34005 Burlington Co
34007 Camden Co
34009 Cape May Co
34011 Cumberland Co
34013 Essex Co
34015 Gloucester Co
34017 Hudson Co
34019 Hunterdon Co
34021 Mercer Co
34023 Middlesex Co
34025 Monmouth Co
34027 Morris Co
34029 Ocean Co
34031 Passaic Co
34033 Salem Co
34035 Somerset Co
34037 Sussex Co
34039 Union Co
34041 Warren Co

*** NM ***

35001 Bernalillo Co
35003 Catron Co
35005 Chaves Co
35007 Colfax Co
35009 Curry Co
35011 De Baca Co
35013 Dona Ana Co
35015 Eddy Co
35017 Grant Co
35019 Guadalupe Co
35021 Harding Co
35023 Hidalgo Co
35025 Lea Co
35027 Lincoln Co
35028 Los Alamos Co
35029 Luna Co
35031 Mc Kinley Co
35033 Mora Co
35035 Otero Co
35037 Quay Co
35039 Rio Arriba Co
35041 Roosevelt Co
35043 Sandoval Co

35045 San Juan Co
35047 San Miguel Co
35049 Santa Fe Co
35051 Sierra Co
35053 Socorro Co
35055 Taos Co
35057 Torrance Co
35059 Union Co
35061 Valencia Co

*** NY ***

36001 Albany Co
36003 Allegany Co
36005 Bronx Co
36007 Broome Co
36009 Cattaraugus Co
36011 Cayuga Co
36013 Chautauqua Co
36015 Chemung Co
36017 Chenango Co
36019 Clinton Co
36021 Columbia Co
36023 Cortland Co
36025 Delaware Co
36027 Dutchess Co
36029 Erie Co
36031 Essex Co
36033 Franklin Co
36035 Fulton Co
36037 Genesee Co
36039 Greene Co
36041 Hamilton Co
36043 Herkimer Co
36045 Jefferson Co
36047 Kings Co
36049 Lewis Co
36051 Livingston Co
36053 Madison Co
36055 Monroe Co
36057 Montgomery Co
36059 Nassau Co
36061 New York Co
36063 Niagara Co
36065 Oneida Co
36067 Onondaga Co
36069 Ontario Co
36071 Orange Co
36073 Orleans Co
36075 Oswego Co
36077 Otsego Co
36079 Putnam Co

36081 Queens Co
36083 Rensselaer Co
36085 Richmond Co
36087 Rockland Co
36089 St. Lawrence Co
36091 Saratoga Co
36093 Schenectady Co
36095 Schoharie Co
36097 Schuyler Co
36099 Seneca Co
36101 Steuben Co
36103 Suffolk Co
36105 Sullivan Co
36107 Tioga Co
36109 Tompkins Co
36111 Ulster Co
36113 Warren Co
36115 Washington Co
36117 Wayne Co
36119 Westchester Co
36121 Wyoming Co
36123 Yates Co

*** NC ***

37001 Alamance Co
37003 Alexander Co
37005 Alleghany Co
37007 Anson Co
37009 Ashe Co
37011 Avery Co
37013 Beaufort Co
37015 Bertie Co
37017 Bladen Co
37019 Brunswick Co
37021 Buncombe Co
37023 Burke Co
37025 Cabarrus Co
37027 Caldwell Co
37029 Camden Co
37031 Carteret Co
37033 Caswell Co
37035 Catawba Co
37037 Chatham Co
37039 Cherokee Co
37041 Chowan Co
37043 Clay Co
37045 Cleveland Co
37047 Columbus Co
37049 Craven Co
37051 Cumberland Co
37053 Currituck Co

37055 Dare Co
 37057 Davidson Co
 37059 Davie Co
 37061 Duplin Co
 37063 Durham Co
 37065 Edgecombe Co
 37067 Forsyth Co
 37069 Franklin Co
 37071 Gaston Co
 37073 Gates Co
 37075 Graham Co
 37077 Granville Co
 37079 Greene Co
 37081 Guilford Co
 37083 Halifax Co
 37085 Harnett Co
 37087 Haywood Co
 37089 Henderson Co
 37091 Hertford Co
 37093 Hoke Co
 37095 Hyde Co
 37097 Iredell Co
 37099 Jackson Co
 37101 Johnston Co
 37103 Jones Co
 37105 Lee Co
 37107 Lenoir Co
 37109 Lincoln Co
 37111 Mc Dowell Co
 37113 Macon Co
 37115 Madison Co
 37117 Martin Co
 37119 Mecklenburg Co
 37121 Mitchell Co
 37123 Montgomery Co
 37125 Moore Co
 37127 Nash Co
 37129 New Hanover Co
 37131 Northampton Co
 37133 Onslow Co
 37135 Orange Co
 37137 Pamlico Co
 37139 Pasquotank Co
 37141 Pender Co
 37143 Perquimans Co
 37145 Person Co
 37147 Pitt Co
 37149 Polk Co
 37151 Randolph Co
 37153 Richmond Co
 37155 Robeson Co
 37157 Rockingham Co

37159 Rowan Co
 37161 Rutherford Co
 37163 Sampson Co
 37165 Scotland Co
 37167 Stanly Co
 37169 Stokes Co
 37171 Surry Co
 37173 Swain Co
 37175 Transylvania Co
 37177 Tyrrell Co
 37179 Union Co
 37181 Vance Co
 37183 Wake Co
 37185 Warren Co
 37187 Washington Co
 37189 Watauga Co
 37191 Wayne Co
 37193 Wilkes Co
 37195 Wilson Co
 37197 Yadkin Co
 37199 Yancey Co

*** ND ***

38001 Adams Co
 38003 Barnes Co
 38005 Benson Co
 38007 Billings Co
 38009 Bottineau Co
 38011 Bowman Co
 38013 Burke Co
 38015 Burleigh Co
 38017 Cass Co
 38019 Cavalier Co
 38021 Dickey Co
 38023 Divide Co
 38025 Dunn Co
 38027 Eddy Co
 38029 Emmons Co
 38031 Foster Co
 38033 Golden Valley Co
 38035 Grand Forks Co
 38037 Grant Co
 38039 Griggs Co
 38041 Hettinger Co
 38043 Kidder Co
 38045 La Moure Co
 38047 Logan Co
 38049 Mc Henry Co
 38051 Mc Intosh Co
 38053 Mc Kenzie Co
 38055 Mc Lean Co

38057 Mercer Co
38059 Morton Co
38061 Mountrail Co
38063 Nelson Co
38065 Oliver Co
38067 Pembina Co
38069 Pierce Co
38071 Ramsey Co
38073 Ransom Co
38075 Renville Co
38077 Richland Co
38079 Rolette Co
38081 Sargent Co
38083 Sheridan Co
38085 Sioux Co
38087 Slope Co
38089 Stark Co
38091 Steele Co
38093 Stutsman Co
38095 Towner Co
38097 Traill Co
38099 Walsh Co
38101 Ward Co
38103 Wells Co
38105 Williams Co

*** OH ***

39001 Adams Co
39003 Allen Co
39005 Ashland Co
39007 Ashtabula Co
39009 Athens Co
39011 Auglaize Co
39013 Belmont Co
39015 Brown Co
39017 Butler Co
39019 Carroll Co
39021 Champaign Co
39023 Clark Co
39025 Clermont Co
39027 Clinton Co
39029 Columbiana Co
39031 Coshocton Co
39033 Crawford Co
39035 Cuyahoga Co
39037 Darke Co
39039 Defiance Co
39041 Delaware Co
39043 Erie Co
39045 Fairfield Co
39047 Fayette Co

39049 Franklin Co
39051 Fulton Co
39053 Gallia Co
39055 Geauga Co
39057 Greene Co
39059 Guernsey Co
39061 Hamilton Co
39063 Hancock Co
39065 Hardin Co
39067 Harrison Co
39069 Henry Co
39071 Highland Co
39073 Hocking Co
39075 Holmes Co
39077 Huron Co
39079 Jackson Co
39081 Jefferson Co
39083 Knox Co
39085 Lake Co
39087 Lawrence Co
39089 Licking Co
39091 Logan Co
39093 Lorain Co
39095 Lucas Co
39097 Madison Co
39099 Mahoning Co
39101 Marion Co
39103 Medina Co
39105 Meigs Co
39107 Mercer Co
39109 Miami Co
39111 Monroe Co
39113 Montgomery Co
39115 Morgan Co
39117 Morrow Co
39119 Muskingum Co
39121 Noble Co
39123 Ottawa Co
39125 Paulding Co
39127 Perry Co
39129 Pickaway Co
39131 Pike Co
39133 Portage Co
39135 Preble Co
39137 Putnam Co
39139 Richland Co
39141 Ross Co
39143 Sandusky Co
39145 Scioto Co
39147 Seneca Co
39149 Shelby Co
39151 Stark Co

39153 Summit Co
39155 Trumbull Co
39157 Tuscarawas Co
39159 Union Co
39161 Van Wert Co
39163 Vinton Co
39165 Warren Co
39167 Washington Co
39169 Wayne Co
39171 Williams Co
39173 Wood Co
39175 Wyandot Co

*** OK ***

40001 Adair Co
40003 Alfalfa Co
40005 Atoka Co
40007 Beaver Co
40009 Beckham Co
40011 Blaine Co
40013 Bryan Co
40015 Caddo Co
40017 Canadian Co
40019 Carter Co
40021 Cherokee Co
40023 Choctaw Co
40025 Cimarron Co
40027 Cleveland Co
40029 Coal Co
40031 Comanche Co
40033 Cotton Co
40035 Craig Co
40037 Creek Co
40039 Custer Co
40041 Delaware Co
40043 Dewey Co
40045 Ellis Co
40047 Garfield Co
40049 Garvin Co
40051 Grady Co
40053 Grant Co
40055 Greer Co
40057 Harmon Co
40059 Harper Co
40061 Haskell Co
40063 Hughes Co
40065 Jackson Co
40067 Jefferson Co
40069 Johnston Co
40071 Kay Co
40073 Kingfisher Co

40075 Kiowa Co
40077 Latimer Co
40079 Le Flore Co
40081 Lincoln Co
40083 Logan Co
40085 Love Co
40087 Mc Clain Co
40089 Mc Curtain Co
40091 Mc Intosh Co
40093 Major Co
40095 Marshall Co
40097 Mayes Co
40099 Murray Co
40101 Muskogee Co
40103 Noble Co
40105 Nowata Co
40107 Okfuskee Co
40109 Oklahoma Co
40111 Okmulgee Co
40113 Osage Co
40115 Ottawa Co
40117 Pawnee Co
40119 Payne Co
40121 Pittsburg Co
40123 Pontotoc Co
40125 Pottawatomie Co
40127 Pushmataha Co
40129 Roger Mills Co
40131 Rogers Co
40133 Seminole Co
40135 Sequoyah Co
40137 Stephens Co
40139 Texas Co
40141 Tillman Co
40143 Tulsa Co
40145 Wagoner Co
40147 Washington Co
40149 Washita Co
40151 Woods Co
40153 Woodward Co

*** OR ***

41001 Baker Co
41003 Benton Co
41005 Clackamas Co
41007 Clatsop Co
41009 Columbia Co
41011 Coos Co
41013 Crook Co
41015 Curry Co
41017 Deschutes Co

41019 Douglas Co
41021 Gilliam Co
41023 Grant Co
41025 Harney Co
41027 Hood River Co
41029 Jackson Co
41031 Jefferson Co
41033 Josephine Co
41035 Klamath Co
41037 Lake Co
41039 Lane Co
41041 Lincoln Co
41043 Linn Co
41045 Malheur Co
41047 Marion Co
41049 Morrow Co
41051 Multnomah Co
41053 Polk Co
41055 Sherman Co
41057 Tillamook Co
41059 Umatilla Co
41061 Union Co
41063 Wallowa Co
41065 Wasco Co
41067 Washington Co
41069 Wheeler Co
41071 Yamhill Co

*** PA ***

42001 Adams Co
42003 Allegheny Co
42005 Armstrong Co
42007 Beaver Co
42009 Bedford Co
42011 Berks Co
42013 Blair Co
42015 Bradford Co
42017 Bucks Co
42019 Butler Co
42021 Cambria Co
42023 Cameron Co
42025 Carbon Co
42027 Centre Co
42029 Chester Co
42031 Clarion Co
42033 Clearfield Co
42035 Clinton Co
42037 Columbia Co
42039 Crawford Co
42041 Cumberland Co
42043 Dauphin Co

42045 Delaware Co
42047 Elk Co
42049 Erie Co
42051 Fayette Co
42053 Forest Co
42055 Franklin Co
42057 Fulton Co
42059 Greene Co
42061 Huntingdon Co
42063 Indiana Co
42065 Jefferson Co
42067 Juniata Co
42069 Lackawanna Co
42071 Lancaster Co
42073 Lawrence Co
42075 Lebanon Co
42077 Lehigh Co
42079 Luzerne Co
42081 Lycoming Co
42083 Mc Kean Co
42085 Mercer Co
42087 Mifflin Co
42089 Monroe Co
42091 Montgomery Co
42093 Montour Co
42095 Northampton Co
42097 Northumberland Co
42099 Perry Co
42101 Philadelphia Co
42103 Pike Co
42105 Potter Co
42107 Schuylkill Co
42109 Snyder Co
42111 Somerset Co
42113 Sullivan Co
42115 Susquehanna Co
42117 Tioga Co
42119 Union Co
42121 Venango Co
42123 Warren Co
42125 Washington Co
42127 Wayne Co
42129 Westmoreland Co
42131 Wyoming Co
42133 York Co

*** RI ***

44001 Bristol Co
44003 Kent Co
44005 Newport Co
44007 Providence Co

44009 Washington Co

*** SC ***

45001 Abbeville Co
45003 Aiken Co
45005 Allendale Co
45007 Anderson Co
45009 Bamberg Co
45011 Barnwell Co
45013 Beaufort Co
45015 Berkeley Co
45017 Calhoun Co
45019 Charleston Co
45021 Cherokee Co
45023 Chester Co
45025 Chesterfield Co
45027 Clarendon Co
45029 Colleton Co
45031 Darlington Co
45033 Dillon Co
45035 Dorchester Co
45037 Edgefield Co
45039 Fairfield Co
45041 Florence Co
45043 Georgetown Co
45045 Greenville Co
45047 Greenwood Co
45049 Hampton Co
45051 Horry Co
45053 Jasper Co
45055 Kershaw Co
45057 Lancaster Co
45059 Laurens Co
45061 Lee Co
45063 Lexington Co
45065 Mc Cormick Co
45067 Marion Co
45069 Marlboro Co
45071 Newberry Co
45073 Oconee Co
45075 Orangeburg Co
45077 Pickens Co
45079 Richland Co
45081 Saluda Co
45083 Spartanburg Co
45085 Sumter Co
45087 Union Co
45089 Williamsburg Co
45091 York Co

*** SD ***

46003 Aurora Co
46005 Beadle Co
46007 Bennett Co
46009 Bon Homme Co
46011 Brookings Co
46013 Brown Co
46015 Brule Co
46017 Buffalo Co
46019 Butte Co
46021 Campbell Co
46023 Charles Mix Co
46025 Clark Co
46027 Clay Co
46029 Codington Co
46031 Corson Co
46033 Custer Co
46035 Davison Co
46037 Day Co
46039 Deuel Co
46041 Dewey Co
46043 Douglas Co
46045 Edmunds Co
46047 Fall River Co
46049 Faulk Co
46051 Grant Co
46053 Gregory Co
46055 Haakon Co
46057 Hamlin Co
46059 Hand Co
46061 Hanson Co
46063 Harding Co
46065 Hughes Co
46067 Hutchinson Co
46069 Hyde Co
46071 Jackson Co
46073 Jerauld Co
46075 Jones Co
46077 Kingsbury Co
46079 Lake Co
46081 Lawrence Co
46083 Lincoln Co
46085 Lyman Co
46087 Mc Cook Co
46089 Mc Pherson Co
46091 Marshall Co
46093 Meade Co
46095 Mellette Co
46097 Miner Co
46099 Minnehaha Co
46101 Moody Co
46103 Pennington Co
46105 Perkins Co

46107 Potter Co
46109 Roberts Co
46111 Sanborn Co
46113 Shannon Co
46115 Spink Co
46117 Stanley Co
46119 Sully Co
46121 Todd Co
46123 Tripp Co
46125 Turner Co
46127 Union Co
46129 Walworth Co
46135 Yankton Co
46137 Ziebach Co

*** TN ***

47001 Anderson Co
47003 Bedford Co
47005 Benton Co
47007 Bledsoe Co
47009 Blount Co
47011 Bradley Co
47013 Campbell Co
47015 Cannon Co
47017 Carroll Co
47019 Carter Co
47021 Cheatham Co
47023 Chester Co
47025 Claiborne Co
47027 Clay Co
47029 Cocke Co
47031 Coffee Co
47033 Crockett Co
47035 Cumberland Co
47037 Davidson Co
47039 Decatur Co
47041 De Kalb Co
47043 Dickson Co
47045 Dyer Co
47047 Fayette Co
47049 Fentress Co
47051 Franklin Co
47053 Gibson Co
47055 Giles Co
47057 Grainger Co
47059 Greene Co
47061 Grundy Co
47063 Hamblen Co
47065 Hamilton Co
47067 Hancock Co
47069 Hardeman Co

47071 Hardin Co
47073 Hawkins Co
47075 Haywood Co
47077 Henderson Co
47079 Henry Co
47081 Hickman Co
47083 Houston Co
47085 Humphreys Co
47087 Jackson Co
47089 Jefferson Co
47091 Johnson Co
47093 Knox Co
47095 Lake Co
47097 Lauderdale Co
47099 Lawrence Co
47101 Lewis Co
47103 Lincoln Co
47105 Loudon Co
47107 Mc Minn Co
47109 Mc Nairy Co
47111 Macon Co
47113 Madison Co
47115 Marion Co
47117 Marshall Co
47119 Maury Co
47121 Meigs Co
47123 Monroe Co
47125 Montgomery Co
47127 Moore Co
47129 Morgan Co
47131 Obion Co
47133 Overton Co
47135 Perry Co
47137 Pickett Co
47139 Polk Co
47141 Putnam Co
47143 Rhea Co
47145 Roane Co
47147 Robertson Co
47149 Rutherford Co
47151 Scott Co
47153 Sequatchie Co
47155 Sevier Co
47157 Shelby Co
47159 Smith Co
47161 Stewart Co
47163 Sullivan Co
47165 Sumner Co
47167 Tipton Co
47169 Trousdale Co
47171 Unicoi Co
47173 Union Co

47175 Van Buren Co
47177 Warren Co
47179 Washington Co
47181 Wayne Co
47183 Weakley Co
47185 White Co
47187 Williamson Co
47189 Wilson Co

*** TX ***

48001 Anderson Co
48003 Andrews Co
48005 Angelina Co
48007 Aransas Co
48009 Archer Co
48011 Armstrong Co
48013 Atascosa Co
48015 Austin Co
48017 Bailey Co
48019 Bandera Co
48021 Bastrop Co
48023 Baylor Co
48025 Bee Co
48027 Bell Co
48029 Bexar Co
48031 Blanco Co
48033 Borden Co
48035 Bosque Co
48037 Bowie Co
48039 Brazoria Co
48041 Brazos Co
48043 Brewster Co
48045 Briscoe Co
48047 Brooks Co
48049 Brown Co
48051 Burleson Co
48053 Burnet Co
48055 Caldwell Co
48057 Calhoun Co
48059 Callahan Co
48061 Cameron Co
48063 Camp Co
48065 Carson Co
48067 Cass Co
48069 Castro Co
48071 Chambers Co
48073 Cherokee Co
48075 Childress Co
48077 Clay Co
48079 Cochran Co
48081 Coke Co

48083 Coleman Co
48085 Collin Co
48087 Collingsworth Co
48089 Colorado Co
48091 Comal Co
48093 Comanche Co
48095 Concho Co
48097 Cooke Co
48099 Coryell Co
48101 Cottle Co
48103 Crane Co
48105 Crockett Co
48107 Crosby Co
48109 Culberson Co
48111 Dallam Co
48113 Dallas Co
48115 Dawson Co
48117 Deaf Smith Co
48119 Delta Co
48121 Denton Co
48123 De Witt Co
48125 Dickens Co
48127 Dimmit Co
48129 Donley Co
48131 Duval Co
48133 Eastland Co
48135 Ector Co
48137 Edwards Co
48139 Ellis Co
48141 El Paso Co
48143 Erath Co
48145 Falls Co
48147 Fannin Co
48149 Fayette Co
48151 Fisher Co
48153 Floyd Co
48155 Foard Co
48157 Fort Bend Co
48159 Franklin Co
48161 Freestone Co
48163 Frio Co
48165 Gaines Co
48167 Galveston Co
48169 Garza Co
48171 Gillespie Co
48173 Glasscock Co
48175 Goliad Co
48177 Gonzales Co
48179 Gray Co
48181 Grayson Co
48183 Gregg Co
48185 Grimes Co

48187	Guadalupe Co	48291	Liberty Co
48189	Hale Co	48293	Limestone Co
48191	Hall Co	48295	Lipscomb Co
48193	Hamilton Co	48297	Live Oak Co
48195	Hansford Co	48299	Llano Co
48197	Hardeman Co	48301	Loving Co
48199	Hardin Co	48303	Lubbock Co
48201	Harris Co	48305	Lynn Co
48203	Harrison Co	48307	Mc Culloch Co
48205	Hartley Co	48309	Mc Lennan Co
48207	Haskell Co	48311	Mc Mullen Co
48209	Hays Co	48313	Madison Co
48211	Hemphill Co	48315	Marion Co
48213	Henderson Co	48317	Martin Co
48215	Hidalgo Co	48319	Mason Co
48217	Hill Co	48321	Matagorda Co
48219	Hockley Co	48323	Maverick Co
48221	Hood Co	48325	Medina Co
48223	Hopkins Co	48327	Menard Co
48225	Houston Co	48329	Midland Co
48227	Howard Co	48331	Milam Co
48229	Hudspeth Co	48333	Mills Co
48231	Hunt Co	48335	Mitchell Co
48233	Hutchinson Co	48337	Montague Co
48235	Irion Co	48339	Montgomery Co
48237	Jack Co	48341	Moore Co
48239	Jackson Co	48343	Morris Co
48241	Jasper Co	48345	Motley Co
48243	Jeff Davis Co	48347	Nacogdoches Co
48245	Jefferson Co	48349	Navarro Co
48247	Jim Hogg Co	48351	Newton Co
48249	Jim Wells Co	48353	Nolan Co
48251	Johnson Co	48355	Nueces Co
48253	Jones Co	48357	Ochiltree Co
48255	Karnes Co	48359	Oldham Co
48257	Kaufman Co	48361	Orange Co
48259	Kendall Co	48363	Palo Pinto Co
48261	Kenedy Co	48365	Panola Co
48263	Kent Co	48367	Parker Co
48265	Kerr Co	48369	Parmer Co
48267	Kimble Co	48371	Pecos Co
48269	King Co	48373	Polk Co
48271	Kinney Co	48375	Potter Co
48273	Kleberg Co	48377	Presidio Co
48275	Knox Co	48379	Rains Co
48277	Lamar Co	48381	Randall Co
48279	Lamb Co	48383	Reagan Co
48281	Lampasas Co	48385	Real Co
48283	La Salle Co	48387	Red River Co
48285	Lavaca Co	48389	Reeves Co
48287	Lee Co	48391	Refugio Co
48289	Leon Co	48393	Roberts Co

48395 Robertson Co
48397 Rockwall Co
48399 Runnels Co
48401 Rusk Co
48403 Sabine Co
48405 San Augustine Co
48407 San Jacinto Co
48409 San Patricio Co
48411 San Saba Co
48413 Schleicher Co
48415 Scurry Co
48417 Shackelford Co
48419 Shelby Co
48421 Sherman Co
48423 Smith Co
48425 Somervell Co
48427 Starr Co
48429 Stephens Co
48431 Sterling Co
48433 Stonewall Co
48435 Sutton Co
48437 Swisher Co
48439 Tarrant Co
48441 Taylor Co
48443 Terrell Co
48445 Terry Co
48447 Throckmorton Co
48449 Titus Co
48451 Tom Green Co
48453 Travis Co
48455 Trinity Co
48457 Tyler Co
48459 Upshur Co
48461 Upton Co
48463 Uvalde Co
48465 Val Verde Co
48467 Van Zandt Co
48469 Victoria Co
48471 Walker Co
48473 Waller Co
48475 Ward Co
48477 Washington Co
48479 Webb Co
48481 Wharton Co
48483 Wheeler Co
48485 Wichita Co
48487 Wilbarger Co
48489 Willacy Co
48491 Williamson Co
48493 Wilson Co
48495 Winkler Co
48497 Wise Co

48499 Wood Co
48501 Yoakum Co
48503 Young Co
48505 Zapata Co
48507 Zavala Co

*** UT ***

49001 Beaver Co
49003 Box Elder Co
49005 Cache Co
49007 Carbon Co
49009 Daggett Co
49011 Davis Co
49013 Duchesne Co
49015 Emery Co
49017 Garfield Co
49019 Grand Co
49021 Iron Co
49023 Juab Co
49025 Kane Co
49027 Millard Co
49029 Morgan Co
49031 Piute Co
49033 Rich Co
49035 Salt Lake Co
49037 San Juan Co
49039 Sanpete Co
49041 Sevier Co
49043 Summit Co
49045 Tooele Co
49047 Uintah Co
49049 Utah Co
49051 Wasatch Co
49053 Washington Co
49055 Wayne Co
49057 Weber Co

*** VT ***

50001 Addison Co
50003 Bennington Co
50005 Caledonia Co
50007 Chittenden Co
50009 Essex Co
50011 Franklin Co
50013 Grand Isle Co
50015 Lamoille Co
50017 Orange Co
50019 Orleans Co
50021 Rutland Co
50023 Washington Co

50025 Windham Co
50027 Windsor Co

*** VA ***

51001 Accomack Co
51003 Albemarle Co
51005 Alleghany Co
51007 Amelia Co
51009 Amherst Co
51011 Appomattox Co
51013 Arlington Co
51015 Augusta Co
51017 Bath Co
51019 Bedford Co
51021 Bland Co
51023 Botetourt Co
51025 Brunswick Co
51027 Buchanan Co
51029 Buckingham Co
51031 Campbell Co
51033 Caroline Co
51035 Carroll Co
51036 Charles City Co
51037 Charlotte Co
51041 Chesterfield Co
51043 Clarke Co
51045 Craig Co
51047 Culpeper Co
51049 Cumberland Co
51051 Dickenson Co
51053 Dinwiddie Co
51057 Essex Co
51059 Fairfax Co
51061 Fauquier Co
51063 Floyd Co
51065 Fluvanna Co
51067 Franklin Co
51069 Frederick Co
51071 Giles Co
51073 Gloucester Co
51075 Goochland Co
51077 Grayson Co
51079 Greene Co
51081 Greensville Co
51083 Halifax Co
51085 Hanover Co
51087 Henrico Co
51089 Henry Co
51091 Highland Co
51093 Isle Of Wight Co
51095 James City Co

51097 King And Queen Co
51099 King George Co
51101 King William Co
51103 Lancaster Co
51105 Lee Co
51107 Loudoun Co
51109 Louisa Co
51111 Lumenberg Co
51113 Madison Co
51115 Mathews Co
51117 Hecklenburg Co
51119 Middlesex Co
51121 Montgomery Co
51123 Nansemond Co
51125 Nelson Co
51127 New Kent Co
51131 Northampton Co
51133 Northumberland Co
51135 Nottoway Co
51137 Orange Co
51139 Page Co
51141 Patrick Co
51143 Pittsylvania Co
51145 Powhatan Co
51147 Prince Edward Co
51149 Prince George Co
51153 Prince William Co
51155 Pulaski Co
51157 Rappahannock Co
51159 Richmond Co
51161 Roanoke Co
51163 Rockbridge Co
51165 Rockingham Co
51167 Russell Co
51169 Scott Co
51171 Shenandoah Co
51173 Smyth Co
51175 Southampton Co
51177 Spotsylvania Co
51179 Stafford Co
51181 Surry Co
51183 Sussex Co
51185 Tazewell Co
51187 Warren Co
51191 Washington Co
51193 Westmoreland Co
51195 Wise Co
51197 Wythe Co
51199 York Co

51510 Alexandria
51515 Bedford

51520 Bristol
51530 Buena Vista
51540 Charlottesville
51550 Chesapeake
51560 Clifton Forge
51570 Colonial Heights
51580 Covington
51590 Danville
51595 Emporia
51600 Fairfax
51610 Falls Church
51620 Franklin
51630 Fredericksburg
51640 Galax
51650 Hampton
51660 Harrisonburg
51670 Hopewell
51678 Lexington
51680 Lynchburg
51690 Martinsville

51700 Newport News
51710 Norfolk
51720 Norton
51730 Petersburg
51740 Portsmouth
51750 Radford
51760 Richmond
51770 Roanoke
51775 Salem
51780 South Boston
51790 Staunton
51800 Suffolk
51810 Virginia Beach
51820 Waynesboro
51830 Williamsburg
51840 Winchester

*** WA ***

53001 Adams Co
53003 Asotin Co
53005 Benton Co
53007 Chelan Co
53009 Clallam Co
53011 Clark Co
53013 Columbia Co
53015 Cowlitz Co
53017 Douglas Co
53019 Ferry Co
53021 Franklin Co
53023 Garfield Co

53025 Grant Co
53027 Grays Harbor Co
53029 Island Co
53031 Jefferson Co
53033 King Co
53035 Kitsap Co
53037 Kittitas Co
53039 Klickitat Co
53041 Lewis Co
53043 Lincoln Co
53045 Mason Co
53047 Okanogan Co
53049 Pacific Co
53051 Pend Oreille Co
53053 Pierce Co
53055 San Juan Co
53057 Skagit Co
53059 Skamania Co
53061 Snohomish Co
53063 Spokane Co
53065 Stevens Co
53067 Thurston Co
53069 Wahkiakum Co
53071 Walla Walla Co
53073 Whatcom Co
53075 Whitman Co
53077 Yakima Co

*** WV ***

54001 Barbour Co
54003 Berkeley Co
54005 Boone Co
54007 Braxton Co
54009 Brooke Co
54011 Cabell Co
54013 Calhoun Co
54015 Clay Co
54017 Doddridge Co
54019 Fayette Co
54021 Gilmer Co
54023 Grant Co
54025 Greenbrier Co
54027 Hampshire Co
54029 Hancock Co
54031 Hardy Co
54033 Harrison Co
54035 Jackson Co
54037 Jefferson Co
54039 Kanawha Co
54041 Lewis Co
54043 Lincoln Co

54045 Logan Co
54047 Mc Dowell Co
54049 Marion Co
54051 Marshall Co
54053 Mason Co
54055 Mercer Co
54057 Mineral Co
54059 Mingo Co
54061 Monongalia Co
54063 Monroe Co
54065 Morgan Co
54067 Nicholas Co
54069 Ohio Co
54071 Pendleton Co
54073 Pleasants Co
54075 Pocahontas Co
54077 Preston Co
54079 Putnam Co
54081 Raleigh Co
54083 Randolph Co
54085 Ritchie Co
54087 Roane Co
54089 Summers Co
54091 Taylor Co
54093 Tucker Co
54095 Tyler Co
54097 Upshur Co
54099 Wayne Co
54101 Webster Co
54103 Wetzel Co
54105 Wirt Co
54107 Wood Co
54109 Wyoming Co

*** WI ***

55001 Adams Co
55003 Ashland Co
55005 Barron Co
55007 Bayfield Co
55009 Brown Co
55011 Buffalo Co
55013 Burnett Co
55015 Calumet Co
55017 Chippewa Co
55019 Clark Co
55021 Columbia Co
55023 Crawford Co
55025 Dane Co
55027 Dodge Co
55029 Door Co
55031 Douglas Co

55033 Dunn Co
55035 Eau Claire Co
55037 Florence Co
55039 Fond Du Lac Co
55041 Forest Co
55043 Grant Co
55045 Green Co
55047 Green Lake Co
55049 Iowa Co
55051 Iron Co
55053 Jackson Co
55055 Jefferson Co
55057 Juneau Co
55059 Kenosha Co
55061 Kewaunee Co
55063 La Crosse Co
55065 Lafayette Co
55067 Langlade Co
55069 Lincoln Co
55071 Manitowoc Co
55073 Marathon Co
55075 Marinette Co
55077 Marquette Co
55078 Menomonie Co
55079 Milwaukee Co
55081 Monroe Co
55083 Oconto Co
55085 Oneida Co
55087 Outagamie Co
55089 Ozaukee Co
55091 Pepin Co
55093 Pierce Co
55095 Polk Co
55097 Portage Co
55099 Price Co
55101 Racine Co
55103 Richland Co
55105 Rock Co
55107 Rusk Co
55109 St Croix Co
55111 Sauk Co
55113 Sawyer Co
55115 Shawano Co
55117 Sheboygan Co
55119 Taylor Co
55121 Trempealeau Co
55123 Vernon Co
55125 Vilas Co
55127 Walworth Co
55129 Washburn Co
55131 Washington Co
55133 Waukesha Co

55135 Waupaca Co
55137 Waushara Co
55139 Winnebago Co
55141 Wood Co

*** WY ***

56001 Albany Co
56003 Big Horn Co
56005 Campbell Co
56007 Carbon Co
56009 Converse Co
56011 Crook Co
56013 Fremont Co
56015 Goshen Co
56017 Hot Springs Co
56019 Johnson Co
56021 Laramie Co
56023 Lincoln Co
56025 Natrona Co
56027 Niobrara Co
56029 Park Co
56031 Platte Co
56033 Sheridan Co

56035 Sublette Co
56037 Sweetwater Co

56039 Teton Co
56041 Vinta Co
56043 Washakie Co
56045 Weston Co

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(Please read Instructions on the reverse before completing)

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