

LandView® IV Help

It is recommended that you use the most current version of LandView IV Help that is located at the following Web site:

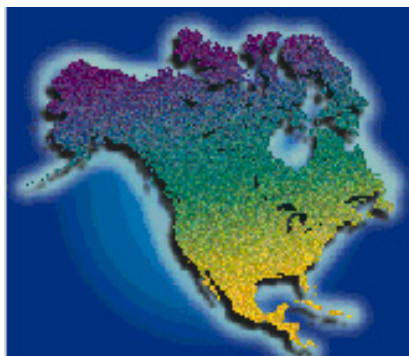
<http://www.census.gov/geo/lv4help/tabcontents.html>

If you are unable to access this Web site, you can continue using the PDF file that you are currently viewing, for it contains the entire contents of the Web site as of 09/21/2000. The most recent version of the LandView IV Help (including a downloadable PDF file) can always be found at this site. If you choose to download a later version, please remember to load it into the folder where LandView IV was originally installed (typically C:\LV4) and overwrite the older version.

LandView® IV Web Site

A Web Site has been established to provide the latest information on LandView IV, including software updates and other items of interest to LandView IV users. This site is can be found at:

<http://landview.census.gov>



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Comments or questions may be sent to: landview@geo.census.gov

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About LandView®

LandView® IV is a CD-ROM based "Federal Geographic Data Viewer" that provides database extracts from the Environmental Protection Agency (EPA), the U.S. Census Bureau, and the United States Geological Survey (USGS). These databases are presented in a geographic context on maps that contain jurisdictional entities (states, counties, cities & towns, congressional districts, and others), detailed network of roads, rivers, and railroads, census block group and tract polygons, schools, hospitals, churches, cemeteries, airports, zip codes and other landmark features.

The LandView system consists of two software programs: the LandView database system and the MARPLOT® mapping system. These two systems communicate with each other to allow you to make map inquiries based on a selection of database records, and to make database inquiries based on a selection of map objects.

History of LandView

LandView has its roots in the CAMEO system (Computer-Aided Management of Emergency Operations). CAMEO was developed by the Environmental Protection Agency and the National Oceanic and Atmospheric Administration to facilitate the implementation of the Emergency Planning and Community Right-to-Know Act. This far-reaching law requires communities to develop emergency response plans addressing chemical hazards and to make available to the public information on chemical hazards in the community.

CAMEO DOS, first released in 1991, contained a mapping program called MARPLOT, which provided access to computerized street maps based on the Bureau of Census TIGER/Line® files. MARPLOT was subsequently enhanced to include Census boundaries and demographic statistics, and was included in the TIGER/Line® 1992 CD-ROM product, under the name of LandView.

With the addition of EPA-regulated sites and more detailed demographic data, LandView became a CD-ROM product in itself, released in 1995 as LandView II. Being a DOS-based program, LandView II was limited by the DOS memory restrictions, and was difficult to run in memory-intensive environments, such as local-area networks. To solve that problem, and to provide additional capabilities and ease of use, the LandView software was converted to the Windows platform. Two programs were developed, MARPLOT for Windows (the mapping engine), and LandView (the database search and query engine). Both programs have also been converted to run on the Macintosh platform. This Windows/Macintosh cross-platform system, with the inclusion of updated Census and EPA data, and data from several other federal agencies was released on CD-ROM as LandView III in January 1998.

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What's New in LandView® IV?

There are a number of new features and improvements in LandView IV. Below are some of the highlights.

- 32-bit LandView software interface supporting both MAC and Windows platforms. Identical look and feel on both platforms. Supports faster computer processors.
- Internet interface that connects to sponsoring agency sites allowing the user to retrieve the most recent data as well as Help information.
- Takes advantage of Digital Versatile Disc (DVD) technologies to provide entire U.S. on a single disc thereby allowing cross state analysis throughout the U.S.
- Up-to-date detailed map information for roads and related features based upon TIGER/Line® 1998.
- An expanded U.S. Geological Survey (USGS) database containing over 1.6 million records from the Geographic Names Information System (GNIS).
- Improved thematic mapping offering several color schemes and automated range scaling.
- Redesigned radius calculation based upon 7 million 1990 census blocks.
- MARPLOT® mapping program has several enhancements including WYSIWYG printing of maps and a shape file translator utility Shp2Mie that allows importing ESRI Shape Files into the MARPLOT User map.

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Getting Started

There are two approaches to using LandView: 1) querying one of the LandView databases and viewing the query results as selected objects on a map, or 2) searching the MARPLOT map and viewing the search results as a selection of LandView database records. These approaches are described below.

1) Querying the databases and viewing the query results as selected objects on a map

In LandView choose a database from the LandView Startup Menu. If you choose Census Areas, you can select the Census database containing data for a specific type of census geography from the labeled file folder tab buttons.

For example, to find census data for Washington County Indiana you would first click on the "states" tab to bring up the states database screen. You would then press the "Switch to List View" button to scroll through the entire database of states alphabetically. Going through list view in a database is a good way to find data records if you are not sure of the precise name of the item you are looking for. After you have highlighted Indiana, you can then click on the "Switch to Form View" button in the upper left-hand corner of the screen. This will allow you to view census data for Indiana in the customized screen. The next step is to click on the "Counties" tab to bring up a list of Indiana counties. You would then again press the "Switch to List View" button to scroll through the entire database of states alphabetically. **(Please note that places, congressional districts, counties, MCDs, tract/BNAs, and census block groups nest hierarchically within state. For that reason, the list views for the above geographies will be limited to the current state selected under the "States" tab.)**

Another way to find data records is by choosing the Query function by pressing the "Query" button on the customized screen. This will bring up a screen that allows you to plug in a search criterion. The default field to search will be "County" for this example, although you can choose any other field to search on. For example, if you were searching for all the counties named Washington in the entire U.S., you would type in "Washington" into the county box and then press the ENTER key. The customized form will reappear with the first county in the match list. The left-hand portion of the screen will indicate that it found 31 records out of 3231 that matched the criteria. For more information on screen controls and indicators see FileMaker Interface and Query.

However you manage to find a particular data record, you can show the selected item on the map by choosing "Show on MARPLOT map" on the customized screen. A "MARPLOT Show Options" box will appear that allows you to select what you would like to view: Pressing the "Current" button will map the current record showing in the form. Pressing the "All" button will map all records in the set and then highlight the records in the found set. Pressing the "Only" button will map only records in found set.

Using the query for "Washington" mentioned above, the current button will map the county shown on the form. The "All" button will map all counties in the entire U.S. and then highlight by using tiny red squares the 31 selected counties. The "Only" button will map just the 31 counties found by the query.

Whether you look for a single item or a group of items, the system will bring the MARPLOT program forward, and the record(s) will be selected (MARPLOT places tiny red squares around the border of selected polygons, or around the symbol of selected point objects). For polygon objects like states, counties, and census tracts, MARPLOT will zoom in so that the selected object(s) just fits the screen.

The Thematic Mapping function is another way to view database results on a map. Once you have chosen a summary level from the choices under Census Areas, highlight the statistic of interest and press the "Thematic

Mapping" button from the customized screen. This function allows you to set colors and patterns for objects on the map, based on values in a database field. For example, you can display counties in various colors based on the Median Household Income. See [Thematic Mapping](#) for more details on this feature.

2)Inquire into the map and view the results as a selection of database records

Details on making inquiries into the map using MARPLOT can be found by choosing "Help" from the MARPLOT program. The following is a brief summary of how map objects can be selected in MARPLOT, and how the results can be shown in LandView:

MARPLOT has a tool bar on the left margin. The MARPLOT tools appear as a list of icons along the left edge of the map window. When you have unlocked one or more layers, the list of tools extends to include tools for creating new objects on the map. (For more information, see Tools and Layer List in MARPLOT Help.) The top-most tool is the arrow, or selection tool. With it, you can click on any map object to select it. You can also drag a rectangle (or a circle with the Ctrl Key pressed) to select all objects within the area you specify. You can also search for map objects by choosing the "Search" option from the "List" menu. The result of a search is a list of objects (search collection) that you can cause to be selected by choosing "Show All on Map".

Whenever you have one or more map objects selected, you can add to the selected set by "Shift-Clicking" additional objects. To view database information on selected map objects, choose "Get Info" from the "LandView Databases" section of the "Sharing" menu. (A shortcut for "Get Info" is to press Ctrl+I). LandView will come forward and provide you with a list of categories (databases or map layers) that were chosen, and how many records were selected in each. Press the "Switch to List View" button to view a list of the records found. If you want to look at the selected database records then you can do that also.

In the Census databases, there is a Summarize button, which will sum numeric fields for the selected (or queried) record set. An example of how this can be used is:

Select a set of Census Tracts from MARPLOT (perhaps these are Tracts that are within a certain radius of an EPA-regulated facility), choose "Get Info". This will bring you back into LandView under the Tract/BNA tab. You will notice in the left-hand column that under "Found" the number of records found is noted. If you want to view the list of census tracts then press "Switch to List View". Otherwise the "Summarize" button can be pressed. The population, income, and other demographic data fields will be summed for the selected Tracts, thus giving you the demographic characteristics for a radius around an EPA site. Alternatively, you can select export from the file menu, specify the fields to be contained on each record, and the file type to be exported. You then can import that file into your database or spreadsheet program for further analysis.

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Thematic Mapping

The Thematic Mapping function allows you to choose a data set and display it on a map using a color scheme and a solid or pattern fill. For example, you can display counties in various colors based on the Median Household Income.

When you first enter the Census database choose a geographic entity that you would like to see displayed by clicking on the appropriate tab. In order to look at data for counties in Maryland for example, one must perform a query. Therefore, click on the counties tab and click the "[Query](#)" button. Once the query screen appears, enter the state abbreviation in the box labeled state and hit enter. When the data for counties in Maryland appears, click in the box next to the data item of interest. Those boxes marked with a percent sign, will be calculated based on the percentage. If you are not looking for a result based on the percentage then highlight the other box. Once you have highlighted the area of interest you can then click on the Thematic Mapping button. If you do not first select a data item you will receive a pop up message telling you to do so.

Once in Thematic Mapping, a set of four number ranges should appear. (In some situations this may not be the case.) The system determines the values of the selected data item by choosing number ranges that approximate an even distribution of records among the four or less categories. (Note that the system may take a little time processing if the number of records is large.) Clicking on a number under to or from will create text boxes and allow you to plug in your own ranges. Click "Recalculate Record Count" when you are done. This will allow the system to redistribute the records. If you would like to change the title then simply click on that area and text boxes will be displayed so that changes can be made.

There are four color schemes to choose from to display the map as well as a choice of a solid or pattern fill. Once you have your pattern and number ranges set, select "Show on Map" and a map will be displayed in MARPLOT®.

When you no longer want to view the map objects in a thematic fashion, go back into LandView and click the "Cancel" button in the thematic mapping window. This will bring you back into the Census Areas section. If you go back into MARPLOT after canceling the map in LandView, MARPLOT will return to its normal way of displaying the objects.

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Query

The "Query" option, which can be found under the Census, EPA, and USGS databases, provides a way of selecting records that meet certain criteria. After a query is performed, you will be working with a subset of records rather than with the entire database.

To begin a query first click on the "Query" button under one of the databases. For this example we will use the Counties tab under the Census database. After clicking "Query" a screen with blanks next to each field will appear. Click the fourth icon from the left on the bottom, the hide-show button, to bring up the left-hand menu bar.

Perhaps you would like to find out how many counties in Alabama have a "Below Poverty" rate that is less than 20%.

First be sure to put the abbreviation for Alabama (AL) in the state abbreviation box located in the center field on the top line. By not filling in the appropriate state, county, tract, etc..., depending on the query you are trying to perform, the system would look for less than 20% below poverty in every state.

Highlight the percent box next to "Below Poverty" by clicking on it. In the left-hand menu bar you will see a drop box next to the word "Symbols". Click here to choose an operator such as "equals", "greater than", "less than". In this case you would choose the less than sign. Clicking on the sign will automatically put the operator in the field box.

When you are finished entering the criteria in the box, press enter and the system will tell you how many records were found with your criteria in the left-hand status bar under "Found".

How to "AND" a Query

The query function also lets you "AND" a query. To "AND" a query choose a field and put in your operator. Then choose a second or third field and put in an operator. Hit enter and the number of "Found" records that met your criteria will be displayed in the left-hand status bar.

How to "OR" a Query

For example, let us pretend that you wanted to do a query on the number of counties in Delaware and Maryland. After clicking the query button in the counties area, you would put DE in the state field. Next, look for the "Request" menu bar. Under Request, choose Add New Request. This saves your first request and allows you to enter another. You can tell how many requests have been entered/ are being worked on by looking at the number of found records in the left-hand status bar. In the new request screen put MD in the state field and then hit enter to see the results of your query. You should find records for both Delaware and Maryland.

To see a list of records that were found as a result of your single, "and", or "or" query press ["Switch to List View"](#).

To copy or export the records in the queried set to another file, go to the File menu and press the "Export" button. There are a variety of file types that you can export the files in.

When you are finished viewing the records or if you decide to perform another query on a different category, hit ["Reset to show ALL records"](#). All records under Counties or which ever category you are in will be restored and you can therefore begin a new search.

If you would like to view the counties that were found as a result of your query, clicking on the ["Show on Map"](#) button allows you to select what you would like to view on the map. Pressing the "Current" button will map the current record shown in the form. Pressing the "All" button will map all records in the set of interest and then highlight the records found from the queried set. Pressing the "Only" button will map only records found in the queried set.

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Switch to List View

The **Switch to List View** function can be found under the Census, EPA, and USGS databases. When you first enter a database such as the EPA database, the format in which the information is displayed is in form format.

If you would like to look at multiple records/a list of records at once, switching to list view would be a good option. List view simply lists all the records that were found.

For example you may want to find out how many EPA sites are in the state of Connecticut. Performing a [Query](#) will create a set of records. To view the found set you can either look at each record individually in form view or you may look at the list of records by switching to list view.

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Reset to Show All Records

"Reset to show ALL records" is usually used after a Query is performed. This function can be found under all three databases in the LandView program.

For example you may want to perform a query on Persons under States in the Census Areas database. You would like to know how many states have less then or equal to two million people. LandView® will bring forth those records that apply. Once you are done viewing them, you may decide to perform another query on a different category. By hitting "Reset to show ALL records", all records in the States category are restored and you can therefore begin a new search.

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Show on Map

The "Show on Map" function is located on screens in the Census, EPA, and USGS databases. Clicking "Show on Map" will allow you to choose how you would like to view the data. You can select "Current record", "Show all records", or "Show only records".

The "Show on Map" operation will be successful only if the database records have a corresponding map object in MARPLOT®. If a record does not have a corresponding map object, MARPLOT will tell you it cannot find the object. Nearly all of the database records in LandView® IV have corresponding map objects, although there are cases where the data record did not have the latitude & longitude values that would enable a map object to be created.

When MARPLOT finds the record it will "select" it (MARPLLOT places tiny boxes around the border of selected polygons, or around the symbol of selected point objects). For polygon objects like states, counties, and census tracts, MARPLOT will zoom in so that the selected object just fits the screen.

For example, you may want to look at how many EPA sites are in Wilmington, Delaware. To get the number of sites in Wilmington you would perform a [Query](#).

Current: Show and zoom in on current record

To view a single record from the results of the query select "Current record" under the "Show on Map" button. MARPLOT will then zoom in and place tiny red squares around the site.

All: Show all records, and highlight those in the "found set"

The "Show all records" function shows the map objects for a collection of records. Typically, this collection of records results from a query. Whenever this option is chosen, MARPLOT will zoom in or out to fit all the selected objects on the screen. For the example above, MARPLOT would map all the EPA sites in Delaware, but highlight only the sites that are located in Wilmington by placing tiny red boxes around the borders to highlight them. If MARPLOT cannot find one or more of the map objects in the collection, it will tell you so. Nevertheless, it will select and show the objects it does find.

Only: Show only those records in the "found set"

The "Show only records" function allows MARPLOT to show a collection of map objects usually resulting from a query operation. MARPLOT does not select the objects, but rather hides all objects on the layer that are not in the collection. Therefore, in the example above only the 74 sites that were found in Wilmington would be shown and all other EPA sites in Delaware would be hidden.

Whenever "Show only records" is chosen, MARPLOT will zoom in or out to fit all the objects on the screen. If MARPLOT cannot find one or more of the map objects in the collection, it will tell you so. Nevertheless, it will show the objects it does find.

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MARPLOT®

MARPLOT is the mapping application for **LandView® IV**. It is a separate program from the LandView database program. When you start LandView IV, MARPLOT is also started; thus you have two applications running simultaneously.

MARPLOT has its own set of help screens. Therefore, in order to obtain detailed instructions on using MARPLOT, choose **Help** from the menu bar in the MARPLOT application. You can also enter the MARPLOT program by clicking on the MARPLOT tab in the task bar.

The LandView IV product contains the 3.2.3 version of MARPLOT software. It has two new MARPLOT behaviors not yet documented in the MARPLOT Help.

1. **Selecting a single object in MARPLOT by Clicking.** This fixes a bug where in certain situations the object on the bottom was selected rather than the object on top.
2. **Circle objects now represent approximate earth circles.** Circles created with MARPLOT now represent a circle on the earth (i.e. they take into account the earth's curvature) rather than circles on the computer screen. This change means that large circles will appear on the computer screen as ellipses as one moves away from the equator.

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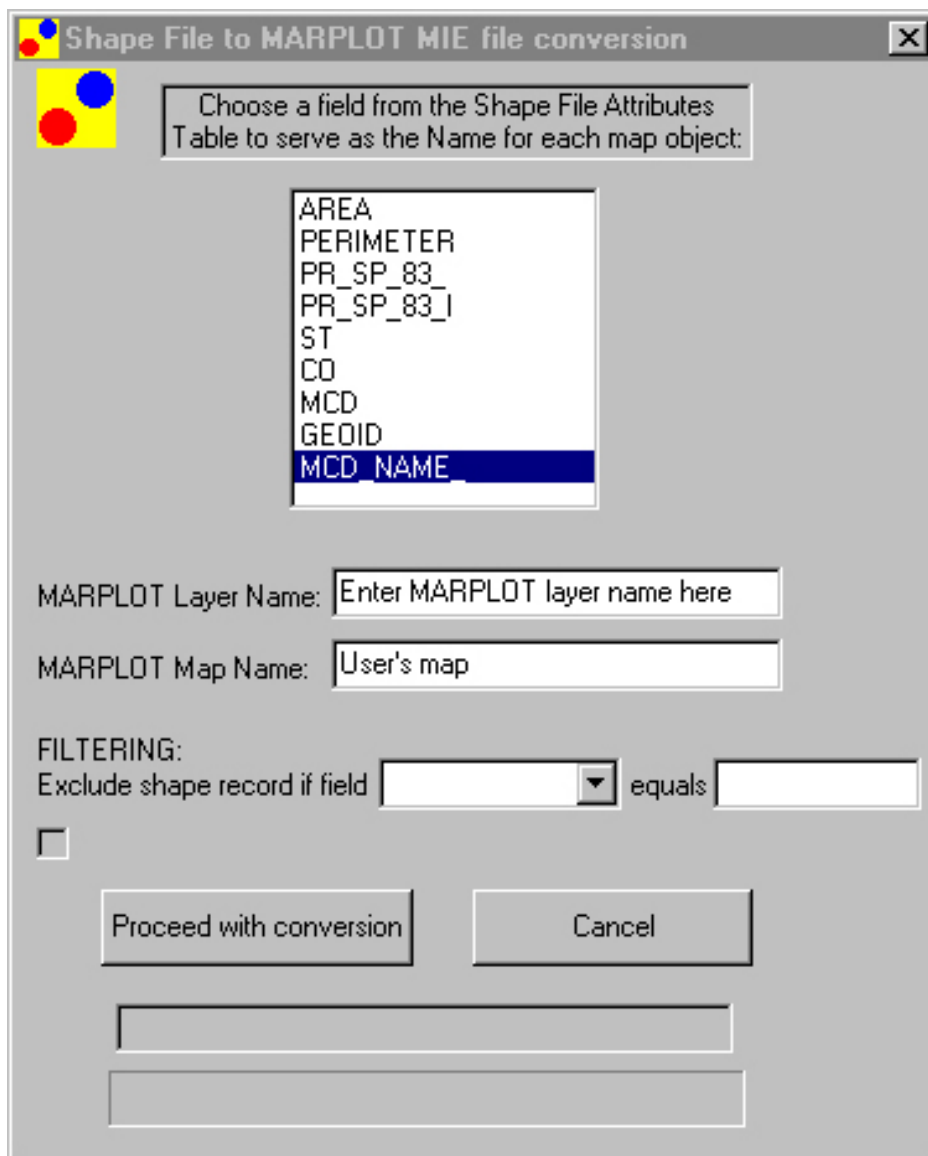
Importing Arcview Shapefiles Into MARPLOT®

For folks interested in bringing information from another GIS product into LandView®, we provide a utility **shp2mie.exe** that translates an Arcview Shapefile into a MARPLOT Import Export (MIE) file.

Shapefiles are a GIS data set used in ESRI's ArcView® software program to represent a set of geographic features such as streets, places, metropolitan areas, and tract boundaries. Shapefiles can represent point, line, or area features. Each feature in a shapefile represents a single geographic feature and its attributes. Shapefiles are a standard file format for transferring such information between GIS mapping software programs.

The MARPLOT Import/Export (MIE) format is the standard format for exchanging MARPLOT information. These files contain complete MARPLOT information about each map object. When you import a file, the objects specified in the file are added to your map(s). If the objects in the file are from maps that are not currently available on your MARPLOT system, new maps will be created to accommodate the objects. Similarly, if the objects are from layers that are not in the current system, new layers will be created. Any maps created during import are put in the same folder (directory) as the MARPLOT application itself. For more details about this process, see the MARPLOT User's Guide.

To start the program, simply double click on **shp2mie.exe** which is located in the LV4 folder on your hard drive. You will then get a Windows dialog box requesting that you point to the folder and identify the Shapefile you wish to translate. After selecting the file, click the **open** button. The *Shape File to MARPLOT MIE file conversion* dialog box (shown below) then opens.



You first need to choose a field from the shape file attributes table to serve as a name for each map object. To avoid confusion, you should try to select a field that provides a unique name for each map object.

Then you should enter the name of the MARPLOT layer for this file's map objects. The default MARPLOT map name is User's map. This layer is automatically created when you install MARPLOT. There's no need to change this default setting.

If you wish to translate only selected map objects, you should select the field using the scroll bar in the **FILTERING** field and the value that will serve as a filter.

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Census Databases

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1990 Census STF Data

1990 Census data in LandView® IV are organized by state, county, census tract/block numbering area (BNA), census block group (BG), place, congressional district (CD), American Indian and Alaska Native Area, and minor civil division (MCD).

The census demographic and housing data come from two 1990 Census sources: Summary Tape File 1A (STF1A) and Summary Tape File 3A (STF3A). STF 1A contains information collected on an 100 percent basis (STF1A data are referred to as counts). STF3A contains information collected on a housing unit sample basis (STF3A data are referred to as estimates).

The STF 1A data items included are: counts of persons, household, families. Additional population characteristics are separately provided by age, race, Hispanic, minority, owner/renter status. The STF3A data items included are: urban/rural population, aggregate income, median household income, per capita income, poverty status, school enrollment, attainment of a college bachelor's degree, residence in same house in 1985, median year built, estimate of structures built 1939 or earlier, high mortgage and high renter.

Both STF1A and STF3A data sets are subject to nonsampling errors while only STF3A is subject to sampling errors. Further discussion of these issues are found in Nonsampling Errors and Sampling Errors. Users are cautioned that differences may occur when comparing similar data between STF1A and STF3A because of sampling variability. A fuller discussion of this is provided in Differences Between 100-Percent Counts and Sample Estimates.

Because metadata does not exist for these 1990 Census data products, we are providing links to edited excerpts from the 1990 Census STF technical documentation below. In addition, we provide links to the metadata provided for both the TIGER/Line 1998 and 1990 Census Cartographic boundaries used in this product.

- [1990 Census LandView Data Dictionary](#)
- [Census Geographic Glossary](#)
- [Census User Note on Sample Estimates for Population and Housing](#)
- [Generalized Boundaries](#)
- [Nonsampling Errors](#)
- [Sampling Errors](#)
- [Pop/Housing Subject Definitions and Derived Measures](#)
- [ZIP Codes®](#)

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Census Geographic Data

TIGER/Line® 1998

The map layers shown under the MARPLOT® *Census TIGER/Line Layers* grouping were produced from the TIGER/Line 1998 data files. The TIGER/Line files are digital databases of geographic features, such as roads, railroads, rivers, lakes, political boundaries, census statistical boundaries, etc. covering the entire United States. The data base contains information about these features such as their location in latitude and longitude, the name, the type of feature, address ranges for most streets, the geographic relationship to other features, and other related information. They are the public product created from the Census Bureau's TIGER (Topologically Integrated Geographic Encoding and Referencing) database of geographic information. TIGER was developed at the Census Bureau to support the mapping and related geographic activities required by the decennial census and sample survey programs.

[TIGER/Line® 1998 Metadata](#)

1990 Census Political and Statistical Boundary Data

To maintain compatibility with the 1990 Census data presented in this product, official boundaries used in the 1990 Census data tabulations are shown in this product excepting congressional districts (105th) and Metropolitan Areas (June 30, 1999). With the exception of Hawaii and the Insular territories, both the TIGER/Line 1998 files and the boundary files are based upon the 1983 North American Datum (NAD 83).

Most of the boundaries shown under the MARPLOT "Census Demographic Layers" were created as selected generalized extracts from the Census Bureau's TIGER geographic database. Because these boundaries are simplified from the original polygons, they do not always exactly overlay the street pattern. See Generalized Boundaries for a fuller discussion of this.

The places, census tracts and block group layers are not generalized and were prepared directly from the TIGER/Line 1998 data files.

[1990 AIANA Metadata](#)

[105th Congressional Districts Boundary Files Metadata](#)

[County Boundary Files Metadata](#)

[1999 Metropolitan Areas Boundary Files Metadata](#)

[Minor Civil Division \(MCD\)/Census County Division \(CCD\) Boundary Files Metadata](#)

[State Boundary Files Metadata](#)

For those of you interested in other boundary files, please visit the [Cartographic Boundary Files](#) site.

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Source: U.S. Census Bureau
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LandView® IV

1990 American Indian / Alaska Native Areas (AIANA) Boundary File Metadata

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Identification Information

[Top of Page](#)**Citation:****Citation Information:****Originator:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Publication Date:** 19990119**Title:** LandView® IV 1990 American Indian / Alaska Native Areas (AIANA) Boundary Files Metadata**Publication Information:****Publication Place:** Washington, D.C.**Publisher:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Online Linkage:** <http://www.census.gov/geo/www/cob/>**Description:****Abstract:** These ungeneralized cartographic boundary files were designed and created to support LandView® thematic mapping functions.**Purpose:** Providing access to boundary file metadata on the Census Bureau's Internet site.**Supplemental Information:** The cartographic boundary files are available in three file formats:

- * ARC/INFO Export (.e00) format
- * Arcview Shapefile format
- * ASCII (ARC/INFO Ungenerate) format

Time Period of Content:**Currentness Reference:** publication date**Status:****Progress:** In Work

Maintenance and Update Frequency: As needed

Spatial Domain:

Bounding Coordinates:

West Bounding Coordinate: 172.46087
East Bounding Coordinate: -65.2215271
North Bounding Coordinate: 71.34294128
South Bounding Coordinate: 17.88511467

Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

Security Information:

Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

Native Data Set Environment: TIGER database converted to ARC/INFO coverages, Arcview Shapefiles,
and ASCII files (ARC/INFO Ungenerate)

Cross Reference:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
Title: LandView® IV 1990 American Indian / Alaska Native Areas (AIANA) Boundary Files
Metadata

Publication Information:

Publication Place: Washington, D.C.
Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Data Quality Information

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Attribute Accuracy:

Attribute Accuracy Report: Accurate against Federal Information Processing Standards (FIPS), FIPS Publication 6-4 (for counties), FIPS 55-3 (for incorporated places and minor civil divisions/census county divisions), and FIPS Publication 5-2 (for states) at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical Consistency Report: The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and Topology" (GT) class objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological edit requirements. These requirements include:

- * Complete chains must begin and end at nodes.
- * Complete chains must connect to each other at nodes.
- * Complete chains do not extend through nodes.
- * Left and right GT-polygons are defined for each complete chain element and are consistent throughout the extract process.
- * The chains representing the limits of the files are free of gaps.

The Census Bureau performed automated tests to ensure logical consistency and limits of files. All polygons are tested for closure. The Census Bureau uses its internally developed Geographic Update System to enhance and modify spatial and attribute data in the Census TIGER data base. Standard geographic codes, such as FIPS codes for states, counties, performed spatial data tests for logical consistency of the codes during the compilation of the original Census TIGER data files. Most of the Codes themselves were provided to the Census Bureau by the USGS, the agency responsible for maintaining FIPS 55. Feature attribute information has been examined but has not been fully tested for consistency.

Completeness Report: Data completeness reflects the contents of the Census TIGER data base as of January 1, 1990. These American Indian / Alaska Native Areas boundary files contain all coordinates from the data in the TIGER data base (i.e., they are NOT generalized). The American Indian and Alaska Native entities are 1990 reservations and off-reservation trust lands recognized by the federal government, 1990 state reservations, and 1990 tribal statistical areas including tribal jurisdiction statistical areas (TJSAs), tribal designated statistical areas (TDSAs), and Alaska Native village statistical areas (ANVSAs). The boundaries for these entities are used for Census Bureau statistical data purposes and depict the data as it exists in the Census Bureau's TIGER geographic database. The boundaries are for Census Bureau statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership/entitlement.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The information present in these files provided for the purposes of statistical analysis and census operations only. Coordinates in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies with the source material used, but generally the information is no better than the established national map

Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey (USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national map accuracy standards and use coordinates defined by the North American Datum, 1983. For the contiguous 48 States, the cartographic fidelity of most of the 1997 Tiger/Line files, in areas outside the 1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: LandView® IV 1990 American Indian / Alaska Native Areas (AIANA) Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

Process Step:

Process Description: The TIGER/Line files are extracted from the Census TIGER data base by county or statistical equivalent area using software (TIGER DB routines) written by the

Geography Division for efficient access.

Source Used Citation Abbreviation: TIGER

Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau,
Geography Division, Products and Services Staff

Spatial Data Organization Information

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Horizontal Coordinate System Definition:

Entity and Attribute Information

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Distribution Information

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Distributor:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division

Metadata Reference Information

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Metadata Date: September 12, 2000

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata Access Constraints: None

Metadata Use Constraints: None

Metadata Security Information:

Metadata Security Classification System: Unclassified

Metadata Security Classification: Unclassified

Metadata Security Handling Description: None

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Source: U.S. Census Bureau
Last Revised: *Thursday, 21-Sep-00 11:14:45*

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LandView® IV

105th Congressional Districts

Boundary Files Metadata

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Identification Information

[Top of Page](#)**Citation:****Citation Information:****Originator:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Publication Date:** 19990119**Title:** Landview® IV 105th Congressional Districts Boundary Files Metadata**Publication Information:****Publication Place:** Washington, D.C.**Publisher:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Online Linkage:** <http://www.census.gov/geo/www/cob/>**Description:****Abstract:** These cartographic boundary files were designed and created to support the LandView® IV small-scale thematic mapping functions.**Purpose:** Providing access to boundary file metadata on the Census Bureau's Internet site.**Supplemental Information:** The cartographic boundary files are available in three file formats:

- * ARC/INFO Export (.e00) format
- * Arcview Shapefile format
- * ASCII (ARC/INFO Ungenerate) format

Time Period of Content:**Currentness Reference:** publication date**Status:****Progress:** In Work**Maintenance and Update Frequency:** As needed

Spatial Domain:

Bounding Coordinates:

West Bounding Coordinate: 172.46087
East Bounding Coordinate: -65.2215271
North Bounding Coordinate: 71.34294128
South Bounding Coordinate: 17.88511467

Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

Security Information:

Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

Native Data Set Environment: TIGER database converted to ARC/INFO coverages, Arcview Shapefiles,
and ASCII files (ARC/INFO Ungenerate)

Cross Reference:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
Title: LandView® IV 105th Congressional Districts Boundary Files Metadata
Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Data Quality Information

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Attribute Accuracy:

Attribute Accuracy Report: Accurate against Federal Information Processing Standards (FIPS), FIPS Publication 6-4 (for counties), FIPS 55-3 (for incorporated places and minor civil divisions/census county divisions), and FIPS Publication 5-2 (for states) at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical Consistency Report: The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and Topology" (GT) class objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological edit requirements. These requirements include:

- * Complete chains must begin and end at nodes.
- * Complete chains must connect to each other at nodes.
- * Complete chains do not extend through nodes.
- * Left and right GT-polygons are defined for each complete chain element and are consistent throughout the extract process.
- * The chains representing the limits of the files are free of gaps.

The Census Bureau performed automated tests to ensure logical consistency and limits of files. All polygons are tested for closure. The Census Bureau uses its internally developed Geographic Update System to enhance and modify spatial and attribute data in the Census TIGER data base. Standard geographic codes, such as FIPS codes for states, counties, performed spatial data tests for logical consistency of the codes during the compilation of the original Census TIGER data files. Most of the Codes themselves were provided to the Census Bureau by the USGS, the agency responsible for maintaining FIPS 55. Feature attribute information has been examined but has not been fully tested for consistency.

Completeness Report: Data completeness reflects the contents of the Census TIGER data base as of January 1, 1990. After the boundary files were extracted, they underwent generalization in the Arc/Info environment. The generalization factor is not known for the boundaries.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The information present in these files provided for the purposes of statistical analysis and census operations only. Coordinates in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies with the source material used, but generally the information is no better than the established national map Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey (USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national map accuracy standards and use coordinates defined by the North American Datum, 1983 (Note: although all boundary files on the cartographic boundary file web site from 1990 are in datum NAD27). For the contiguous 48 States, the cartographic fidelity of most of the 1997 Tiger/Line files, in areas outside the 1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file

coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:**Source Information:****Source Citation:****Citation Information:**

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: LandView® IV 105th Congressional Districts Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:**Time Period Information:****Single Date/Time:**

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

Process Step:

Process Description: The TIGER/Line files are extracted from the Census TIGER data base by county or statistical equivalent area using software (TIGER DB routines) written by the Geography Division for efficient access.

Source Used Citation Abbreviation: TIGER

Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:**Contact Information:****Contact Person Primary:**

Contact Person: Department of Commerce, U.S. Census Bureau, Geo

LandView® IV

County Boundary Files Metadata

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Identification Information

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Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: LandView® IV County Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Description:

Abstract: These cartographic boundary files were designed and created to support the LandView® IV small-scale thematic mapping functions.

Purpose: Providing access to boundary file metadata on the Census Bureau's Internet site.

Supplemental Information: The cartographic boundary files are available in three file formats:

- * ARC/INFO Export (.e00) format
- * Arcview Shapefile format
- * ASCII (ARC/INFO Ungenerate) format

Time Period of Content:

Currentness Reference: publication date

Status:

Progress: In Work

Maintenance and Update Frequency: As needed

Spatial Domain:

Bounding Coordinates:

West Bounding Coordinate: 172.46087
East Bounding Coordinate: -65.2215271
North Bounding Coordinate: 71.34294128
South Bounding Coordinate: 17.88511467

Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

Security Information:

Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

Native Data Set Environment: TIGER database converted to ARC/INFO coverages, Arcview Shapefiles,
and ASCII files (ARC/INFO Ungenerate)

Cross Reference:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
Title: Boundary File Web Site Metadata
Publication Information:
Publication Place: Washington, D.C.
Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division
Online Linkage: <http://www.census.gov/geo/www/cob/>

Data Quality Information

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Attribute Accuracy:

Attribute Accuracy Report: Accurate against Federal Information Processing Standards (FIPS), FIPS Publication 6-4 (for counties), FIPS 55-3 (for incorporated places and minor civil divisions/census county divisions), and FIPS Publication 5-2 (for states) at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical Consistency Report: The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and Topology" (GT) class objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological edit requirements. These requirements include:

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Completeness Report: Data completeness reflects the contents of the Census TIGER data base as of January 1, 1990. After the boundary files were extracted, they underwent generalization in the Arc/Info environment. The generalization factor is not known for the boundaries.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The information present in these files provided for the purposes of statistical analysis and census operations only. Coordinates in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies with the source material used, but generally the information is no better than the established national map Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey (USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national map accuracy standards and use coordinates defined by the North American Datum, 1983 (Note: although all boundary files on the cartographic boundary file web site from 1990 are in datum NAD27). For the contiguous 48 States, the cartographic fidelity of most of the 1997 Tiger/Line files, in areas outside the 1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file

coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: Boundary File Web Site Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

Process Step:

Process Description: The TIGER/Line files are extracted from the Census TIGER data base by county or statistical equivalent area using software (TIGER DB routines) written by the Geography Division for efficient access.

Source Used Citation Abbreviation: TIGER

Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:

Contact Information:

Contact Person Primary:

Spatial Data Organization Information

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Spatial Reference Information

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Horizontal Coordinate System Definition:

Entity and Attribute Information

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Distribution Information

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Distributor:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division

Metadata Reference Information

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Metadata Date: September 12, 2000

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata Access Constraints: None

Metadata Use Constraints: None

Metadata Security Information:

Metadata Security Classification System: Unclassified

Metadata Security Classification: Unclassified

Metadata Security Handling Description: None

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Source: U.S. Census Bureau
Last Revised: *Thursday, 21-Sep-00 11:14:45*

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LandView® IV

1999 Metropolitan Areas Boundary Files Metadata

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Identification Information

[Top of Page](#)**Citation:****Citation Information:****Originator:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Publication Date:** 19990119**Title:** LandView® IV 1999 Metropolitan Areas Boundary Files Metadata**Publication Information:****Publication Place:** Washington, D.C.**Publisher:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Online Linkage:** <http://www.census.gov/geo/www/cob/>**Description:****Abstract:** These cartographic boundary files were designed and created to support the LandView® IV small-scale thematic mapping functions.**Purpose:** Providing access to boundary file metadata on the Census Bureau's Internet site.**Supplemental Information:** The cartographic boundary files are available in three file formats:

- * ARC/INFO Export (.e00) format
- * Arcview Shapefile format
- * ASCII (ARC/INFO Ungenerate) format

Time Period of Content:**Currentness Reference:** publication date**Status:****Progress:** In Work**Maintenance and Update Frequency:** As needed**Spatial Domain:**

Bounding Coordinates:

West Bounding Coordinate: 172.46087
East Bounding Coordinate: -65.2215271
North Bounding Coordinate: 71.34294128
South Bounding Coordinate: 17.88511467

Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

Security Information:

Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

Native Data Set Environment: TIGER database converted to ARC/INFO coverages, Arcview Shapefiles,
and ASCII files (ARC/INFO Ungenerate)

Cross Reference:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
Title: LandView® IV 1999 Metropolitan Areas Boundary File Web Site Metadata
Publication Information:
Publication Place: Washington, D.C.
Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division
Online Linkage: <http://www.census.gov/geo/www/cob/>

Data Quality Information

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Attribute Accuracy:

Attribute Accuracy Report: Accurate against Federal Information Processing Standards (FIPS), FIPS Publication 6-4 (for counties), FIPS 55-3 (for incorporated places and minor civil divisions/census county divisions), and FIPS Publication 5-2 (for states) at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical Consistency Report: The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and Topology" (GT) class objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological edit requirements. These requirements include:

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- * Complete chains do not extend through nodes.
- * Left and right GT-polygons are defined for each complete chain element and are consistent throughout the extract process.
- * The chains representing the limits of the files are free of gaps.

The Census Bureau performed automated tests to ensure logical consistency and limits of files. All polygons are tested for closure. The Census Bureau uses its internally developed Geographic Update System to enhance and modify spatial and attribute data in the Census TIGER data base. Standard geographic codes, such as FIPS codes for states, counties, performed spatial data tests for logical consistency of the codes during the compilation of the original Census TIGER data files. Most of the Codes themselves were provided to the Census Bureau by the USGS, the agency responsible for maintaining FIPS 55. Feature attribute information has been examined but has not been fully tested for consistency.

Completeness Report: Data completeness reflects the contents of the Census TIGER data base as of January 1, 1990. After the boundary files were extracted, they underwent generalization in the Arc/Info environment. The generalization factor is not known for the boundaries.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The information present in these files provided for the purposes of statistical analysis and census operations only. Coordinates in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies with the source material used, but generally the information is no better than the established national map Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey (USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national map accuracy standards and use coordinates defined by the North American Datum, 1983 (Note: although all boundary files on the cartographic boundary file web site from 1990 are in datum NAD27). For the contiguous 48 States, the cartographic fidelity of most of the 1997 Tiger/Line files, in areas outside the 1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file

coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: LandView® IV 1999 Metropolitan Areas Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

Process Step:

Process Description: The TIGER/Line files are extracted from the Census TIGER data base by county or statistical equivalent area using software (TIGER DB routines) written by the Geography Division for efficient access.

Source Used Citation Abbreviation: TIGER

Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:

Contact Information:

Contact Person Primary:

Spatial Data Organization Information

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Spatial Reference Information

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Horizontal Coordinate System Definition:

Entity and Attribute Information

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Distribution Information

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Distributor:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division

Metadata Reference Information

[Top of Page](#)

Metadata Date: September 12, 2000

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata Access Constraints: None

Metadata Use Constraints: None

Metadata Security Information:

Metadata Security Classification System: Unclassified

Metadata Security Classification: Unclassified

Metadata Security Handling Description: None

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Source: U.S. Census Bureau
Last Revised: *Thursday, 21-Sep-00 11:14:45*

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Landview® IV

Minor Civil Division (MCD)/Census County Division (CCD) Boundary Files Metadata

[Identification](#)[Data Quality](#)[Spatial Data Organization](#)[Spatial Reference](#)[Entity and Attribute](#)[Distribution](#)[Metadata Reference](#)

Identification Information

[Top of Page](#)**Citation:****Citation Information:****Originator:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Publication Date:** 19990119**Title:** LandView® IV Minor Civil Division (MCD)/Census County Division (CCD) Boundary Files Metadata**Publication Information:****Publication Place:** Washington, D.C.**Publisher:** U.S. Department of Commerce, Bureau of the Census, Geography Division**Online Linkage:** <http://www.census.gov/geo/www/cob/>**Description:****Abstract:** These cartographic boundary files were designed and created to support the LandView® IV small-scale thematic mapping functions.**Purpose:** Providing access to boundary file metadata on the Census Bureau's Internet site.**Supplemental Information:** The cartographic boundary files are available in three file formats:

- * ARC/INFO Export (.e00) format
- * Arcview Shapefile format
- * ASCII (ARC/INFO Ungenerate) format

Time Period of Content:**Currentness Reference:** publication date**Status:****Progress:** In Work

Maintenance and Update Frequency: As needed

Spatial Domain:

Bounding Coordinates:

West Bounding Coordinate: 172.46087
East Bounding Coordinate: -65.2215271
North Bounding Coordinate: 71.34294128
South Bounding Coordinate: 17.88511467

Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

Security Information:

Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

Native Data Set Environment: TIGER database converted to ARC/INFO coverages, Arcview Shapefiles,
and ASCII files (ARC/INFO Ungenerate)

Cross Reference:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
Title: LandView® IV Minor Civil Division (MCD)/Census County Division (CCD)
Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.
Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Data Quality Information

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Attribute Accuracy:

Attribute Accuracy Report: Accurate against Federal Information Processing Standards (FIPS), FIPS Publication 6-4 (for counties), FIPS 55-3 (for incorporated places and minor civil divisions/census county divisions), and FIPS Publication 5-2 (for states) at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical Consistency Report: The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and Topology" (GT) class objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological edit requirements. These requirements include:

- * Complete chains must begin and end at nodes.
- * Complete chains must connect to each other at nodes.
- * Complete chains do not extend through nodes.
- * Left and right GT-polygons are defined for each complete chain element and are consistent throughout the extract process.
- * The chains representing the limits of the files are free of gaps.

The Census Bureau performed automated tests to ensure logical consistency and limits of files. All polygons are tested for closure. The Census Bureau uses its internally developed Geographic Update System to enhance and modify spatial and attribute data in the Census TIGER data base. Standard geographic codes, such as FIPS codes for states, counties, performed spatial data tests for logical consistency of the codes during the compilation of the original Census TIGER data files. Most of the Codes themselves were provided to the Census Bureau by the USGS, the agency responsible for maintaining FIPS 55. Feature attribute information has been examined but has not been fully tested for consistency.

Completeness Report: Data completeness reflects the contents of the Census TIGER data base as of January 1, 1990. After the boundary files were extracted, they underwent generalization in the Arc/Info environment. The generalization factor is not known for the boundaries.

Positional Accuracy:

Horizontal Positional Accuracy:

Horizontal Positional Accuracy Report: The information present in these files provided for the purposes of statistical analysis and census operations only. Coordinates in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies with the source material used, but generally the information is no better than the established national map Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey (USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national map accuracy standards and use coordinates defined by the North American Datum, 1983 (Note: although all boundary files on the cartographic boundary file web site from 1990 are in datum NAD27). For the contiguous 48 States, the cartographic fidelity of most of the 1997 Tiger/Line files, in areas outside the

1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: LandView® IV Minor Civil Division (MCD)/Census County Division (CCD) Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

Process Step:

Process Description: The TIGER/Line files are extracted from the Census TIGER data base by county or statistical equivalent area using software (TIGER DB routines) written by the Geography Division for efficient access.

Source Used Citation Abbreviation: TIGER

Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau,
Geography Division, Products and Services Staff

Spatial Data Organization Information

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Spatial Reference Information

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Horizontal Coordinate System Definition:

Entity and Attribute Information

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Distribution Information

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Distributor:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division

Metadata Reference Information

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Metadata Date: September 12, 2000

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,

Products and Services Staff

Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata Access Constraints: None

Metadata Use Constraints: None

Metadata Security Information:

Metadata Security Classification System: Unclassified

Metadata Security Classification: Unclassified

Metadata Security Handling Description: None

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Source: U.S. Census Bureau
Last Revised: *Thursday, 21-Sep-00 11:14:46*

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Landview® IV

State Boundary Files Metadata

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Identification Information

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Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: Landview® IV State Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

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Currentness Reference: publication date

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Progress: In Work

Maintenance and Update Frequency: As needed

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Bounding Coordinates:

West Bounding Coordinate: 172.46087
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Data Set G-Polygon:

Data Set G-Polygon Outer G-Ring:
Data Set G-Polygon Exclusion G-Ring:

Keywords:

Theme:

Theme Keyword Thesaurus: Boundary Files
Theme Keyword: Boundary Files
Theme Keyword: Spatial Metadata
Theme Keyword: U.S. Census Bureau

Access Constraints: None

Use Constraints: None

Point of Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Browse Graphic:

Browse Graphic File Name: Boundary_File_Metadata_Graphic
Browse Graphic File Description: US_Map
Browse Graphic File Type: JPEG

Data Set Credit: Department of Commerce, U.S. Census Bureau, Geography Division

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Security Classification System: None
Security Classification: Unclassified
Security Handling Description: Unclassified

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Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division
Publication Date: 19990119
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Publication Information:
Publication Place: Washington, D.C.
Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division
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Data Quality Information

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coverage and selected other large metropolitan areas, compare favorable with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on map sheets prepared from the Census TIGER data base as they attempted to traverse every street feature shown on the 1990 census map sheets; the Bureau also made other corrections from updated map sheets supplied by local participants for Census Bureau programs. The locational accuracy of these updates is of unknown quality. In addition to the Federal, State, and local resources, portions of the files may contain information obtained in part from maps and other materials prepared by private companies. Despite the fact the TIGER/Line data is not as high as the coordinate values imply, the six-decimal place precision is useful when producing maps. The precision allows features that are next to each other on the ground to be placed in the correct position, on the map, relative to each other, without overlap.

Lineage:

Source Information:

Source Citation:

Citation Information:

Originator: U.S. Department of Commerce, Bureau of the Census, Geography Division

Publication Date: 19990119

Title: Landview® IV State Boundary Files Metadata

Publication Information:

Publication Place: Washington, D.C.

Publisher: U.S. Department of Commerce, Bureau of the Census, Geography Division

Online Linkage: <http://www.census.gov/geo/www/cob/>

Source Scale Denominator: 5,000,000

Type of Source Media: paper

Source Time Period of Content:

Time Period Information:

Single Date/Time:

Calendar Date: January 1, 1990

Source Citation Abbreviation: TIGER

Source Contribution: Selected geographic and cartographic information (line segments) from the Census TIGER data base.

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Process Date: 1990-1999

Source Produced Citation Abbreviation: TIGER

Process Contact:

Contact Information:

Contact Person Primary:

Spatial Data Organization Information

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Spatial Reference Information

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Horizontal Coordinate System Definition:

Entity and Attribute Information

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Distribution Information

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Distributor:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division

Metadata Reference Information

[Top of Page](#)

Metadata Date: September 12, 2000

Metadata Contact:

Contact Information:

Contact Person Primary:

Contact Person: Department of Commerce, U.S. Census Bureau, Geography Division,
Products and Services Staff

Metadata Standard Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata Access Constraints: None

Metadata Use Constraints: None

Metadata Security Information:

Metadata Security Classification System: Unclassified

Metadata Security Classification: Unclassified

Metadata Security Handling Description: None

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Source: U.S. Census Bureau
Last Revised: *Thursday, 21-Sep-00 11:14:46*

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1990 Census Data Dictionary

The following field names, data types, field lengths, number of decimal places, and field descriptions are common to all levels, with the following exceptions: Data for territories (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Virgin Islands) is limited to PERSONS, FAMILIES, HOUSEHOLDS, all AGE fields, OWNER_OCC, RENTER_OCC, INCOME, AREALAND, AREAWAT, INTPTLAT, INTPTLNG. All other fields are represented in the databases with a -1, and show on the screen as NA (not applicable). Data for the Metropolitan Area level includes all fields except INCOME, HIGHMORT, HIGHRENT, PC_BACHDEG, PC_HIGHSCH, PC_URBAN, PC_RURAL, SAMEHOUSE, and MEDYRBUILT, and also have -1 in those database fields and show NA on the screen. There is no data in the Places database for American Samoa, Guam, and Northern Mariana Islands.

Calculated figures are rounded to the specified decimal place.

PERSONS N 9

Count of Persons in Identified Area. Source: STF1A, P0010001

FAMILIES N 9

Count of Families in Identified Area. Source: STF1A, P0020001

HOUSEHOLDS N 9

Count of Households in Identified Area. Source: STF1A, P0030001

INCOME N 9

Median Household Income Estimate. Source: STF3A, P080A001

AGE_0_4 N 9

Count of Persons 4 years old and younger. Source: STF1A, P0110001 through P0110003

AGE_5_9 N 9

Count of Persons 5 to 9 years old. Source: STF1A, P0110004 through P0110006

AGE_10_19 N 9

Count of Persons 10 to 19 years old. Source: STF1A, P0110007 through P0110014

AGE_20_49 N 9

Count of Persons 20 to 49 years old. Source: STF1A, P0110015 through P0110022

AGE_50_64 N 9

Count of Persons 50 to 64 years old. Source: STF1A, P0110023 through P0110026

AGE_65_UP N 9

Count of Persons 65 years old and older. Source: STF1A, P0110027 through P0110031

WHITE N 9

Count of People Who Reported Race as White. Source: STF1A, P0060001

BLACK N 9

Count of People Who Reported Race as Black. Source: STF1A, P0060002

INDIAN N 9

Count of People Who Reported Race as American Indian, Eskimo, or Aleut. Source: STF1A, P0060003

ASIAN N 9

Count of People Who Reported Race as Asian or Pacific Islander. Source: STF1A, P0060004

OTHER N 9

Count of People Who Reported Race as Other. Source: STF1A, P0060005

HISPANIC N 9

Count of People Who Reported Ethnicity as Hispanic. Source: STF1A, P0080001

OWNER_OCC N 9

Count of Owner-Occupied Households. Source: STF1A, H0030001

RENTER_OCC N 9

Count of Renter-Occupied Households. Source: STF1A, H0030002

PC_0_4 N 5 1

Percentage of Persons 4 years old and younger. Source: calculated, $(AGE_0_4/PERSONS)*100$

PC_5_9 N 5 1

Percentage of Persons 5 to 9 years old. Source: calculated, $(AGE_5_9/PERSONS)*100$

PC_10_19 N 5 1

Percentage of Persons 10 to 19 years old. Source: calculated, $(AGE_10_19/PERSONS)*100$

PC_20_49 N 5 1

Percentage of Persons 20 to 49 years old. Source: calculated, $(AGE_2_49/PERSONS)*100$

PC_50_64 N 5 1

Percentage of Persons 50 to 64 years old. Source: calculated, $(AGE_50_64/PERSONS)*100$

PC_65_UP N 5 1

Percentage of Persons 65 years old and older. Source: calculated, $(AGE_65_UP/PERSONS)*100$

PC_WHITE N 5 1

Percentage of Persons Who Reported Race as White. Source: calculated, $(WHITE/PERSONS)*100$

PC_BLACK N 5 1

Percentage of Persons Who Reported Race as Black. Source: calculated, (BLACK/PERSONS)*100

PC_INDIAN N 5 1

Percentage of Persons Who Reported Race as American Indian, Eskimo, or Aleut. Source: calculated, (INDIAN/PERSONS)*100

PC_ASIAN N 5 1

Percentage of Persons Who Reported Race as Asian/Pacific Islander. Source: calculated, (ASIAN/PERSONS)*100

PC_OTHER N 5 1

Percentage of Persons Who Reported Race as Other. Source: calculated, (OTHER/PERSONS)*100

PC_HISPAN N 5 1

Percentage of Persons Who Reported Ethnicity as Hispanic. Source: calculated, (HISPAN/PERSONS)*100

PC_OWNER N 5 1

Percentage Owner-Occupied Households. Source: calculated, (OWNER_OCC/HOUSEHOLDS)*100

PC_RENTER N 5 1

Percentage Renter-Occupied Households. Source: calculated, (RENTER_OCC/HOUSEHOLDS)*100

AREALAND N 13 3

Land Area of Identified Area. Source: STF1A, AREALAND, converted from sq. km. to sq. mi.

AREAWAT N 13 3

Water Area of Identified Area. Source: STF1A, AREAWAT, converted from sq. km. to sq. mi.

INTPTLAT C 9

Internal Point Latitude (Similar to Centroid) in degrees to six decimal places (decimal point is implied). First digit identifies the hemisphere. A plus sign (+) indicates Northern Hemisphere; a minus sign (-) indicates Southern Hemisphere. Source: STF1A, INTPLAT

INTPTLNG C 10

Internal Point Longitude (Similar to Centroid) in degrees to six decimal places (decimal point is implied). First digit identifies the hemisphere. A plus sign (+) indicates Eastern Hemisphere; a minus sign (-) indicates Western Hemisphere. A point on the 180th meridian is assigned to the Western Hemisphere (-180000000). Source: STF1A, INTPLNG

MINORITY N 9

Count of persons of non-White races, plus White persons of Hispanic Origin. Source: STF1A, P0010001 - P0060001 + P0100006

POVERTY N 9

Estimate of persons for whom poverty status is determined living below the poverty level. Source: STF3A,

P1170013 + P1170014 + P1170015 + P1170016 + P1170017 + P1170018 + P1170019 + P1170020 + P1170021 + P1170022 + P1170023 + P1170024

PC_MINORIT N 5 1

Percentage of the total population who are either non-White, or White Hispanic. Source: STF1A, calculated, (MINORITY/PERSONS)*100

PC_POVERTY N 5 1

Estimated Percentage of persons for whom poverty status is determined living below the poverty level. Source: STF3A, calculated, (POVERTY/sum of P1170001 through P1170012+POVERTY)*100

PC_URBAN N 5 1

Estimated Percentage of all persons living in urban areas. Source: STF3A, calculated, ((P0060001 + P0060002) / P0010001)*100

PC_RURAL N 5 1

Estimated Percentage of all persons living in rural areas. Source: STF3A, calculated, ((P0060003 + P0060004) / P0010001)*100

SCH_ENROL N 5 1

Estimate of persons 3 years and older enrolled in elementary through high school. Source: STF3A, P0540003+P0540004

PC_HIGHSCH N 5 1

Estimated Percentage of persons 18 years and older that graduated from high school. Source: STF3A, ((P0600003+P0600004+P0600005+P0600006+P0600007) / (P0130013+P0130014+P0130015+P0130016+P0130017+P0130018+P0130019+P0130020+P0130021+P0130022+P0130023+P0130024+P0130025+P0130026+P0130027+P0130028+P0130029+P0130030+ P0130031)) * 100

PC_BACHDEG N 5 1

Estimated Percentage of persons 18 years and older that have bachelors degree. Source: STF3A, ((P0600006+P0600007)/(P0130013+P0130014+P0130015+P0130016+P0130017+P0130018+P0130019+P0130020+P0130021+P0130022+P0130023+P0130024+P0130025+P0130026+P0130027+P0130028+P0130029+P0130030+P0130031))*100

SAMEHOUSE N 5 1

Percentage of population 5 years and older that lived in the same house in 1985. Source: STF3A, (P0430001/(P0010001-(P0130001+P0130002+P0130003)))*100

BUILT_1939 N 9

Estimate of Houses built in 1939 or earlier. Source: STF3A, H0250008

MEDYRBUILT N 4

Estimate of Median Year houses built. Source: STF3A, H025A001

HIGHMORTG N 5 1

Estimate of percentage of owner-occupied households where the shelter costs are 30% or more of the income.
Source: STF3A, $((H0580004+H0580005+H0580010+H0580011)/(\text{sum of } H0580001 \text{ through } H0580012))*100$

HIGHRENT N 5 1

Estimate of the percentage of renter-occupied households where the shelter costs are 30% or more of the income.
Source: STF3A, $((H0510004+H0510005+H0510010+H0510011)/(\text{sum of } H0510001 \text{ through } H0510012))*100$

HOUS_UNITS N 9

Estimate of total housing units. Source: STF3A, H0010001

PERSONSTF3 N 9

Estimate of Persons from STF3A file. Source: STF3A, P0010001

TOT_INCOM2 N 13

Estimate of Aggregate Personal Income. Source: STF3A, sum of P1150001 through P1150005

PER CAPITA INCOME N 9

Estimate of Aggregate Personal Income divided by estimate of persons. Calculated field for screen display only.
Source: STF3A, $TOT_INCOM2 / PERSONSTF3$

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U S C E N S U S B U R E A U
Helping You Make Informed Decisions

Census Geographic Glossary

Active governmental unit A governmental unit that has elected or appointed officials, raises revenues, and performs governmental activities (such as enactment of laws, provision of services, and entering into contracts). See also functional status (governmental), functioning governmental unit, inactive governmental unit, nonfunctioning governmental unit.

Address The number or other designation assigned to a housing unit, business establishment, or other structure for purposes of mail delivery, emergency services, and so forth. See also city-style address, general delivery address, post office box address, rural address.

AIANA See American Indian and Alaska Native area.

AIANA code A four-digit number assigned by the Census Bureau to identify AIANAs for data processing and tabulation during the 1990 census; AIANA codes range from 0001 through 4989. A five-digit FIPS code used to identify each AIANA (or portion of an AIANA) within a State. See also Geographic Identification Code Scheme, Federal Information Processing Standards.

Alaska Native For decennial census purposes, includes people who report their race as Aleut or Eskimo as well as those who report race entries such as Alutiiq, Egegik, Pribilovian, Arctic Slope, Inupiat, and Yupik.

Alaska Native Claims Settlement Act (ANCSA) Legislation enacted in 1972 establishing 13 ANRCs to conduct business and nonprofit activities by and for Alaska Natives. See also Alaska Native Regional Corporation, Alaska Native village, Alaska Native village statistical area.

Alaska Native Regional Corporation (ANRC) A corporate entity established by the ANCSA. Twelve ANRCs have specific boundaries that together cover the State of Alaska except for the Annette Islands Reserve (an American Indian reservation). A thirteenth corporation represents Alaska Natives not resident in Alaska who do not identify with any of the other 12 corporations. See also Alaska Native Claims Settlement Act, Alaska Native village, Alaska Native village statistical area.

Alaska Native village (ANV) A type of local governmental unit found in Alaska, with boundaries identified for the Census Bureau by an appropriate authority, that constitutes an association, band, clan, community, group, tribe, or village recognized pursuant to the ANCSA. The Census Bureau tabulated statistical data for ANVs for the 1980 census. ANVs do not have legally defined boundaries. See also Alaska Native Claims Settlement Act, Alaska Native village statistical area.

Alaska Native village statistical area (ANVSA) A 1990 census statistical entity that represents the densely settled extent of an ANV as delineated for the Census Bureau by officials of the ANRC in which the ANVSA is located, or by other appropriate officials, for the purpose of presenting decennial census data. See also Alaska Native Regional Corporation, Alaska Native village.

American Indian A person who identifies herself or himself as being in the racial classification of an American Indian for decennial census purposes.

American Indian and Alaska Native area (AIANA) A Census Bureau term referring to these entity types: American Indian reservation, American Indian subreservation area, American Indian trust land, tribal jurisdictional statistical area, tribal designated statistical area, Alaska Native Regional Corporation, Alaska Native village, and Alaska Native village statistical area.

American Indian reservation An American Indian entity with boundaries established by treaty, statute, and/or executive or court order. Federal and individual State governments have established reservations as territory over which American Indians have governmental jurisdiction. These entities are designated as colonies, communities, pueblos, rancherias, reservations, and reserves. The Federally recognized reservations, their names, and their boundaries are identified for the Census Bureau by the Bureau of Indian Affairs (BIA), an agency in the U.S. Department of the Interior; State governments identify the names and boundaries of State reservations.

American Indian subreservation area An administrative subdivision of an American Indian reservation, known as an area, chapter, community, district, or segment. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservation. Subreservation areas may lie wholly or partially within an American Indian reservation; a few are located entirely outside any reservation (off-reservation). Tribal governments identified and delineated subreservation areas for the Census Bureau for the 1980 decennial census, the only census in which the Census Bureau has tabulated data for these areas.

American Indian trust land Land held in trust by the Federal government for either a tribe (tribal trust land) or an individual member of that tribe (individual trust land). Such land always is associated with a specific Federally recognized reservation or tribe, but may be located on or off the reservation. The Census Bureau recognizes and tabulates data separately only for off-reservation trust lands. The BIA identifies and provides maps of these areas for use by the Census Bureau.

Analysis unit (AU) A small geographic area consisting of one or more contiguous census blocks, created by the Census Bureau to evaluate their land area and population density and to determine if they should be included in a UA area or extended city. See also extended city, urbanized area.

ANCSA See Alaska Native Claims Settlement Act.

Annex To add territory to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action. See also detach.

Annexation The act or process of adding land to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action.

ANRC See Alaska Native Regional Corporation.

ANV See Alaska Native village.

ANVSA See Alaska Native village statistical area.

Area measurement The determination of the extent of surface area, expressed in square miles and/or square kilometers, of land and/or water within a predetermined boundary. Formerly accomplished by measuring on a correctly scaled map, area measurements for the 1990 census were calculated by computer based on the locations of features and boundaries in the TIGER data base.

AU See analysis unit.

Barrio A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. A barrio (or group of barrios) is the area from which municipio officials and the Commonwealth legislature are elected. See also barrio-pueblo, ciudad, county subdivision, nonfunctioning government.

Barrio-pueblo A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. The barrio-pueblo replaces the pueblo reported in decennial censuses prior to 1990. The barrio-pueblo is differentiated from other barrios because it is the historical center and seat of government of its

municipio. See also barrio, county subdivision, pueblo.

BAS See Boundary and Annexation Survey.

BG See block group.

BIA See Bureau of Indian Affairs.

Block See census block.

Block group (BG) A combination of census blocks that is a subdivision of a census tract or BNA. A BG consists of all blocks whose numbers begin with the same digit in a given census tract or BNA; for example, BG 3 within a census tract or BNA includes all blocks numbered between 301 and 399. The BG is the lowest level of geography for which the Census Bureau has tabulated sample data in the 1990 census; it was used to tabulate sample data in the 1970 and 1980 censuses only for those areas that had block numbers. See also block number, enumeration district, sample data.

Block number A three-digit number, which may have a one- or two-letter alphabetic suffix for the 1990 census, that identifies a specific census block on census maps and Summary Tape Files (STFs). Block numbers are not repeated within a census tract or BNA.

Block numbering area (BNA) An area delineated by State officials or (lacking State participation) by the Census Bureau, following Census Bureau guidelines, for the purpose of grouping and numbering decennial census blocks in counties or statistically equivalent entities in which census tracts have not been established. A BNA is equivalent to a census tract in the Census Bureau's geographic hierarchy. See also block numbering area number, census tract.

Block numbering area (BNA) number A four-digit number, possibly with a two-digit suffix, used to identify a BNA within a county. BNA numbers range from 9501 to 9989.

BNA See block numbering area.

Borough In Alaska, the type of governmental unit that is the primary legal subdivision of the organized portion of the State, similar to a county in other States. In New York, a functioning MCD; the boroughs are the five entities, one for each county, that together constitute New York city. In Connecticut, New Jersey, and Pennsylvania, an incorporated place; in New Jersey and Pennsylvania, also a county subdivision. See also census area, census subarea, county subdivision, dependent place, incorporated place, independent place, unorganized borough.

Boundary A line, which may or may not follow a visible feature, that defines the limits of a geographic entity such as a block, BNA, census tract, county, or place. See also nonvisible feature, visible feature.

Boundary and Annexation Survey (BAS) A Census Bureau survey of a specified universe of counties (and legally equivalent entities), MCDs, and incorporated places. The purpose of the BAS is to determine the inventory of legally defined entities and the correct names, political descriptions, and legal boundaries of counties, MCDs, and incorporated places as of January 1 of the year of the survey. The survey also collects specific information on the legal actions that effect boundary changes.

Bureau of Indian Affairs (BIA) The Federal Government agency, located in the Department of the Interior, responsible for the historic and legal relationships between the Federal Government and American Indian communities.

CCD See census county division.

CD See congressional district.

CDP See census designated place.

Census area The statistical equivalent of a county in Alaska. Census areas are delineated cooperatively by the State of Alaska and the Census Bureau for statistical purposes in the portion of Alaska not within an organized borough; they were used first in the 1980 census. See also borough, census subarea, unorganized borough.

Census block The smallest entity for which the Census Bureau collects and tabulates decennial census information; bounded on all sides by visible and nonvisible features shown on Census Bureau maps.

Census county division (CCD) A statistical subdivision of a county, established cooperatively by the Census Bureau and State and local government authorities, for the presentation of decennial census data in 21 States that do not have well-defined MCDs; that is, where MCDs have not been legally established, do not serve a legal or administrative governmental purpose, are not well known, have poorly defined boundaries, and/or have frequent boundary changes. A CCD boundary normally follows visible features and county lines, but may follow corporate boundaries and other nonvisible features in selected instances. See also census subarea, county subdivision, civil division.

Census designated place (CDP) A statistical entity, defined for each decennial census according to Census Bureau guidelines, comprising a densely settled concentration of population that is not within an incorporated place, but is locally identified by a name. CDPs are delineated cooperatively by State and local officials and the Census Bureau, following Census Bureau guidelines. These entities were called unincorporated places for the 1940 through 1970 censuses. See also aldea, comunidad, whole-town CDP, zona urbana.

Census division See division (census geographic).

Census geography A collective term referring to the geographic entities used by the Census Bureau in its data collection and tabulation operations, including their structure, designations, and relationships to one another.

Census subarea (CSA) A statistical division of a borough or census area in Alaska, equivalent to a CCD in other States. Census subareas are delineated cooperatively by officials from Alaska and the Census Bureau. See also borough, census area, census county division.

Census subdistrict A nonfunctioning MCD equivalent in the Virgin Islands of the United States. Census subdistricts were legally defined by the Virgin Islands legislature for the 1980 census.

Census tract A small, relatively permanent statistical subdivision of a county in a metropolitan area (MA) or a selected nonmetropolitan county, delineated by a local committee of census data users (a CSAC) for the purpose of presenting decennial census data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other nonvisible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time the CSAC established them, census tracts usually contain between 2,500 and 8,000 inhabitants. They may be split by any subcounty geographic entity. See also block numbering area.

Census tract number A four-digit number, possibly with a two-digit suffix, used to identify a census tract. Census tract numbers are always unique within a county and usually unique within an MA. Almost all census tract numbers range from 0001 to 9499. Leading zeros are not shown on the Census Bureau's maps or in its printed reports.

Central city The largest city of an MA or, from the 1950 through 1980 censuses, an urbanized area (UA). (Also included as central cities are the CDP of Honolulu in Hawaii, highly urban MCDs in Massachusetts and New Jersey, and several zonas urbanas in Puerto Rico.) Central cities are a basis for establishment of an MA, and prior to the 1990 census, a UA. Additional cities that meet specific criteria also are identified as central city(ies). In a number of instances, only part of a city qualifies as central, because another part of the city extends beyond the

MA boundary. See also central place.

Central place The core incorporated place(s) or CDP(s) of a UA, usually consisting of the most populous place(s) in the UA. If a central place also is defined as an extended city, only the portion of the central place contained within the UA is recognized as the central place. The term was first used for the 1990 census to recognize a CDP as the most populous place in a UA. See also central city, extended city.

Centroid The central location within a specified geographic area. A centroid may fall outside its geographic area, or may be adjusted so that it is located within its geographic area. See also internal point.

Chapter (American Indian) See American Indian subreservation area.

City A type of incorporated place in 49 States and the District of Columbia. In 20 States, some or all cities are not part of any MCD, and the Census Bureau also treats these as county subdivisions, statistically equivalent to MCDs. See also county subdivision, dependent place, incorporated place, independent place.

Ciudad A term used by the government of Puerto Rico before the 1990 census to refer to a group of barrios (if they contained at least 50,000 people) that identified the municipio's center of government. See also barrio.

Civil township A type of MCD with a functioning government. See also county subdivision, functioning government, minor civil division.

CMSA See consolidated metropolitan statistical area.

Colony (American Indian) A type of American Indian reservation.

Commonwealth The legal designation for four States (Kentucky, Massachusetts, Pennsylvania, and Virginia) and two of the Outlying Areas (Puerto Rico and the Northern Mariana Islands). The Census Bureau does not use this term in presenting census data.

Community (American Indian) A type of American Indian reservation. See also American Indian subreservation area.

Comunidad A CDP in Puerto Rico for the 1990 census; formerly called an aldea. See also aldea, census designated place.

Congressional district (CD) An area established by State officials or the courts for the purpose of electing a person to the U.S. House of Representatives. Within each State, these areas must contain, as nearly as possible, an equal number of inhabitants. The number of CDs in each State may change after each decennial census, and the boundaries may be changed more than once during a decade. See also reapportionment, redistricting.

Consolidated city An incorporated place that has combined its governmental functions with a county or subcounty entity but contains one or more other incorporated places that continue to function as local governments within the consolidated government. See also consolidated government, consolidation, merger.

Consolidated government A governmental unit that comprises two or more legal entities that have joined together to form a common government; for example, a consolidated city-county government. The combined governmental units may or may not occupy the same territory. See also consolidated city, consolidation, merger.

Consolidated metropolitan statistical area (CMSA) A geographic entity defined by the Federal Office of Management and Budget (OMB) for use by Federal statistical agencies. An area becomes a CMSA if it meets the requirements to qualify as a metropolitan statistical area (MSA), has a population of 1,000,000 or more, if component parts are recognized as primary metropolitan statistical areas (PMSAs), and local opinion favors the designation. Whole counties are components of CMSAs outside of New England, where they are composed of cities and towns instead. See also metropolitan area, metropolitan statistical area, primary metropolitan statistical

area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

Consolidation A combination of two or more governmental units. The units may be at the same or different levels of government. See also consolidated city, consolidated government, merger.

Conterminous States The coterminous 48 States and the District of Columbia; that is, the United States excluding Alaska and Hawaii.

Contiguous Descriptive of geographic areas that are adjacent to one another, sharing either a common boundary or point. See also adjacent, conjoint.

Coterminous A term descriptive of geographic entities that are contiguous with one another and are contained within the same boundaries; for example, the coterminous 48 States and the District of Columbia. See also conterminous States.

County A type of governmental unit that is the primary legal subdivision of every State except Alaska and Louisiana; also, a type of functioning MCD found in American Samoa. See also borough, county equivalent, parish.

County code A three-digit code assigned by the National Institute of Standards and Technology (NIST) to identify each county and statistically equivalent entity within a State. The NIST assigns the codes based on the alphabetic sequence of county names; it documents these codes in a FIPS publication (FIPS PUB 6). The Census Bureau also documents these codes in its Geographic Identification Code Scheme. The NIST leaves gaps in the numbering system to accommodate new counties or statistically equivalent entities. See also Federal Information Processing Standards, Geographic Identification Code Scheme.

County equivalent A geographic entity that is not legally referred to as a county, but is recognized by the Census Bureau as equivalent to a county for purposes of data presentation. See also borough, census area, district, independent city, island, municipality, municipio, parish, State.

County subdivision A legal or statistical division of a county recognized by the Census Bureau for data presentation. See also barrio, barrio-pueblo, census county division, census subarea, census subdistrict, city, gore, grant, island, location, minor civil division, municipality, plantation, purchase, town, township, unorganized territory, village

Crews of vessels The shipboard populations of U.S. Navy, U.S. Coast Guard, and merchant marine vessels. For a decennial census, they are assigned to the offshore area adjacent to the land area that contains the facility, pier, or dock associated with the ship; this location is assigned a unique census tract or BNA number, with a suffix of .99, and a unique block number of either 199 (for a military vessel) or 299 (for a civilian vessel). This area is more conceptual than geographic, and has no area measurement assigned to it.

CSA See census subarea.

Cultural feature Any type of artificial feature, such as a street, power line, or fence. See also feature, natural feature, visible feature.

Decennial census The census of population and housing, taken by the Census Bureau in years ending in 0 (zero). Article I of the Constitution requires that a census be taken every ten years for the purpose of reapportioning the U.S. House of Representatives. The first census of population occurred in 1790; the census of housing has been conducted since 1940. See also reapportionment, redistricting.

Delineate To draw or identify on a map the specific location of a boundary.

Dependent place An incorporated place or CDP that is legally or statistically part of the county(ies) and/or county subdivision(s) within which it is located; the statistical data for the place also are tabulated as part of the total for the county(ies) and/or county subdivision(s) that these data are part of. There are three types of dependent places: (1) an incorporated place that is legally part of the county(ies) and/or MCD(s) within which it is located, (2) an incorporated place that is legally part of the county(ies) and statistically part of the county subdivision(s) within which it is located, and (3) a CDP that always is statistically part of the county(ies) and county subdivision(s) within which it is located. See also incorporated place, independent place.

District A type of nonfunctioning county equivalent found in American Samoa; any of several types of geographic areas recognized by the Census Bureau. See also American Indian subreservation area, assessment district, election district, magisterial district, municipal district, Outlying Area, parish governing authority district, road district, voting district.

Division (census geographic) A grouping of States within a census geographic region, established by the Census Bureau for the presentation of census data. The current nine divisions (East North Central, East South Central, Middle Atlantic, Mountain, New England, Pacific, South Atlantic, West North Central, and West South Central) are intended to represent relatively homogeneous areas that are subdivisions of the four census geographic regions. See also region (census geographic).

Extended city An incorporated place that contains large, sparsely settled area(s) within its legally defined boundaries; that is, one or more areas with a population density of less than 100 persons per square mile, each of which is at least 5 square miles in extent, which together constitute at least 25 percent of the place's total land area or at least 25 square miles. These low-density areas are classified as rural; the remainder of the extended city is classified as urban. Before the 1990 census, the Census Bureau identified extended cities only within urbanized areas.

Feature Any part of the landscape, whether natural (such as a stream or ridge) or artificial (such as a road or power line). In a geographic context, features are any part of the landscape portrayed on a map, including legal entity boundaries such as city limits or county lines. See also cultural feature, nonvisible feature, visible feature.

Federal Information Processing Standards (FIPS) Any of the standardized systems of numeric and/or alphabetic coding issued by the National Institute of Standards and Technology (NIST), an agency in the U. S. Department of Commerce, for use by the Federal Government and others. Several series of FIPS identify standard geographic codes for States, counties, metropolitan areas, congressional districts, foreign geographic entities, and named populated and related locational entities. Geographic elements to be assigned codes are first alphabetized and then assigned codes serially, generally with systematic gaps that permit additions to the list. The basic geographic code formats published in FIPS publications (FIPS PUBs) are (1) States two digits, (2) counties and county equivalents three digits, (3) metropolitan areas four digits; CMSAs and the former SCSAs also have two-digit codes, (4) congressional districts two digits, (5) foreign geographic entities two or three digits, (6) named populated places, primary county divisions, and other locational entities used to assign codes to places, county subdivisions, and AIANAs five digits. See also FIPS code.

FIPS See Federal Information Processing Standards.

FIPS code One of a series of codes, issued by the NIST, assigned for the purpose of ensuring uniform identification during computer processes involving geographic entities throughout all Federal Government programs and agencies. See also Federal Information Processing Standards.

FIPS PUB See FIPS publication.

FIPS publication (FIPS PUB) One in a series of U.S. Government publications containing a standard set of geocodes for different types of geographic entities. See also Federal Information Processing Standards, FIPS code.

Functional status (governmental) The administrative or legal activities associated with performing the legally prescribed functions of a governmental unit; that is, the administrative or legal entity is functioning or nonfunctioning, and if functioning, is either active or inactive. See also active governmental unit, functioning governmental unit, governmental unit, inactive governmental unit, nonfunctioning governmental unit.

Functioning governmental unit A general-purpose government that has the legal capacity to elect or appoint officials, raise revenues, provide services, and enter into contracts. See also active governmental unit, functional status (governmental), general-purpose government, governmental unit, inactive governmental unit, nonfunctioning governmental unit.

General-purpose government A functioning governmental unit that, through appointed or elected officials, performs many tasks and provides a wide range of services. See also governmental unit.

Geocode A code assigned to identify a geographic entity; to assign an address (such as housing unit, business, industry, farm) to the full set of geographic code(s) applicable to the location of that address on the surface of the Earth. See also Address Coding Guide, GBF/DIME-File, geographic base file, geographic code, TIGER data base, TIGER System.

Geographic Areas Reference Manual (GARM) A geographic reference source developed by the Census Bureau as a guide for local CSACs and other agencies and groups working with the Census Bureau to maintain and improve the geographic areas, concepts, and methods used for the presentation of decennial and economic census data. See also census statistical areas committees, census tract manual.

Geographic code One or more alphanumeric symbols used to identify a legal, administrative, or statistical entity. See also Address Coding Guide, Federal Information Processing Standards, GBF/DIME-File, geocode, geographic base file, geographic data base, TIGER data base, TIGER System.

Geographic entity A geographic unit of any type legal, administrative, or statistical. See also geographic code, geographic data base, geographic hierarchy.

Geographic hierarchy A system of relationships among geographic entities in which each geographic entity (except the smallest one) is subdivided into lower-order units that in turn may be subdivided further. For example, States are subdivided into counties, which are subdivided into county subdivisions. Most 1990 census reports and STFs present data in all or part of the hierarchical sequence: United States, region, division, State, county, county subdivision, place (incorporated/census designated), place part or remainder of county subdivision, census tract/block numbering area (or part), block group (or part), and block. See also geographic code, geographic data base, part.

Geographic Identification Code Scheme (GICS) A detailed listing of the geographic codes, associated names, and attributes that the Census Bureau used to identify the various legal, administrative, and statistical geographic entities of the United States in a specific census. See also administrative entity, legal entity, statistical entity.

GICS See Geographic Identification Code Scheme.

Governmental unit A geographic entity established by legal action, and for the purpose of implementing administrative or governmental functions. Most governmental units have officially recognized boundaries. All area and population of the United States are part of one or more legal units, such as American Indian reservations, States, counties, county subdivisions, and incorporated places. See also active governmental unit, administrative entity, functioning governmental unit, general-purpose government, inactive governmental unit, legal entity, nonfunctioning governmental unit.

Hierarchy (census geographic) See geographic hierarchy.

Historic Areas of Oklahoma The area of the former American Indian reservations that had legally established boundaries during the period 1900 through 1907 but were dissolved during the two- to three-year period preceding the establishment of Oklahoma as a State in 1907. The Historic Areas boundaries were delineated for the Census Bureau by the BIA and excluded all territory in urbanized areas. They were used for tabulating data from the 1980 census. The Census Bureau did not retain the Historic Areas for the 1990 census. See also tribal jurisdiction statistical area.

Inactive governmental unit A governmental unit that is not exercising its legal capacity to have elected or appointed officials; thus, it neither raises revenue nor provides services. An inactive governmental unit is not classified as a government by the Census Bureau. See also active governmental unit, functional status (governmental), functioning governmental unit, governmental unit, nonfunctioning governmental unit.

Incorporated place A type of governmental unit, incorporated under State law as a city, town (except in New England, New York, and Wisconsin), borough (except in Alaska and New York), or village, having legally prescribed limits, powers, and functions. See also dependent place, governmental unit, independent place.

Independent city An incorporated city that is a primary division of a State and legally not part of any county. The Census Bureau treats an independent city as both a county equivalent and MCD equivalent for data tabulation purposes. See also incorporated place.

Independent place An incorporated place that legally is not part of any MCD. The Census Bureau treats independent places as a primary division of a county and an MCD equivalent for data tabulation purposes. See also dependent place, incorporated place.

Indian reservation See American Indian reservation.

Individual trust lands See American Indian trust land.

Internal point A coordinate value for a point that lies within its geographic area; where possible, the internal point also is a centroid. See also centroid.

Island An area of land totally surrounded by water; a type of nonfunctioning county equivalent in American Samoa and the Virgin Islands of the United States; a type of nonfunctioning MCD equivalent in American Samoa.

Joint use area (American Indian) Territory that is administered jointly and/or claimed by two or more American Indian tribes.

Legal entity A geographic entity whose boundaries, name, origin, and political/statistical area description result from charters, laws, treaties, or other administrative or governmental action. In earlier censuses, often referred to as a political area or entity. Legal entities include States, counties, minor civil divisions, American Indian reservations, and Alaska Native Regional Corporations. See also administrative entity, governmental unit, political/statistical area description, statistical entity.

Linear feature A feature, such as a railroad, road, street, stream, pipeline, or boundary that can be represented by a line in a geographic data base. See also TIGER data base, visible feature.

MA See metropolitan area.

MA code The NIST issues numeric FIPS codes for MAs. FIPS codes for MSAs and PMSAs (and NECMAs) are four-digit codes; CMSAs are assigned two-digit FIPS codes. NIST also has made available an alternative set of four-digit codes for CMSAs. See also Federal Information Processing Standards, Geographic Identification Code Scheme.

MCD See minor civil division.

Metropolitan area (MA) A collective term, established by the Federal OMB and used for the first time in 1990, to refer to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, there is an alternative set of areas termed NECMAs. See also metropolitan districts.

Metropolitan statistical area (MSA) A geographic entity, defined by the Federal OMB for use by Federal statistical agencies, based on the concept of a core area with a large population nucleus, plus adjacent communities having a high degree of economic and social integration with that core. Qualification of an MSA requires the presence of a city with 50,000 or more inhabitants, or the presence of a UA and a total population of at least 100,000 (75,000 in New England). The county or counties containing the largest city and surrounding densely settled territory are central counties of the MSA. Additional outlying counties qualify to be included in the MSA by meeting certain other criteria of metropolitan character, such as a specified minimum population density or percentage of the population that is urban. MSAs in New England are defined in terms of cities and towns, following rules concerning commuting and population density. MSAs were first defined and effective June 30, 1983. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

Minor civil division (MCD) A type of governmental unit that is the primary legal subdivision of a county in 28 States, created to govern or administer an area rather than a specific population. The several types of MCDs are identified by a variety of terms, such as town, township, and district, and include both functioning and nonfunctioning governmental units. Many MCDs represent local, general-purpose governmental units, which makes them required areas for presentation of decennial census data. See also census county division, census subarea, county subdivision, incorporated place, independent place, unorganized territory.

Municipality A type of functioning county equivalent found in the Northern Mariana Islands for the 1990 census; a functioning MCD found in the Northern Mariana Islands for the 1980 census and in Palau for the 1990 census; the generic term used for a general-purpose local government, such as an incorporated place or MCD.

Municipio A type of governmental unit that is the primary legal subdivision of Puerto Rico; the Census Bureau treats the municipio as the statistical equivalent of a county.

National Institute of Standards and Technology (NIST) An agency of the U.S. Department of Commerce, the NIST (formerly the National Bureau of Standards) serves as the Nation's science and engineering laboratory for measurement technology and standards research.

Natural feature Any part of the landscape resulting from natural processes (such as a stream or ridge), in contrast to the activity of man. See also cultural feature, feature, visible feature.

NECMA See New England County Metropolitan Area.

New England County Metropolitan Area (NECMA) County-based areas defined by the Federal OMB to provide an alternative to the city- and town-based MSAs and CMSAs in New England. A NECMA includes the county containing the first-named place in an MSA/CMSA title (this county may include the first-named places of other MSAs or CMSAs), and each additional county having at least half its population in the MSA(s)/CMSA(s) whose first-named place is in the county identified in the previous step. NECMAs were first defined in 1975. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area.

NIST See National Institute of Standards and Technology.

Nonfunctioning governmental unit A legally defined governmental unit that does not have appointed or elected officials, raise revenues, or perform general purpose governmental activities such as enacting laws, entering into contracts, or providing services. The term usually refers to an entity established to administer a task assigned to another governmental unit. A nonfunctioning governmental unit is not classified as a government by the Census Bureau. See also active governmental unit, administrative entity, functioning governmental unit, functional status (governmental), governmental unit, inactive governmental unit.

Nonmetropolitan The area and population not located in any MA.

Nonphysical feature See nonvisible feature.

Nonstreet feature A map feature that is not a street, but for which records exist on a map or in a geographic base file. Nonstreet features include pipelines, governmental unit boundaries, power lines, railroads, and water features. See also nonvisible feature, visible feature.

Nonvisible feature A map feature that is not visible, such as a city or county boundary, a property line, a short imaginary extension of a street or road, or a point-to-point line. See also visible feature.

OA See Outlying Area.

Off-reservation A subreservation entity, or tribal or individual trust land, that is located entirely outside the boundaries of an American Indian reservation. See also American Indian subreservation area, American Indian trust land.

Office of Management and Budget (OMB) The OMB (formerly the Bureau of the Budget) is that part of the Executive Branch responsible for evaluating, formulating, and coordinating management procedures and program objectives within and among Federal departments and agencies. It also controls the administration of the Federal budget, while routinely providing the President with recommendations regarding budget proposals and relevant legislative enactments. **OMB** See Office of Management and Budget.

Organized territory Any area that lies within an established legal entity, such as a State, county, MCD, or incorporated place. See also unorganized territory.

Outlying Area An entity, other than a State or the District of Columbia, under the jurisdiction of the United States; for the 1990 census, this included American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, the Virgin Islands of the United States, and several small islands in the Caribbean Sea and the Pacific Ocean. The Census Bureau treated other entities as outlying areas in earlier censuses. The Census Bureau uses Puerto Rico and the Outlying Areas to refer to these areas as a group.

Parish A type of governmental unit that is the primary legal subdivision of Louisiana, similar to a county in other States.

Part That portion of a geographic entity contained within some higherlevel geographic entity, the boundary of which transects the first entity. See also administrative entity, geographic entity, geographic hierarchy, legal entity, statistical entity.

Physical feature See visible feature.

Place A concentration of population either legally bounded as an incorporated place, or identified by the Census Bureau as a CDP. Incorporated places have political/statistical descriptions of borough (except in Alaska and New York), city, town (except in New England, New York, and Wisconsin), or village. See also census designated place, incorporated place, political/statistical area description.

Place code A four-digit code assigned by the Census Bureau to identify each incorporated or census designated

place within a State (the Census Bureau assigns the codes based on the alphabetic sequence of the place names). Also, the five-digit numeric code assigned by the NIST to identify populated places, primary county divisions, and other locational entities within a State. The NIST assigns the codes based on the alphabetic sequence of the entity names; it documents the codes in FIPS PUB 55. See also Geographic Identification Code Scheme, Federal Informa

Census User Note on Sample Estimates for Population and Housing

Census STF3A USER NOTE 2: Clarification of Differences Between 100-Percent Counts and Sample Estimates

Estimated population and housing unit totals based on tabulations from only the sample questionnaires (sample tabulations) may differ from the official counts as tabulated from every census questionnaire (100-percent tabulations). Such differences result, in part, because the sample tabulations are based on information from a sample of households rather than from all households (sampling error). Differences also can occur because the interview situation (length of questionnaire, effect of the interviewer, and so forth) and the processing rules differ somewhat between the 100-percent and sample tabulations. These types of differences are reflected in what is called nonsampling error. For a more detailed description go to

Generalized Boundaries

The boundary files for the mapping of states, counties, block groups, minor civil divisions (MCDs), metropolitan areas (MAs), and congressional districts (CDs) are generalized, which means that the number of lines making up the perimeter of those polygons are reduced, and the polygon shapes are simplified. The purpose of generalizing the boundaries is to reduce the size of the map files, and to speed their display. The "Alaska Native Lands", "Indian_Lands", "Places", and "Census Tracts" layer are not generalized. The "Census Block Grps-generalized" layer is generalized, while the "Census Block Groups" layer is not. The latter resides on the individual county maps.

Details of the generalization process are as follows:

Original boundary coordinates and geocodes were extracted from the Census Bureau's TIGER database -- a system of internal files equivalent to the publicly available TIGER/Line files. Coordinates and geocodes were imported into an ArcInfo® environment where generalization processes were applied to reduce boundary complexity and the size of the files. The generalization process included reduction of coordinate pairs, elimination of small polygons for discontinuous entities, and elimination of small Census tract/BNAs and Block Groups with zero population.

Different degrees of coordinate reduction or thinning were used for different boundary types. State, county, MCD and MA boundaries were aggressively thinned, although lines coincident amongst these separate boundary networks retain a precise nesting quality. The Census Block Group boundaries were moderately thinned, while CD boundaries were only minimally thinned. Geographic relationships amongst boundary types can not be inferred from boundary location, because boundary networks were thinned independently of one another (except for the previously mentioned State, county, MCD and MSA boundaries). After generalization, all boundary networks were clipped against a national coastline. This coastline was also derived from the TIGER database and then generalized within the ArcInfo environment.

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U S C E N S U S B U R E A U
Helping You Make Informed Decisions

Nonsampling Errors

CONFIDENTIALITY OF THE DATA

To maintain confidentiality required by law (Title 13, United States Code), the Bureau of the Census applies a confidentiality edit to assure published data do not disclose information about specific individuals, households, and housing units. The result is that a small amount of uncertainty is introduced into some of the census characteristics to prevent identification of specific individuals, households, or housing units. The edit is controlled so that the counts of total persons, totals by race and American Indian tribe, Hispanic origin, and age 18 years and over are not affected by the confidentiality edit and are published as collected. In addition, total counts for housing units by tenure are not affected by this edit.

The confidentiality edit is conducted by selecting a sample of census households from the 100-percent data internal census files and interchanging its data with other households that have identical characteristics on a set of selected key variables but are in different geographic locations within the same State. To provide more protection for "small areas," a higher sampling rate was used for these areas. The net result of this procedure is that the data user's ability to obtain census data, particularly for small areas and subpopulation groups, has been significantly enhanced.

EDITING OF UNACCEPTABLE DATA

The objective of the processing operation is to produce a set of data that describes the population as accurately and clearly as possible. To meet this objective, questionnaires were edited during field data collection operations for consistency, completeness, and acceptability. Questionnaires were also reviewed by census clerks for omissions, certain inconsistencies, and population coverage. For example, write-in entries such as "Don't know" or "NA" were considered unacceptable. For some district offices, the initial edit was automated; however, for the majority of the district offices, it was performed by clerks. As a result of this operation, a telephone or personal visit follow-up was made to obtain missing information. Potential coverage errors were included in the follow-up, as well as a sample of questionnaires with omissions or inconsistencies.

Subsequent to field operations, remaining incomplete or inconsistent information on the questionnaires was assigned using imputation procedures during the final automated edit of the collected data. Allocations, or computer assignments of acceptable codes in place of unacceptable entries or blanks, are needed most often when an entry for a given item is lacking or when the information reported for a person or housing unit on that item is inconsistent with other information for that same person or housing unit. As in previous censuses, the general procedure for changing unacceptable entries was to assign an entry for a person or housing unit that was consistent with entries for persons or housing units with similar characteristics. The assignment of acceptable codes in place of blanks or unacceptable entries enhances the usefulness of the data.

Another way in which corrections were made during the computer editing process was through substitution; that is, the assignment of a full set of characteristics for a person or housing unit. When there was an indication that a housing unit was occupied, but the questionnaire contained no information for the people within the household, or the occupants were not listed on the questionnaire, a previously accepted household was selected as a substitute, and the full set of characteristics for the substitute was duplicated. The assignment of the full set of housing characteristics occurred when there was no housing information available. If the housing unit was determined to be occupied, the housing characteristics were assigned from a previously processed occupied unit. If the housing unit was vacant, the housing characteristics were assigned from a previously processed vacant unit.

SOURCES OF ERROR

In any large-scale statistical operation, such as the 1990 decennial census, human- and machine-related errors occur. These errors are commonly referred to as nonsampling errors. Such errors include not enumerating every household or every person in the population, not obtaining all required information from the respondents, obtaining incorrect or inconsistent information, and recording information incorrectly. In addition, errors can occur during the field review of the enumerators' work, during clerical handling of the census questionnaires, or during the electronic processing of the questionnaires.

To reduce various types of nonsampling errors, a number of techniques were implemented during the planning, development of the mailing address list, data collection, and data processing activities. Quality assurance methods were used throughout the data collection and processing phases of the census to improve the quality of the data. A reinterview program was designed to minimize the errors in the data collection phase for enumerator-filled questionnaires.

Several coverage improvement programs were implemented during the development of the census address list and census enumeration and processing to minimize undercoverage of the population and housing units. These programs were developed based on experience from the 1980 decennial census and results from the 1990 decennial census testing cycle. In developing and updating the census address list, the Census Bureau used a variety of specialized procedures in different parts of the country.

- For larger urban areas, the Census Bureau purchased and coded address lists, had the United States Postal Service (USPS) review and update this list, and conducted a dependent canvass and update operation. Prior to mailout, local officials were given the opportunity to examine block counts of address listings (local review) and identify possible errors, and the USPS conducted a final review.
- For small cities and suburban and selected rural parts of the country, the Census Bureau created the address list through a listing operation that occurred in 1988 and 1989. For the addresses listed in 1988, the USPS reviewed and updated this list, and the Census Bureau reconciled USPS corrections through a field check; prior to mailout, the USPS conducted a final review of these addresses, and local officials participated in reviewing block counts of address listings.

Coverage improvement programs continued during and after mailout. The Census Bureau (rather than the USPS) delivered census questionnaires in the rural and seasonal housing areas listed in 1989 and in inner-city public housing developments. Computer and clerical edits and telephone and personal visit follow-ups contributed to improved coverage.

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Population Characteristics, Housing Characteristics, and Derived Measures, from STF3 APPENDIX B, "Definitions of Subject Characteristics"

STF3 Appendix B has been divided into the three main categories listed below. Please click on the appropriate link to view area of interest.

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Population Characteristics from STF3 APPENDIX B, "Definitions of Subject Characteristics"

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- [American Indian Tribe \(See Race\)](#)
- [Educational Attainment](#)
- [Families \(See Household Type and Relationship\)](#)
- [Family Composition \(See Household Type and Relationship\)](#)
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- [Family Size \(See Household Type and Relationship\)](#)
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U.S. Census Bureau

Housing Characteristics from STF3 APPENDIX B, "Definitions of Subject Characteristics"

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[Vacant Housing Units \(See Living Quarters\)](#)

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HOUSING CHARACTERISTICS

LIVING QUARTERS

Living quarters are classified as either housing units or group quarters. (For more information, see the discussion of "Group Quarters" under Population Characteristics.) Usually, living quarters are in structures intended for residential use (for example, a one-family home, apartment house, hotel or motel, boarding house, or mobile home). Living quarters also may be in structures intended for nonresidential use (for example, the rooms in a warehouse where a guard lives), as well as in places such as tents, vans, shelters for the homeless, dormitories, barracks, and old railroad cars.

Housing Units--A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms or a single room occupied as separate living quarters or, if vacant, intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from outside the building or through a common hall.

The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If that information cannot be obtained, the criteria are applied to the previous occupants.

Both occupied and vacant housing units are included in the housing unit inventory, except that recreational vehicles, boats, vans, tents, railroad cars, and the like are included only if they are occupied as someone's usual place of residence. Vacant mobile homes are included provided they are intended for occupancy on the site where they stand. Vacant mobile homes on dealers' sales lots, at the factory, or in storage yards are excluded from the housing inventory.

If the living quarters contains nine or more persons unrelated to the householder or person in charge (a total of at least 10 unrelated persons), it is classified as group quarters. If the living quarters contains eight or fewer persons unrelated to the householder or person in charge, it is classified as a housing unit.

Occupied Housing Units--A housing unit is classified as occupied if it is the usual place of residence of the person or group of persons living in it at the time of enumeration, or if the occupants are only temporarily absent; that is, away on vacation or business. If all the persons staying in the unit at the time of the census have their usual place of residence elsewhere, the unit is classified as vacant. A household includes all the persons who occupy a housing unit as their usual place of residence. By definition, the count of occupied housing units for 100-percent tabulations is the same as the count of households or householders. In sample tabulations, the counts of household and occupied housing units may vary slightly because of different sample weighting methods.

Vacant Housing Units--A housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by persons who have a usual residence elsewhere also are classified as vacant. (For more information, see discussion under "Usual Home Elsewhere.") New units not yet occupied are classified as vacant housing units if construction has reached a point where all exterior windows and doors are installed and final usable floors are in place. Vacant units are excluded if they are open to the elements; that is, the roof, walls, windows, and/or doors no longer protect the interior from the elements, or if there is positive evidence (such as a sign on the house or in the block) that the unit is condemned or is to be demolished. Also excluded are quarters being used entirely for nonresidential purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.

Hotels, Motels, Rooming Houses, Etc.--Occupied rooms or suites of rooms in hotels, motels, and similar places are classified as housing units only when occupied by permanent residents; that is, persons who consider the hotel as their usual place of residence or have no usual place of residence elsewhere. Vacant rooms or suites of rooms are classified as housing units only in those hotels, motels, and similar places in which 75 percent or more of the

accommodations are occupied by permanent residents.

If any of the occupants in a rooming or boarding house live and eat separately from others in the building and have direct access, their quarters are classified as separate housing units.

Staff Living Quarters--The living quarters occupied by staff personnel within any group quarters are separate housing units if they satisfy the housing unit criteria of separateness and direct access; otherwise, they are considered group quarters.

Comparability--The first Census of Housing in 1940 established the "dwelling unit" concept. Although the term became "housing unit" and the definition has been modified slightly in succeeding censuses, the 1990 definition is essentially comparable to previous censuses. There was no change in the housing unit definition between 1980 and 1990.

BOARDED-UP STATUS

Boarded-up status was obtained from questionnaire item C2 and was determined for all vacant units. Boarded-up units have windows and doors covered by wood, metal, or masonry to protect the interior and to prevent entry into the building. A single-unit structure, a unit in a multi-unit structure, or an entire multi-unit structure may be boarded-up in this way. For certain census data products, boarded-up units are shown only for units in the "Other vacant" category. A unit classified as "Usual home elsewhere" can never be boarded up. (For more information, see the discussion under "Usual Home Elsewhere.")

CONTRACT RENT

The data on contract rent (also referred to as "rent asked" for vacant units) were obtained from questionnaire item H7a, which was asked at all occupied housing units that were rented for cash rent and all vacant housing units that were for rent at the time of enumeration.

Housing units that are renter occupied without payment of cash rent are shown separately as "No cash rent" in census data products. The unit may be owned by friends or relatives who live elsewhere and who allow occupancy without charge. Rent-free houses or apartments may be provided to compensate caretakers, ministers, tenant farmers, sharecroppers, or others.

Contract rent is the monthly rent agreed to or contracted for, regardless of any furnishings, utilities, fees, meals, or services that may be included. For vacant units, it is the monthly rent asked for the rental unit at the time of enumeration.

If the contract rent includes rent for a business unit or for living quarters occupied by another household, the respondent was instructed to report that part of the rent estimated to be for his or her unit only. Respondents were asked to report rent only for the housing unit enumerated and to exclude any rent paid for additional units or for business premises.

If a renter pays rent to the owner of a condominium or cooperative, and the condominium fee or cooperative carrying charge is also paid by the renter to the owner, the respondent was instructed to include the fee or carrying charge.

If a renter receives payments from lodgers or roomers who are listed as members of the household, the respondent was instructed to report the rent without deduction for any payments received from the lodgers or roomers. The respondent was instructed to report the rent agreed to or contracted for even if paid by someone else such as friends or relatives living elsewhere, or a church or welfare agency. In some tabulations, contract rent is presented for all renter-occupied housing units, as well as specified renter-occupied and vacant-for-rent units. Specified renter-occupied and specified vacant-for-rent units exclude one-family houses on 10 or more acres. (For more information on rent, see the discussion under "Gross Rent.")

Median and Quartile Contract Rent--The median divides the rent distribution into two equal parts. Quartiles divide the rent distribution into four equal parts. In computing median and quartile contract rent, units reported as "No cash rent" are excluded. Median and quartile rent calculations are rounded to the nearest whole dollar. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Contract Rent--To calculate aggregate contract rent, the amount assigned for the category "Less than \$80" is \$50. The amount assigned to the category "\$1,000 or more" is \$1,250. Mean contract rent is rounded to the nearest whole dollar. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Limitation of the Data--In the 1970 and 1980 censuses, contract rent for vacant units had high allocation rates, about 35 percent.

Comparability--Data on this item have been collected since 1930. For 1990, quartiles were added because the range of rents and values in the United States has increased in recent years. Upper and lower quartiles can be used to note large rent and value differences among various geographic areas.

GROSS RENT

Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment. The estimated costs of utilities and fuels are reported on a yearly basis but are converted to monthly figures for the tabulations. Renter units occupied without payment of cash rent are shown separately as "No cash rent" in the tabulations. Gross rent is calculated on a sample basis.

Comparability--Data on gross rent have been collected since 1940 for renter-occupied housing units. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

Gross rent as a percentage of household income in 1989 is a computed ratio of monthly gross rent to monthly household income (total household income in 1989 divided by 12). The ratio was computed separately for each unit and was rounded to the nearest whole percentage. Units for which no cash rent is paid and units occupied by households that reported no income or a net loss in 1989 comprise the category "Not computed." This item is calculated on a sample basis.

KITCHEN FACILITIES

Data on kitchen facilities were obtained from questionnaire item H11, which was asked at both occupied and vacant housing units. A unit has complete kitchen facilities when it has all of the following: (1) an installed sink with piped water, (2) a range, cook top and convection or microwave oven, or cookstove, and (3) a refrigerator. All kitchen facilities must be located in the structure. They need not be in the same room. Portable cooking equipment is not considered a range or cookstove. An ice box is not considered to be a refrigerator.

Comparability--Data on complete kitchen facilities were collected for the first time in 1970. Earlier censuses collected data on individual components, such as kitchen sink and type of refrigeration equipment. In 1970 and 1980, data for kitchen facilities were shown only for year-round units. In 1990, data are shown for all housing units.

PERSONS IN UNIT

This item is based on the 100-percent count of persons in occupied housing units. All persons occupying the housing unit are counted, including the householder, occupants related to the householder, and lodgers, roomers, boarders, and so forth.

The data on "persons in unit" show the number of housing units occupied by the specified number of persons. The phrase "persons in unit" is used for housing tabulations, "persons in households" for population items. Figures for "persons in unit" match those for "persons in household" for 100-percent data products. In sample products, they may differ because of the weighting process.

Median Persons in Unit--In computing median persons in unit, a whole number is used as the midpoint of an interval; thus, a unit with 4 persons is treated as an interval ranging from 3.5 to 4.5 persons. Median persons is rounded to the nearest hundredth. (For more information on medians, see the discussion under "Derived Measures.")

Persons in Occupied Housing Units--This is the total population minus those persons living in group quarters. "Persons per occupied housing unit" is computed by dividing the population living in housing units by the number of occupied housing units.

POVERTY STATUS OF HOUSEHOLDS IN 1989

The data on poverty status of households were derived from answers to the income questions. The income items were asked on a sample basis. Households are classified below the poverty level when the total 1989 income of the family or of the nonfamily householder is below the appropriate poverty threshold. The income of persons living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the household size in determining the appropriate poverty threshold. The poverty thresholds vary depending upon three criteria: size of family, number of children, and age of the family householder or unrelated individual for one and two-persons households. (For more information, see the discussion of "Poverty Status in 1989" and "Income in 1989" under Population Characteristics.)

SELECTED MONTHLY OWNER COSTS

The data on selected monthly owner costs were obtained from questionnaire items H20 through H26 for a sample of owner-occupied one-family houses, condominiums, and mobile homes. Selected monthly owner costs is the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second or junior mortgages, and home equity loans); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees) for mobile homes.

In certain tabulations, selected monthly owner costs are presented separately for specified owner-occupied housing units (owner-occupied one-family houses on fewer than 10 acres without a business or medical office on the property), owner-occupied condominiums, and owner-occupied mobile homes. Data usually are shown separately for units "with a mortgage" and for units "not mortgaged."

Median Selected Monthly Owner Costs--This measure is rounded to the nearest whole dollar.

Comparability--The components of selected monthly owner costs were collected for the first time in 1980. The 1990 tabulations of selected monthly owner costs for specified owner-occupied housing units are virtually identical to 1980, the primary difference was the amounts of the first and second mortgages were collected in separate questions in 1990, while the amounts were collected in a single question in 1980. The component parts of the item were tabulated for mobile homes and condominiums for the first time in 1990. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

The information on selected monthly owner costs as a percentage of household income in 1989 is the computed ratio of selected monthly owner costs to monthly household income in 1989. The ratio was computed separately for each unit and rounded to the nearest whole percentage. The data are tabulated separately for specified owner-occupied units, condominiums, and mobile homes.

Separate distributions are often shown for units "with a mortgage" and for units "not mortgaged." Units occupied by households reporting no income or a net loss in 1989 are included in the "not computed" category. (For more information, see the discussion under "Selected Monthly Owner Costs.")

Comparability--The components of selected monthly owner costs were collected for the first time in 1980. The tabulations of "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for specified owner-occupied housing units are comparable to 1980.

TENURE

The data for tenure were obtained from questionnaire item H4, which was asked at all occupied housing units. All occupied housing units are classified as either owner occupied or renter occupied.

Owner Occupied--A housing unit is owner occupied if the owner or co-owner lives in the unit even if it is mortgaged or not fully paid for. The owner or co-owner must live in the unit and usually is the person listed in column 1 of the questionnaire. The unit is "Owned by you or someone in this household with a mortgage or loan" if it is being purchased with a mortgage or some other debt arrangement such as a deed of trust, trust deed, contract to purchase, land contract, or purchase agreement. The unit is also considered owned with a mortgage if it is built on leased land and there is a mortgage on the unit.

A housing unit is "Owned by you or someone in this household free and clear (without a mortgage)" if there is no mortgage or other similar debt on the house, apartment, or mobile home including units built on leased land if the unit is owned outright without a mortgage. Although owner-occupied units are divided between mortgaged and owned free and clear on the questionnaire, census data products containing 100-percent data show only total owner-occupied counts. More extensive mortgage information was collected on the long-form questionnaire and are shown in census products containing sample data. (For more information, see the discussion under "Mortgage Status.")

Renter Occupied--All occupied housing units which are not owner occupied, whether they are rented for cash rent or occupied without payment of cash rent, are classified as renter occupied. "No cash rent" units are separately identified in the rent tabulations. Such units are generally provided free by friends or relatives or in exchange for services such as resident manager, caretaker, minister, or tenant farmer. Housing units on military bases also are classified in the "No cash rent" category. "Rented for cash rent" includes units in continuing care, sometimes called life care arrangements. These arrangements usually involve a contract between one or more individuals and a health services provider guaranteeing the individual shelter, usually a house or apartment, and services, such as meals or transportation to shopping or recreation.

Comparability--Data on tenure have been collected since 1890. In 1970, the question on tenure also included a category for condominium and cooperative ownership. In 1980, condominium units and cooperatives were dropped from the tenure item, and since 1980, only condominium units are identified in a separate question.

For 1990, the response categories were expanded to allow the respondent to report whether the unit was owned with a mortgage or free and clear (without a mortgage). The distinction between units owned with a mortgage and units owned free and clear was added in 1990 to improve the count of owner-occupied units. Research after the 1980 census indicated some respondents did not consider their units owned if they had a mortgage.

USUAL HOME ELSEWHERE

The data for usual home elsewhere are obtained from questionnaire item B, which was completed by census employees. A housing unit temporarily occupied at the time of enumeration entirely by persons with a usual residence elsewhere is classified as vacant. The occupants are classified as having a "Usual home elsewhere" and are counted at the address of their usual place of residence. Typical examples are people in a vacation home, persons renting living quarters temporarily for work, and migrant workers.

Limitation of the Data--Evidence from previous censuses suggests that in some areas enumerators marked units as "vacant--usual home elsewhere" when they should have marked "vacant--regular." **Comparability**--Data for usual home elsewhere was tabulated for the first time in 1980.

VACANCY STATUS

The data on vacancy status were obtained from questionnaire item C1, which was completed by census enumerators. Vacancy status and other characteristics of vacant units were determined by enumerators obtaining information from landlords, owners, neighbors, rental agents, and others. Vacant units are subdivided according to their housing market classification as follows:

For Rent--These are vacant units offered "for rent," and vacant units offered either "for rent" or "for sale."

For Sale Only--These are vacant units being offered "for sale only," including units in cooperatives and condominium projects if the individual units are offered "for sale only."

Rented or Sold, Not Occupied--If any money rent has been paid or agreed upon but the new renter has not moved in as of the date of enumeration, or if the unit has recently been sold but the new owner has not yet moved in, the vacant unit is classified as "rented or sold, not occupied."

For Seasonal, Recreational, or Occasional Use--These are vacant units used or intended for use only in certain seasons or for weekend or other occasional use throughout the year.

Seasonal units include those used for summer or winter sports or recreation, such as beach cottages and hunting cabins. Seasonal units also may include quarters for such workers as herders and loggers. Interval ownership units, sometimes called shared-ownership or time-sharing condominiums, also are included here.

For Migrant Workers--These include vacant units intended for occupancy by migratory workers employed in farm work during the crop season. (Work in a cannery, a freezer plant, or a food-processing plant is not farm work.)

Other Vacant--If a vacant unit does not fall into any of the classifications specified above, it is classified as "other vacant." For example, this category includes units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.

Homeowner Vacancy Rate--This is the percentage relationship between the number of vacant units for sale and the total homeowner inventory. It is computed by dividing the number of vacant units for sale only by the sum of the owner-occupied units and the number of vacant units that are for sale only.

Rental Vacancy Rate--This is the percentage relationship of the number of vacant units for rent to the total rental inventory. It is computed by dividing the number of vacant units for rent by the sum of the renter-occupied units and the number of vacant units for rent.

Comparability--Data on vacancy status have been collected since 1940. For 1990, the category, "seasonal/recreational/occasional use" combined vacant units classified in 1980 as "seasonal or migratory" and "held for occasional use." Also, in 1970 and 1980, housing characteristics generally were presented only for

year-round units. In 1990, housing characteristics are shown for all housing units.

VALUE

The data on value (also referred to as "price asked" for vacant units) were obtained from questionnaire item H6, which was asked at housing units that were owned, being bought, or vacant for sale at the time of enumeration. Value is the respondent's estimate of how much the property (house and lot, mobile home and lot, or condominium unit) would sell for if it were for sale. If the house or mobile home was owned or being bought, but the land on which it sits was not, the respondent was asked to estimate the combined value of the house or mobile home and the land. For vacant units, value was the price asked for the property.

Value was tabulated separately for all owner-occupied and vacant-for-sale housing units, owner-occupied and vacant-for-sale mobile homes or trailers, and specified owner-occupied and specified vacant-for-sale housing units. Specified owner-occupied and specified vacant-for-sale housing units include only one-family houses on fewer than 10 acres without a business or medical office on the property. The data for "specified units" exclude mobile homes, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings.

Median and Quartile Value--The median divides the value distribution into two equal parts. Quartiles divide the value distribution into four equal parts. These measures are rounded to the nearest hundred dollars. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Value--To calculate aggregate value, the amount assigned for the category "Less than \$10,000" is \$9,000. The amount assigned to the category "\$500,000 or more" is \$600,000. Mean value is rounded to the nearest hundred dollars. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Comparability--In 1980, value was asked only at owner-occupied or vacant-for-sale one-family houses on fewer than 10 acres with no business or medical office on the property and at all owner-occupied or vacant-for-sale condominium housing units. Mobile homes were excluded. Value data were presented for specified owner-occupied housing units, specified vacant-for-sale-only housing units, and owner-occupied condominium housing units.

In 1990, the question was asked at all owner-occupied or vacant-for-sale-only housing units with no exclusions. Data presented for specified owner-occupied and specified vacant-for-sale-only housing units will include one-family condominium houses but not condominiums in multi-unit structures since condominium units are now identified only in long-form questionnaires.

For 1990, quartiles have been added because the range of values and rents in the United States has increased in recent years. Upper and lower quartiles can be used to note large value and rent differences among various geographic areas.

YEAR STRUCTURE BUILT

The data on year structure built were obtained from questionnaire item H17, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Data on year structure built refer to when the building was first constructed, not when it was remodeled, added to, or converted. For housing units under construction that met the housing unit definition--that is, all exterior windows, doors, and final usable floors were in place--the category "1989 or March 1990" was used. For a houseboat or a mobile home or trailer, the manufacturer's model year was assumed to be the year built. The figures shown in census data products relate to the number of units built during the specified periods that were still in existence at the time of enumeration.

Median Year Structure Built--The median divides the distribution into two equal parts. The median is rounded

to the nearest calendar year. Median age of housing can be obtained by subtracting median year structure built from 1990. For example, if the median year structure built is 1957, the median age of housing in that area is 33 years (1990 minus 1957).

Limitation of the Data--Data on year structure built are more susceptible to errors of response and nonreporting than data on many other items because respondents must rely on their memory or on estimates by persons who have lived in the neighborhood a long time. Available evidence indicates there is underreporting in the older-year-structure- builtcategories, especially "Built in 1939 or earlier." The introduction of the "Don't know" category (see the discussion on "Comparability") may have resulted in relatively higher allocation rates. Data users should refer to the discussion in Appendix C, Accuracy of the Data, and to the allocation tables.

Comparability--Data on year structure built were collected for the first time in the 1940 census. Since then, the response categories have been modified to accommodate the 10-year period between each census. In 1990, the category, "Don't Know," was added in an effort to minimize the response error mentioned in the paragraph above on limitation of the data.

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Derived Measures from STF3 APPENDIX B, "Definitions of Subject Characteristics"

DERIVED MEASURES

[Interpolation](#) [Mean](#) [Median](#) [Percentages, Rates, and Ratios](#) [Quartile](#)

DERIVED MEASURES

Census data products include various derived measures, such as medians, means, and percentages, as well as certain rates and ratios. Derived measures that round to less than 0.1 are not shown but indicated as zero. In printed reports, zero is indicated by a dash (-).

Interpolation

Interpolation frequently is used in calculating medians or quartiles based on interval data and in approximating standard errors from tables. Linear interpolation is used to estimate values of a function between two known values. "Pareto interpolation" is an alternative to linear interpolation. It is used by the Census Bureau in calculating median income within intervals wider than \$2,500. In Pareto interpolation, the median is derived by interpolating between the logarithms of the upper and lower income limits of the median category.

Mean

This measure represents an arithmetic average of a set of values. It is derived by dividing the sum of a group of numerical items (or aggregate) by the total number of items. Aggregates are used in computing mean values. For example, mean family income is obtained by dividing the aggregate of all income reported by persons in families by the total number of families. (Additional information on means and aggregates is included in the separate explanations of many population and housing subjects.)

Median

This measure represents the middle value in a distribution. The median divides the total frequency into two equal parts: one-half of the cases fall below the median and one-half of the cases exceed the median. The median is computed on the basis of the distribution as tabulated, which is sometimes more detailed than the distribution shown in specific census publications and other data products.

In reports, if the median falls within the upper interval of the tabulation distribution, the median is shown as the initial value of the interval followed by a plus sign (+); if within the lower interval, the median is shown as the upper value of the category followed by a minus sign (-). For summary tape files, if the median falls within the upper or lower interval, it is set to a specified value. (Additional information on medians is included in the separate explanations of many population and housing subjects.)

Percentages, Rates, and Ratios

These measures are frequently presented in census products to compare two numbers or two sets of measurements. These comparisons are made in two ways: (1) subtraction, which provides an absolute measure of the difference between two items, and (2) the quotient of two numbers, which provides a relative measure of

difference.

Quartile

This measure divides a distribution into four equal parts. The first quartile (or lower quartile) is the value that defines the upper limit of the lowest one-quarter of the cases. The second quartile is the median. The third quartile (or upper quartile) defines the lower limit of the upper one-quarter of the cases in the distribution. The difference between the upper and lower quartiles is called the interquartile range. This interquartile range is less affected by wide variations than is the mean. Quartiles are presented for certain financial characteristics such as housing value and rent.

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ZIP Codes®

The ZIP Code file in LandView® IV was prepared by the Bureau of Census from the U.S. Postal Service (USPS) City-State file (November, 1999). This file contains all 5-digit ZIP Codes defined as of November 1, 1999 and the city, county and Post Office names associated with them. (Note: For ZIP Codes that cross county boundaries, the Post Office file assigns that ZIP Code to just one of the counties rather than to each county.)

The Census Bureau then determined a geographic coordinate (latitude and longitude) for each ZIP Code in the City-State file by processing it against the Bureau's internal TIGER database for the state and county specified for the ZIP Code. (Before processing the file against TIGER, the Census Bureau excluded overseas military APO/FPO records from the file.) For those records where the ZIP Code could not be located in the TIGER database, the county internal point (in many cases the geographic centroid) was assigned to the ZIP Code. This typically occurred on records containing either a "P" or "U" in the ZIP_CLASS field.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file ZIP_CODE.DBF are as follows:

ZIP_CODE C 5

The 5-digit zip code.

LATITUDE C 10

Latitude expressed as a signed integer with six decimal places. Negative numbers are in the southern hemisphere.

LONGITUDE C 11

Longitude expressed as a signed integer with six decimal places. Negative numbers are in the eastern hemisphere.

ZIP_CLASS C 1

Zip Code classification. Values are:

M = APO/FPO Military Zip

P = P.O. Box

U = Unique Zip, assigned to large corporations or government agencies

Blank = Non-unique Zip, shared by numerous residences and businesses

NAME C 28

USPS Post Office name.

STATE_CODE C 2

Federal Information Processing Standards (FIPS) state code.

COUNTY_CD C 3

FIPS county code.

ZIP Code is a registered trademark of the U.S. Postal Service.

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The EPA Database

● [Interested in Metadata?](#)

The Environmental Protection Agency's (EPA) database contains some of the data available from the EPA's Internet Envirofacts Warehouse databases. The [Envirofacts Warehouse](#) was created so that EPA data would be easily accessible to the public. LandView® IV contains extracts from the following Envirofacts Warehouse databases: Air, Hazardous Waste, Superfund, Toxic Releases, and Water Permits. The data used to create these files were extracted from Envirofacts in March, 2000.

- For Air facilities, LandView includes major dischargers (those with Class Code "A" or "A1").
- For Hazardous Waste facilities, Large Quantity Generators and Treatment/Storage/Disposal (TSD) facilities are included.
- For Superfund, all active sites are included.
- For Toxic Releases, all facilities from reporting year 1997 are included.
- For Water Permits, all active sites are included.

For questions on EPA data please see the [Envirofacts web site](#) .

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USGS Databases

● **Interested in Metadata?** [Geographic Names Information System \(GNIS\)](#) [National Atlas](#)

Data for the U.S. Geological Survey (USGS) database came from the Geographic Names Information System (GNIS) and the National Atlas of the United States®.

Geographic Names Information System (GNIS) Features

The GNIS contains geographic names for all known places, features, and areas in the United States that are identified by a proper name. Each feature is located by State, county, and geographic coordinates; and referenced to the appropriate 1:24,000-scale U.S. Geological Survey (USGS) topographic map in which it is shown. The feature class terms and abbreviations currently consist of nine or fewer letters and were chosen for computer search and retrieval purposes. They do not necessarily represent terminology for the identification of all kinds of cultural and natural features. Please refer to [APPENDIX C](#) to view the Geographic Names Information System (GNIS) feature class definitions.

Selected Federal Lands from the USGS National Atlas

Selected Federal Lands were taken from the USGS National Atlas of the United States. The National Atlas is intended to provide a comprehensive, map-like view into the enormous wealth of data collected by the Federal Government. Information on the Federal Lands included in LandView® IV as well as metadata can be found on the [National Atlas](#) site.

Individual Feature Layers				
Airports	Cemeteries	Churches	Hospitals	Populated Places
Schools				

Land Features				
Arch	Bench	Flat	Levee	Slope
Area	Bend	Gap	Pillar	Valley
Bar	Cape	Island	Plain	Woods
Basin	Cliff	Isthmus	Range	
Beach	Crater	Lava	Ridge	

Man-Made Features				
Dam	Locale	Mine	Oilfield	Tower
Well				

Miscellaneous Features				
Forest	Military (historical only)	Park	Post Office	Reserve

Transportation Features			
Bridge	Crossing	Trail	Tunnel

Water Features				
Arroyo	Falls	Gut	Rapids	Spring
Bay	Geyser	Harbor	Reservoir	Stream
Canal	Glacier	Lake	Sea	Swamp
Channel				

For questions or comments regarding the Geographic Information Names System (GNIS) contact:
gnis_manager@usgs.gov

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Internet Access

LandView® IV is the first version of the LandView product to offer selected functions that connect to various web sites where users can access more up-to-date information from the Census Bureau, the Environmental Protection Agency and the United States Geological Survey.

The following functions require both Internet access as well as an Internet browser.

Selecting the 1990 Census Data, EPA Data, USGS Data buttons from the LandView IV Startup menu will open the respective agency's database. From each database screen, there will be a button connecting to that agency's web site.

The Online Address Tract Matching button connects you to the Census Bureau web site that provide links to sites that allow a quick lookup of a census tract for a street address.

The Help button gives the user the option to either access the LandView Help file stored on the user's hard disc in Adobe Acrobat format or to connect to the LandView IV Help web site which will be most current.

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MARPLOT® Sharing Menu

The MARPLOT® Sharing menu contains links to a number of important features in the LandView® IV program. Some of these features are:

- [Get Info](#)
- [Estimate Population at current map pointer](#)
- [Identify Census Areas at current map pointer](#)

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Get Info

To view database information on selected map objects, choose "Get Info" from the Sharing menu in MARPLOT®. (A shortcut for "Get Info" is to press Ctrl+I.) LandView® will come forward and provide you with information on the object you have selected. If there is no information for the object you have selected LandView will let you know.

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Population Estimator

This LandView® IV program function produces a total population and housing unit count for a specified radius.

The estimate is created by tallying 1990 census block data for those block centroids (i.e. calculated centers) whose coordinates fall within the circle defined by the radius. The demographic data is based upon the 1990 Census of Population and Housing STF 1B data involving over 5 million census blocks nationwide. (Although there were over 7 million blocks for the 1990 Census, we have included only the 5 million census blocks that contain population or housing units.)

Please note that block centroids shown on the MARPLOT® map for the continental United States were computed under North American Datum 27 (NADS 27) for the 1990 Census while the features shown in the TIGER/Line® 1998 layer and Census Demographic layers were computed under NADS 83. Because of the coordinate differences between datums, the block centroids may appear off center when compared to these features. Alaska and Hawaii and other outlying areas outside of the continental United States are based upon local datums.

After the 1990 Census, Geography division found some additional problems with positional accuracy of the source materials used to create the maps for Alaska. Subsequent to computation of the block centroids, roads and other features were adjusted to compensate for these problems. For these reasons, the block centroids in Alaska may appear off center.

You start this function by clicking the Population Estimator button on the LandView Startup or clicking Sharing-LandView-Estimate Population around current map pointer. Then follow the four steps provided in the LandView 1990 Census Population Estimator.

After entering the radius and calculating the population and housing data, the Show this radius on map button will create a red shaded map object on the map. This shaded area will remain on the map until the user clicks the Clear all fields button or calculates a new population radius from a different for a different coordinate.

If you wish to preserve these objects, you can do so by creating a user layer. Unlocking the layer allows you to copy the object to the layer and save it. For further details on how to do this check the MARPLOT Help and Users manual.

Although this function can be used for much larger radii, processing time is significantly increased as the size of the search circle increases. For these larger radii, users should use the MARPLOT List - Search commands to create a search collection census tracts or counties. After creating the "Search Collection", the user can then have MARPLOT show all the found objects in the "Search Collection" by clicking the Show All on map button. The user would then and then click on the Sharing - LandView- Get Info menu item which then opens the appropriate LandView database and creates a subset of records marked on the map. The user can then click on File-Export Records from the LandView menu to copy the selected database records to a spreadsheet or database file for further analysis.

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Identify Census Areas at Current Map Pointer

The "Identify Census Areas at current map pointer" is a function that will identify the state, county, tract/bna, and block group at the location of the current map pointer. This feature is available from the Sharing menu in MARPLOT®.

The system will first attempt to locate a census block group polygon at that location. The block group identification number has within it the identification for state, county, and tract/bna. If a block group polygon cannot be found at that location, the system will attempt to locate a census tract/bna polygon. In LandView®, tract/bna polygons are generalized (i.e., some node points that make up the boundary are removed to make them smaller, and faster to display). Therefore, if the current map pointer is near the boundary between two or more tract/bnas, the imprecision of the boundaries may cause you to obtain an invalid result.

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Summarize

The "Summarize" button is located on screens within the Census Areas database. This button is active whenever a ["Query"](#) has been performed. Its purpose is to sum numeric fields to produce totals for a selected subset of records. It is also activated when you have selected map objects from MARPLOT®, and have chosen "Get Info" from the "LandView" section of the "Sharing Menu".

The following are several examples of how the "Summarize" function can be used:

You can do a query for counties that have less than 5,000 persons and then click the "Summarize" button to get the total number of persons, by race and age, living in those counties.

You could also select a collection of census tracts from MARPLOT and then summarize to get the population statistics totals for all the people living in the selected area.

To do this, first highlight the tracts that you are interested in in MARPLOT. Then choose "Get Info" from the "LandView" section of the "Sharing Menu", this will take you into the LandView program. In the LandView program you will be under the Tract/BNA section of the Census Areas database. In the left-hand column you will see "Records" and "Found". Under "Found" the number of tracts that you highlighted will appear. Click on "Summarize" to obtain information for these tracts.

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The FileMaker® Interface

LandView® IV was created in FileMaker Developer 5. The Introduction to FileMaker section of the Help will provide you with a brief overview of the FileMaker interface. We have also highlighted other FileMaker commands that we support in the LandView program. However, please note that you may come across some FileMaker command modes that are highlighted in LandView, but are not fully implemented in the program. One example of this is the **Import Records** command which can be found under the **File** menu.

- [Export Records](#)
- [Introduction to the FileMaker Interface](#)
- [Printing](#)

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Export Records

The **Export Records** function can be found under the **File** menu in the LandView database. It will allow you to export records in the currently opened file to a variety of formats including: DBF Files, HTML Table Files, FileMaker Pro Runtime Files, Tab-Separated Text Files, and Comma-Separated Text Files. If you have performed a [Query](#) then only those records found will be copied.

For example you may have performed a query on how many tracts in New Castle County, Delaware have less than 2,000 people. To export the 20 records that were found you would:

1. Choose **File** menu - **Export Records**.
2. In the *Export Records to File* dialog box, type a name and select a location for the file. Important -If another file with the same name already exists in the same location, this new file replaces the existing file.
3. Choose a file type from the *Save as type* list (Windows) or the *Type* list (Mac OS), then click **Save**. Use a file format supported by the application in which you plan to use the exported data.
4. In the *Specify Field Order for Export* dialog box, indicate how you want FileMaker Pro to export the data.
5. To:

Include a field in the export

Double-click the field name to move it to the *Field Order* list. To export all fields, click **Move All**.

Include a related field in the export

Choose a relationship from the relationship list, then move fields to the *Field Order* list. You can include related fields before, after, or between fields in the master file.

Prevent data in a field from being exported

Select a field in the *Field Order* list, then click **Clear**. To move all fields out of the list, click **Clear All**.

Change the export order of the fields

In the *Field Order* list, point to the double arrow to the left of the field name and drag it up or down.

Use a different character set in the exported file (Windows only)

Choose an item from the *Character Set* drop-down list.

6. Select an option for formatting the exported data:

Click *Don't format output* to export data exactly as it is typed in the field (for example, export 3.7 even if the field is formatted to display on the current layout as \$3.70).

Click *Format output using current layout* to use number, date, and time field formatting as specified for the included fields on the current layout. Symbols and other non-numeric values are exported as text. (For example, export \$3.70 if the field is formatted to display this way on the current layout, even if the field actually holds 3.7.) You can't select this option for SYLK, DBF, or DIF formats.

7. Click **Export**.

To use an exported file: Open an application that can read the file format, and then open the file.

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Introduction to FileMaker®

The purpose of this section of the help is to provide an introduction to the FileMaker interface. We have highlighted many of the key features that you will come across in the LandView® IV program.



Status Bar Icons


On the left-hand bottom of the screen you will find a button that says **Browse** with a prompt arrow as well as four different icons (Figure 1).



Figure 1

The farthest icon on the left is the Zoom percentage box , which shows the current magnification.

The next two buttons over are the Zoom in and Zoom out features. The Zoom in icon  allows you to shrink your view while the Zoom out icon  allows you to magnify your view. You will notice as you use these features that the Zoom percentage box will increase or decrease.

The fourth icon from the left is the Hide/Show icon . This allows the user to hide or show the status area on the left-hand side of the page.

Mode Pop-up Box

The Mode pop-up box (Figure 1) can be accessed by clicking on the pop-up button that says **Browse** at the lower left-hand area of the screen. You can move from one mode to another by clicking on the mode you are interested in.

The **Browse** mode (Figure 1) is the default in the FileMaker interface. This is the mode that will be used the majority of the time if you are working with an existing database. Browse allows the user to view, sort, and omit records.

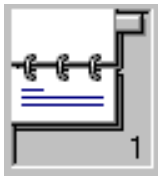
Preview mode (Figure 1) allows the user to view their document before printing.

The **Find** mode (Figure 2) is useful for finding individual records or groups of records in a database. The user can search for records by inputting text or mathematical values, using the **Symbols** button.



Figure 2

Mode Status Area



The Flipbook icon lets the user flip forwards or backwards through the database by clicking on the top page or the bottom page. To move more quickly through a database, drag the **Record Bookmark** up or down (Figure 3).

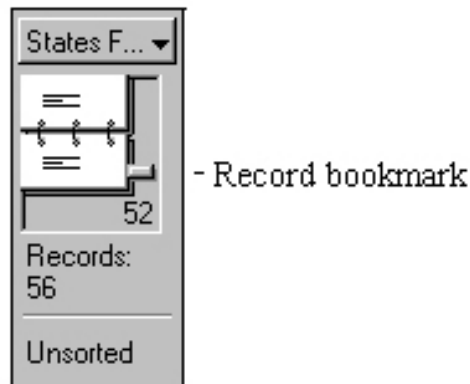


Figure 3

The **Layout mode** on top of the Flipbook (Figure 4) will allow you to choose which view you would like to see the records in. Records may be viewed in **Form View**, **List View**, or **Print View**. Form View allows you to look at an individual record while List View shows a list of records. Print View allows you preview the record before you print it.

If you are interested in looking at a record in List View, there is also a button labeled **Switch to List View** which can be found on various Census geography screens in the Census database and screens throughout the EPA and USGS databases.

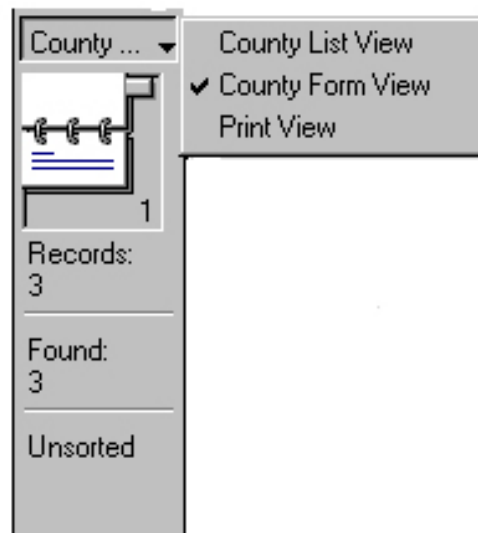


Figure 4

In the **Mode Status Area** you will find the word **Records**. This will let you know the total number of records or the current record you are on if you are searching through a database. If you have performed a [Query](#), under Records will be the word **Found**. This will let you know how many records were found for the query you

entered.

The **Sort** command can be found under the **Records** menu in LandView. The Sort command allows you to change the order in which you browse or print records. Depending on whether you have sorted any records, the Status Area will either say *Sorted* or *Unsorted* (Figure 4).

A few other things to take note of when interacting with the new interface are:

- When you are done working with a screen in LandView you will find that there is no way to "close" out of it. You can either minimize the screen or move on to another screen of your choice and the system will simply minimize the previous screen for you.



- The **Main Menu** button is located on screens throughout the LandView program. Pressing this button will take you out of the current screen you are in and send you to the *LandView Startup* menu.

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Printing

The **Print Setup** option under the **File** menu invokes the standard printer setup dialog for your Windows or Macintosh system. This dialog is not part of the LandView software. Figure 1 provides a dialog for Windows OS.

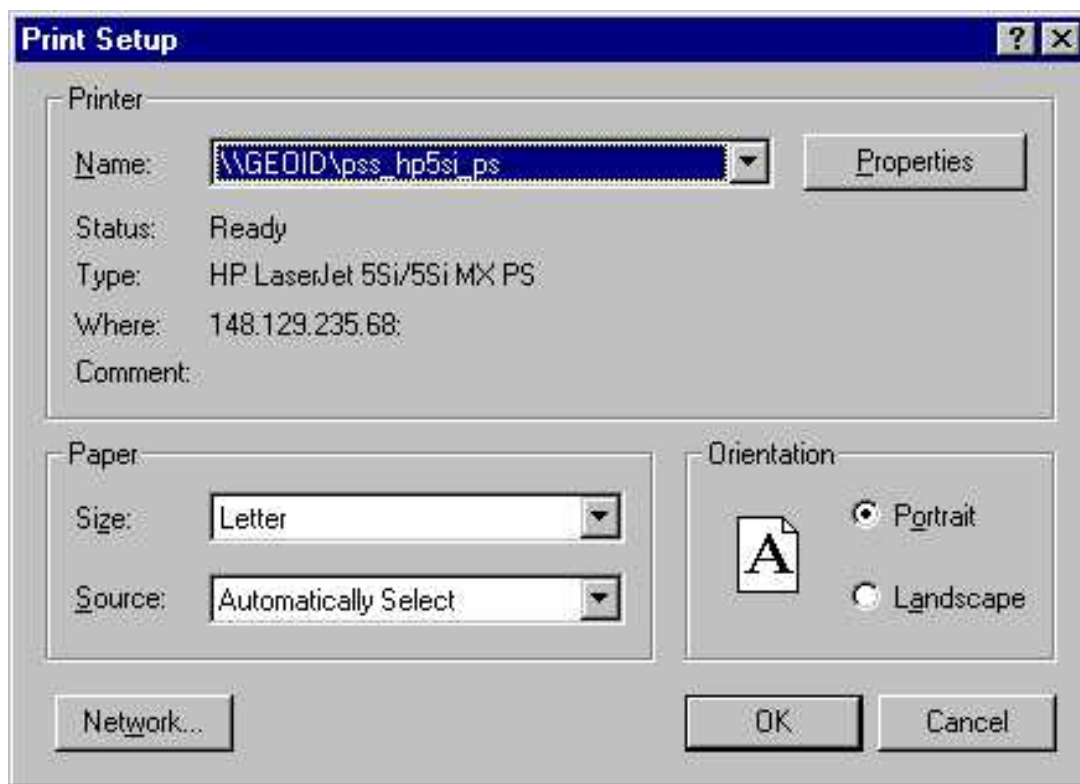


Figure 1 — Print Setup Dialog

If you are connected to multiple printers, you use this dialog to select the printer. Once you have selected the printer, you can then specify the paper size and page orientation.

The **Print** option under the **File** menu allows you to specify the records to print. Figure 2 provides the Windows version of this dialog. In the box labeled **Print:** you can specify whether to print the current record, records being browsed or a blank record showing fields. Most of the time you will be specifying either the current record or the records being browsed. Note that records being browsed option will print either all records or the records found if you performed a query.

In addition, you will need to select the **Print View** from the **Layout Mode** options. For further information on how to do this see the [Introduction to FileMaker®](#) section of this **Help**.

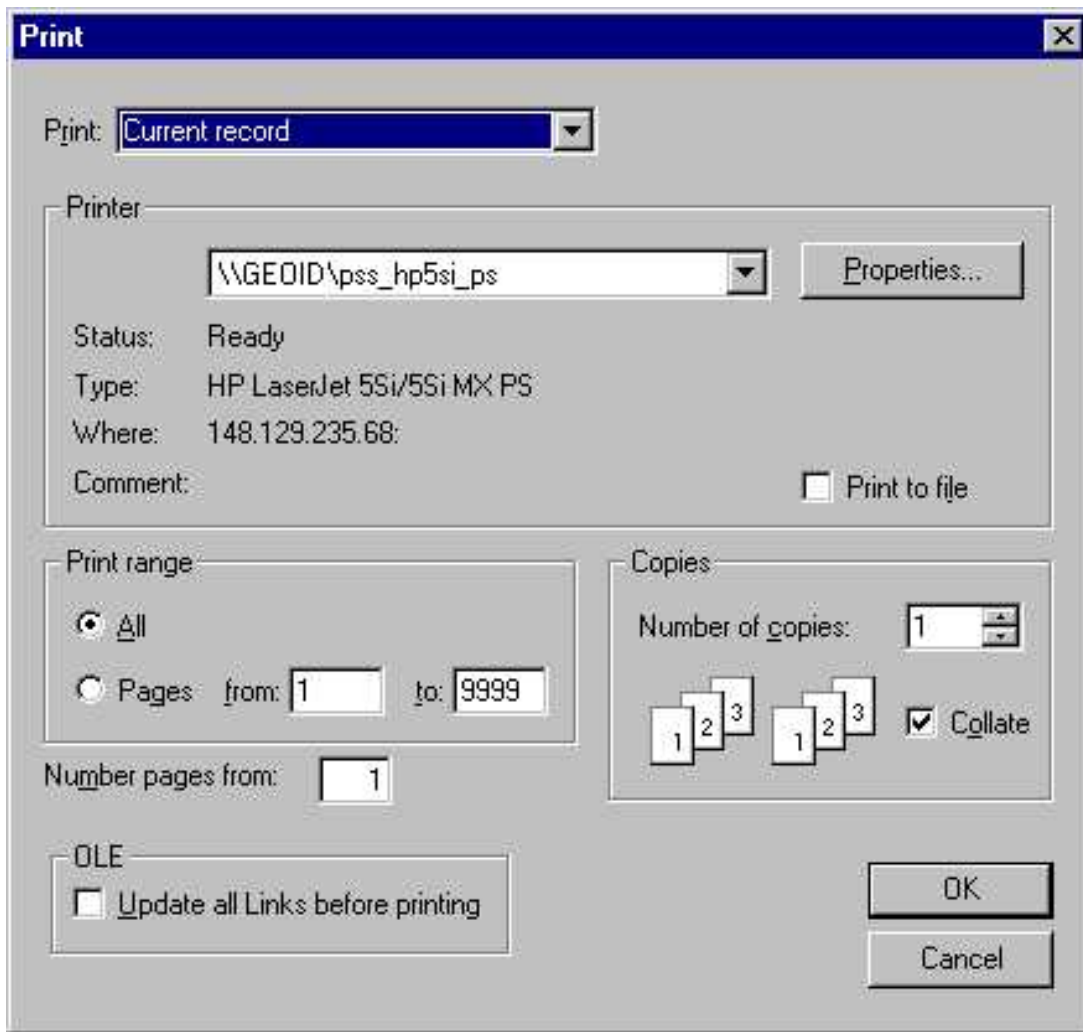


Figure 2 — Print Dialog

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About Our Data

EPA has assessed major EPA databases to characterize their overall quality and applicability for non-programmatic and secondary uses such as evaluating the local state of the environment, identifying pollution sources and hot spots, promoting environmental education, and tracking corporate accountability. The assessment process resulted in descriptions of each of the major databases that include information on coverage, spatial characteristics, temporal characteristics, consistency within the data system, ability to link to other systems, accuracy, limitations, access, and documentation.

Databases available for review

(.pdf documents require Adobe Acrobat Reader version 3.0)



[Aerometric Information Retrieval System - Air Quality Subsystem \(AIRS-AQS\) \(.html format\)](#)

[\(.pdf format\)](#)



[Aerometric Information Retrieval System - AIRS Facility Subsystem \(AIRS-AFS\) \(.html format\)](#)

[\(.pdf format\)](#)



[Emissions Tracking Subsystem \(ETS\) - Acid Rain Program \(.html format\)](#)

[\(.pdf format\)](#)



[Safe Drinking Water Information System \(SDWIS\) \(.html format\)](#)

[\(.pdf format\)](#)



[STORET \(.html format\)](#)

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[Permit Compliance System \(PCS\) \(.html format\)](#)

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[National Hydrography Dataset \(NHD\) Database \(.html format\)](#)

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[Comprehensive Environmental Response, Compensation, and Liability Information System \(CERCLIS\) \(.html format\)](#)

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[Resource Conservation and Recovery Information System \(RCRIS\) \(.html format\)](#)

[\(.pdf format\)](#)



[Compliance Subsystem of RCRIS \(.html format\)](#)

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[Biennial Reporting System \(BRS\) \(.html format\)](#)

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[Toxics Release Inventory \(.html format\)](#)

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Aerometric Information Retrieval System - Air Quality Subsystem (AIRS-AQS)

**CEIS
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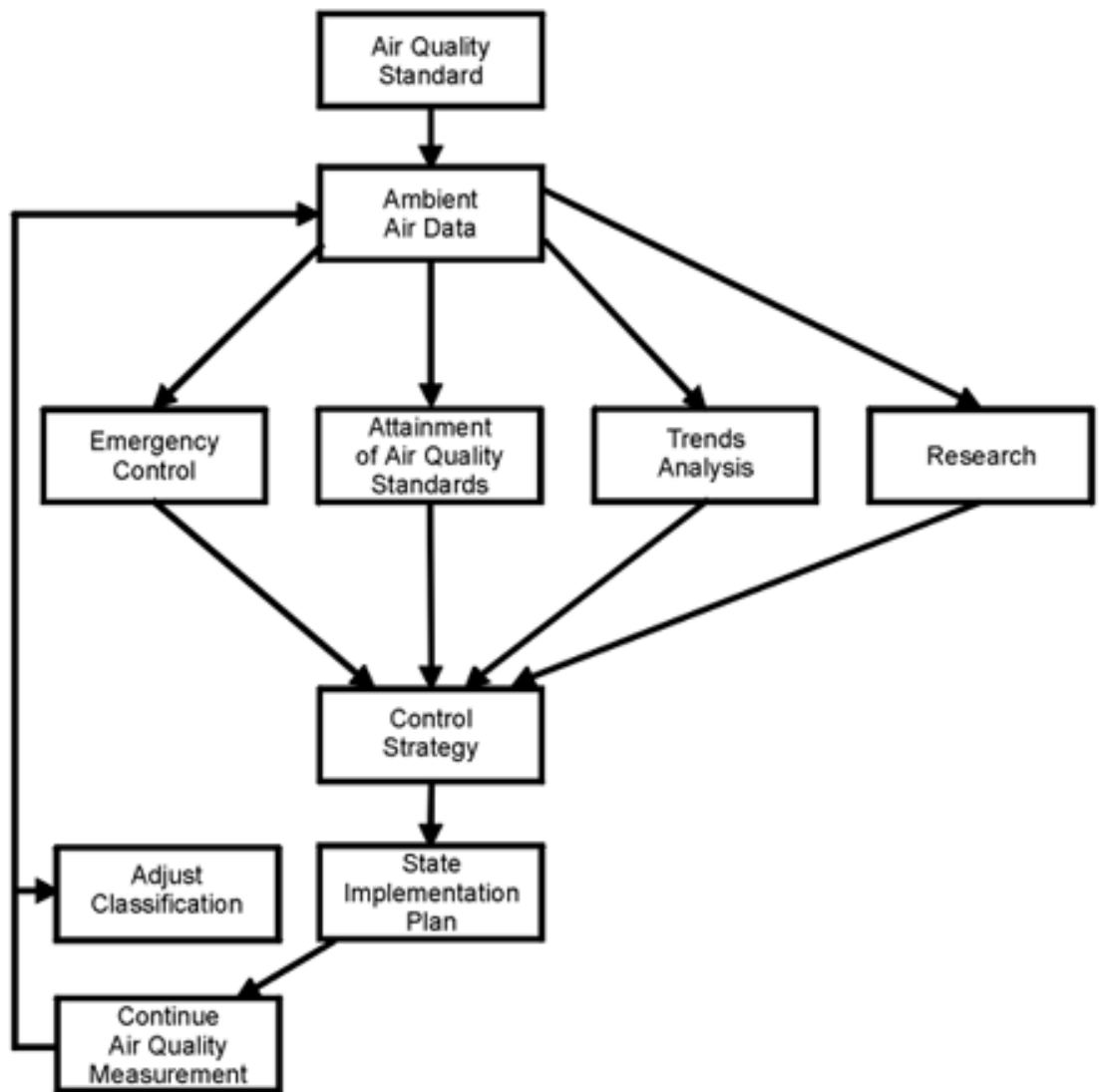
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Introduction

The **Aerometric Information Retrieval System (AIRS)** is a computerized database containing information about certain types of airborne pollutants in the United States. The **Air Quality Subsystem (AQS)** of AIRS contains measurements of ambient concentrations of the criteria pollutants - carbon monoxide, nitrogen dioxide, ozone, lead, particulate matter, and sulfur dioxide, as well as data on air toxics, Volatile Organic Compounds (VOCs), and meteorological data. The Clean Air Act (CAA) requires the EPA to set National Ambient Air Quality Standards (NAAQS) for the criteria pollutants. AIRS-AQS allows the EPA to assess the status of the nation's air quality and to identify areas where improvements in air quality are needed. The figure below displays the ambient air quality monitoring process including the uses of the data. The Office of Air Quality Planning and Standards (OAQPS) of EPA is responsible for the maintenance and administration of this database.

AIRS-AQS is one of the major EPA databases that are being reviewed to characterize their overall quality and applicability.

Ambient Air Quality Monitoring Process



Source: EPA Quality Assurance Handbook for Air Pollution on Measurement Systems Vol. II: Ambient Air Specific Methods, Draft, March 1997

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2. Can the database be used for spatial analysis?

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3. Can the database be used for temporal analysis?

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4. How consistent are the variables over space and time?

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5. Can data from AIRS-AQS be linked with information from other databases?

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AIRS Facility Subsystem (AIRS-AFS)

CEIS
Review
of AIRS-AFS

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Executive Summary

The **Aerometric Information Retrieval System (AIRS)/AIRS Facility Subsystem (AIRS-AFS)** was developed as a national database system for the collection and dissemination of compliance information for all major stationary sources of air pollution in the U.S. AIRS-AFS is operated as a collaborative program between EPA, State and local government agencies that collect and input data in keeping with Federal reporting requirements. The system is co-managed by the Office of Air Quality Planning and Standards (OAQPS) and the Office of Enforcement and Compliance Assurance (OECA) as it contains both emissions and compliance data. OAQPS is primarily responsible for the operation and maintenance of the systems, while the compliance information contained within the systems is used by OECA and the States to carry out their respective programs for improving and maintaining air quality.

This database maintains compliance information on facilities regulated under the Clean Air Act, as well as Titles I, III, IV, and V of the Amendments. The compliance information within the database pertain to major sources of hazardous and criteria air pollutants. A major source is defined as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit air pollutants above thresholds specified in the Clean Air Act and its Amendments. Nationally required information contained within the database includes facility identification, significant violation status, air programs that regulate the source, pollutants covered by the air programs, and the required actions (inspections, notice of violation, penalties, etc.) within the air programs.

AIRS-AFS contains approximately 100,000 facility records reported by States, 40,000 of which are Federally reportable facilities, with the balance being those tracked to meet State requirements. AIRS-AFS data are collected and updated by State and/or local agencies, and data reporters have direct access to the system at EPA's National Computing Center. The submission process includes checks during data entry to minimize errors. Regions provide quality assurance for the data provided by the States within that Region.

State compliance data coverage within AIRS-AFS is uneven as a result of varying State definitions and requirements, as well as differences in the structure and operation of State data collection, translation, and reporting activities. Analyses using only the nationally required data are more meaningful in situations where consistency is required.

AIRS-AFS data are appropriate for both spatial and temporal analyses. Spatial analyses are possible through utilization of address and ZIP code information which is consistently available. Updates to AIRS-AFS are made quarterly, but some States may be more diligent than others with regard to the timeliness of their updates, which may result in temporal inconsistencies. AIRS-AFS data can be linked to that contained within other databases using the Facility Identification Initiative on Envirofacts. Greater linkage capabilities are forthcoming through AIRS staff involvement with the Sector Facility Indexing Project.

Introduction

The EPA developed the Aerometric Information Retrieval System (AIRS)/AIRS Facility Subsystem (AIRS-AFS) as a national database system for the collection and dissemination of compliance information concerning all major stationary sources of air pollution in the United

States. A major source means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit air pollutants above thresholds specified in the Clean Air Act and its Amendments. The AIRS-AFS is operated as a collaborative program between EPA, and the State and local agencies that collect and input data in keeping with their Federal data reporting requirements under the Clean Air Act and its Amendments.

Compliance information on facilities affected by the Clean Air Act, including Titles I, III, IV, and V of the Amendments are in the database. Title I refers to the National Ambient Air Quality Standards (NAAQS) set for criteria pollutants. Section 110 of the Clean Air Act of 1970 requires development of State Implementation Plans (SIPs) to provide for the implementation, maintenance and enforcement of the NAAQS for each air quality region in each State. The 1977 Amendments required the implementation of a program for the review of new source locations prior to their construction or modification. SIPs sources as well as New Source Performance Standards (NSPS) sources are found in AIRS-AFS. Title III of the Amendments refers to imposing controls on emissions of hazardous air pollutants (HAPs). Title IV caps SO₂ emissions and lowers NO_x emissions primarily from major utility emission sources. Title V establishes a comprehensive emissions permit program for major sources, including sources subject to Title III. Specific permit requirements and provisions, as well as State implementation of the program, are set out in Title V. Most of these regulations are based on the use of appropriate control technology. Compliance status and violations are based on the performance of control technology.

AFS became operational in April, 1990, replacing the National Emissions Data System (NEDS), the Hazardous and Trace Emissions System (HATREMS), and the Emissions Inventory System (EIS) for emission point source data reporting. AIRS-AFS also replaced the Compliance Data System (CDS), previously used by EPA and the States for compliance and emission point source data reporting, and the Continuous Emissions Monitoring Subset (CEMS), which was used for the maintenance of point continuous emission monitoring data.

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2. Can the database be used for spatial analysis?

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3. Can the database be used for temporal analysis?

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4. How consistent are the variables over space and time?

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5. Can data from AIRS-AFS be linked with information from other databases?

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6. How accurate are the data in AIRS-AFS?

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Acid Rain Program's Emissions Tracking System (ETS)

CEIS
Review
of ETS

[.pdf version](#)

Introduction

The **Emissions Tracking System (ETS)** stores data collected under the auspices of the Acid Rain Program and the Clean Air Act. Title IV of the Clean Air Act requires fossil-fuel fired utility power plants and other significant SO₂ emitters to monitor and report their emissions of sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon dioxide (CO₂), and the volume and opacity of their emissions flow. The overall goal of the Acid Rain Program is to achieve significant environmental and public health benefits through reductions in the emissions of SO₂ and NO_x, the primary causes of acid rain. To achieve this goal at the lowest cost to society, the program employs both traditional and innovative market-based approaches for controlling air pollution. One of these innovative approaches is the establishment of SO₂ allowances that can be bought, sold, and traded among investors, brokers, utilities, and other significant SO₂ emitters. This program requires accurate monitoring of pollutant emissions to ensure that participants do not ôpendö (emit) more than their allowances.

The Acid Rain Program was established under Title IV of the Clean Air Act. The program sets a cap on the total amount of SO₂ that may be emitted by electric utilities nationwide in 2010 at about one half of the amount estimated to have been emitted in 1980. The program also sets NO_x emission limitations for coal-fired electric utility units, representing about a 27% reduction from their 1990 levels. To achieve these reductions, the law requires a two-phase tightening of the restrictions placed on utility boilers and combustion turbines (referred to as ôunitsö) operated by fossil-fuel fired power plants. There are more than 2,000 units currently operating in the United States. Phase I, instituted in 1995, affects 263 units at 110 mostly coal-burning electric utility plants located in 21 Eastern and Midwestern States. Additional units may join Phase I of the program as substitution or compensating units. Phase II, which will begin in the year 2000, tightens the annual emissions limits imposed on the large, higher-emitting Phase I units and also sets restrictions on smaller, cleaner plants fired by coal, oil, and gas; Phases I and II will eventually encompass over 2,000 units. The program affects existing utility units serving generators with an output capacity of greater than 25 megawatts and all new (post-1994 start-up date) utility units. The ETS assists in tracking the progress toward the goal to reduce annual SO₂ and NO_x emissions. The ETS also contains CO₂ emissions data that will assist in assessing the nationÆs progress in stabilizing greenhouse gases.

Emissions Tracking System (ETS) is one of the major EPA databases that are being reviewed to characterize their overall quality and applicability.

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Safe Drinking Water Information System (SDWIS)

CEIS
Review
of SDWIS

[.pdf version](#)

Introduction

The **Safe Drinking Water Information System/Federal version (SDWIS)** is an EPA national database storing information about the nation's drinking water. Designed to replace the system known as the Federal Reporting Data System (FRDS), SDWIS stores the information EPA needs to monitor public water systems (PWS). The database covered over 172,000 PWSs in 1996, the most recent year for which annual figures have been compiled. SDWIS tracks information on drinking water contamination levels as required by the 1974 Safe Drinking Water Act and its 1986 and 1996 amendments.

SDWIS is operated and maintained by the Office of Ground Water and Drinking Water within the Office of Water. This office uses the information reported to SDWIS to oversee State drinking water programs, track contaminant levels, respond to public inquiries, and prepare national reports. EPA also uses this information to evaluate the effectiveness of its programs and regulations, and to determine whether new regulations are needed to further protect public health.

SDWIS is one of the major EPA databases that are being reviewed to characterize their overall quality and applicability.

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3. Can the database be used for temporal analysis?

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5. Can data from SDWIS be linked with information from other databases?

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6. How accurate are the data in SDWIS?

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STORET Database

CEIS
Review
of STORET

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Introduction

The new, modernized STORET is EPA's principal repository for marine and freshwater ambient water quality and biological monitoring information. It combines the functions of the original STORET with that of the Biological Information System (BIOS) and the Ocean Data Evaluation System (ODES). These systems have served as the Agency's primary sources of point and non-point source ambient water quality and biological monitoring data. Their analytical tools supported a wide range of EPA water quality and ecosystem health assessment activities. Together, these systems contain over 250 million parametric observations collected primarily by State agencies from over 700,000 sampling stations nationwide, representing an investment of over \$2.2 billion.

The original STORET was developed in the 1960's and served as the nation's primary water quality storage system for 33 years. Program requirements and technology have outpaced the original STORET. It was unable to track monitoring information such as how, why, and by whom water samples were taken, thus making the quality of the data questionable and limiting its usefulness. The system also suffered from year 2000 problems that would have been prohibitively expensive to correct. Data from the legacy system will be reviewed to ensure that it meets current quality requirements before migrating it to the modernized system. All pre-1999 data, irrespective of whether it meets current requirements, will be maintained in the Legacy Data Center (LDC) and made available to the public as long as it is technically feasible and cost effective.

The first version of the new STORET software to collect data was released in September 1998, and STORET Version 1.1 was released in March 1999. The new system addresses the problems with the legacy version. It is easier to use, supports the storage of quality assurance and quality control information, is flexible enough to handle the changing needs of its users, and provides a wide range of standard output formats. STORET currently also supports the Geographic Information System environment. Future updates and revisions are planned to maintain a dynamic system. While the software to input the data in the system has been distributed to data providers, the new system is not yet populated with the data. It is expected to be operational by the end of 1999.

STORET currently better meets the emerging data and information needs associated with watershed-level environmental protection. It promotes data sharing and meets spatial assessment requirements for successful local watershed protection programs. The water monitoring community will have access to information that accurately reflects the current status while illustrating future monitoring and assessment paths. Decision makers can use STORET both to plan and to evaluate the effectiveness of pollution prevention and abatement programs.

The modernized STORET was designed with several purposes in mind: to investigate water quality where there have been reports of poor water quality or where an event affecting water quality has occurred; to provide the data needed to make a continuing broad assessment of water quality within a geographic area for which the data provider holds responsibility for protecting and improving water quality; and to support systematic assessments of data providers' watersheds.

This review is limited because a number of questions cannot be answered until the system has been in use for an extended period of time. EPA's Office of Water will continue to

administer and maintain STORET.

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4. How consistent are the variables over space and time?

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5. Can data from STORET be linked with information from other databases?

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6. How accurate are the data in STORET?

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Permit Compliance System (PCS)

CEIS
Review
of PCS

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Introduction

The **Permit Compliance System (PCS)** is a computerized database of information on water discharge permits, designed to support the National Pollutant Discharge Elimination System (NPDES). The Clean Water Act requires that all discharges from any point source into waters of the United States must obtain an NPDES permit. By point sources, EPA means discrete conveyances such as pipes or man-made ditches. This does not necessarily mean that a household must obtain a permit to connect to a city sewer. However, facilities that discharge directly to surface waters must obtain a permit. The discharges that pose the most threat to public health and the nation's waters are: human wastes; household food wastes; laundry and bath waters; toxic chemicals and metals. Fecal coliform, oil and grease, pesticides, and metals are types of pollutants that, when discharged into the nation's waters, threaten both the health of humans and life forms in the water. The Clean Water Act requires wastewater dischargers to obtain a permit establishing pollution limits and specifying monitoring and reporting requirements. The NPDES permit program regulates direct discharges from municipal and industrial wastewater treatment facilities. It also regulates industrial point source and concentrated animal feeding operations that discharge into other wastewater collection systems or that discharge directly into receiving waters. Permits are issued for each source (referred to as pipes) and there may be multiple sources for a regulated facility. PCS automates entry, updating, and retrieval of NPDES data. It tracks permit issuance, permit limits, monitoring data, and other data on the regulated facilities. The Office of Enforcement and Compliance Assurance (OECA) of the EPA is responsible for the maintenance and administration of this database.

PCS is one of the major EPA databases that are being reviewed to characterize their overall quality and applicability.

1. What does the database cover?

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3. Can the database be used for temporal analysis?

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National Hydrography Dataset (NHD) Database

CEIS
Review
of NHD

[.pdf version](#)

Introduction

Key components of watershed assessment require the effective organization and management of a range of watershed information. The **National Hydrography Dataset (NHD)**, a joint effort of the U.S. Environmental Protection Agency (EPA) and the United States Geological Survey (USGS), is the latest in a series of hydrological databases pertaining to the surface waters of the continental United States and Hawaii that provides a consistent national framework for managing watershed data. The NHD provides comprehensive coverage of hydrographic data for the United States. It uniquely identifies and interconnects the stream segments or reaches that comprise the nation's surface water drainage system. It also contains information for other common surface water bodies (e.g., lakes, reservoirs, estuaries, and coastlines). The NHD provides a digital referencing system for citing the location of specific points on streams and coasts of the United States, allowing users to move along the reaches and encounter water-related entities in hydrological sequence as they move up or downstream. Some anticipated end-user applications of the NHD are hydrological modeling and other water-quality analyses.

The NHD is the culmination of recent cooperative efforts of EPA and the USGS. In 1994, the USGS and EPA formalized a commitment to merge their hydrography files through a Memorandum of Understanding. The resultant National Hydrography Dataset combines the best of these Agencies' hydrography files including hydrological ordering, hydrological navigation for modeling applications, the unique identifiers for surface water features (i.e., reach codes) from EPA's Reach Files, and the spatial accuracy and comprehensiveness of USGS's Digital Line Graph (DLG) hydrography files. By incorporating these systems and data, the National Hydrography Dataset is more comprehensive, powerful, and useful than any of its components, and is designed to allow continued expansion and improvement by user-contributors.

This merger of complementary systems coincides with the Federal Geographic Data Committee (FGDC)-led efforts to develop the National Spatial Data Infrastructure (NSDI). The NSDI encompasses policies, standards, and procedures for all levels of government, the private and nonprofit sectors, and the academic community to promote production and sharing of geographic data. As part of the dynamic nature of the NHD, it will be made available via the internet.

Because the NHD is designed to be more flexible and comprehensive than RF3, once the NHD is complete, the EPA will no longer support RF3. The balance of this review will focus on issues pertaining to the NHD.

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COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY INFORMATION SYSTEM (CERCLIS) DATABASE

CEIS
Review
of CERCLIS

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Introduction

The Superfund Program was created as a result of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. CERCLA was enacted in December, 1980, and amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. These Acts established broad authority for the government to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at such sites; provided the authority for the government to undertake enforcement and abatement action against these parties; and established a trust fund to provide for cleanup when no responsible party could be identified. In addition, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP, 40 CFR Part 300) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

The **Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)** is the official repository for all site- and non-site-specific Superfund data generated and compiled in support of CERCLA. CERCLIS, an administrative and management database, is used by the EPA to track activities conducted under its Superfund Program. The current version of the database, CERCLIS 3, is a client-server based system.

CERCLIS data are used to:

- help EPA Regional and Headquarters managers evaluate the status and progress of site cleanup actions;
- report official Superfund accomplishments to Congress and the public;
- track the Superfund Comprehensive Accomplishments Plan (SCAP); and
- track the Agency requirements from Government Performance and Results Act of 1993 (GPRA).

The Office of Emergency and Remedial Response maintains CERCLIS. CERCLIS also contains enforcement modules administered by the Office of Enforcement and Compliance Assurance and the Federal Facilities Restoration and Reuse Office.

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Resource Conservation and Recovery Information System (RCRIS) Database

CEIS
Review
of RCRIS

[.pdf version](#)

Executive Summary

The **Resource Conservation and Recovery Information System (RCRIS)** is an administrative system designed to assist EPA Headquarters (HQ), EPA Regions, and States in managing the activities of hazardous waste handlers under the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. RCRA is a delegated program in which authorized States or Regions manage the program, collect data from waste handlers, and maintain the collected data. An agreed-upon subset of all the data collected by the authorized States or Regions is uploaded to the RCRIS National Oversight Database (hereafter simply referred to as RCRIS). The database contains an inventory of waste handlers and information about their waste-handling activities. For all waste handlers, RCRIS maintains data on the identification, location, mailing address, contact person, ownership, releases of hazardous materials, clean-up events, and compliance with the Federal and State regulations. For Treatment, Storage, and Disposal (TSD) facilities, RCRIS maintains additional information on status and history of permitting, closure, and post-closure activities.

The EPA HQ makes an agreement with the authorized States and Regions as to what subset of the collected information will be transferred to the RCRIS database. This process allows for maintaining a consistent set of elements across different States and helps in making spatial comparisons of RCRIS data. However, some States use a definition of Large Quantity Generators (LQGs) which is more stringent than the Federal definition. These States are required to convert the data to match the Federal definitions prior to reporting the data to RCRIS. Some States do not comply with this requirement, and users should take into account these differences in definition when making spatial comparisons.

Some of the information, particularly that related to names and addresses of waste handlers, is outdated. A waste handler is required to notify the authorized authority about changes in its name, location, or waste handling activities, but not all handlers do this. However, the information for TSDs is generally current, as communication between the authorized authority and TSDs is maintained via permitting events and inspections.

RCRIS is a national program management and inventory system, in which all major permitting and clean-up activities of RCRA waste handlers are tracked. RCRIS provides a partial picture of waste generation and management activities for those covered under the RCRA program. The information about the different kinds of wastes generated, quantity of waste generated, and on- and off-site management of waste is stored in the Biennial Reporting System (BRS) and not in RCRIS.



Introduction

The Resource Conservation and Recovery Information System (RCRIS) is an administrative system designed to assist EPA headquarters (HQ), EPA Regions, and States in managing the activities of hazardous waste handlers under the Resource Conservation and Recovery Act

(RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984. Hazardous waste handlers include hazardous waste Treatment, Storage, and Disposal (TSD) facilities, hazardous waste generators, hazardous waste transporters, hazardous waste fuel marketers, and used oil recyclers. RCRIS contains information on the identification, location, status, and history of permitting, closure, and post-closure activities, Federal and State compliance, and enforcement issues for hazardous waste handlers. As of March 1999, RCRIS included data on approximately 450,000 handlers.

RCRA is a delegated program in which authorized States or Regions manage the program, collect data from waste handlers, and maintain the collected data. An agreed-upon subset of all the data collected by the authorized States or Regions is uploaded to the RCRIS National Oversight Database (hereafter referred to simply as RCRIS). The Office of Solid Waste and Emergency Response (OSWER) at EPA HQ is responsible for the maintenance and administration of RCRIS. The compliance and enforcement modules of RCRIS fall within the purview of the Office of Enforcement and Compliance Assurance (OECA). Information on RCRIS compliance and enforcement is reviewed in a separate document.

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Resource Conservation & Recovery Information System (RCRIS) Database Compliance Subsystem

**CEIS
Review**
of RCRIS Compliance

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Introduction

The **Resource Conservation and Recovery Information System (RCRIS)** is designed to assist EPA Headquarters, Regions, and States in managing hazardous waste handlers under the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. Hazardous waste handlers include hazardous waste treatment, storage, and disposal (TSD) facilities, hazardous waste generators, and hazardous waste transporters. RCRIS contains information on the identification, location, permitting status, closure/post-closure status, compliance, and enforcement issues for hazardous waste handlers. As of 1998, RCRIS included data on 429,000 handlers.

States or Regions enter all of the information to track events and activities. The State data are merged into Regional databases. Core data include those data elements which have been determined by States, EPA Regions, and EPA Headquarters to be necessary for the oversight of the RCRA program from a national perspective. Core data from the Regional databases are extracted to create the RCRIS National Oversight Database, used and made available by EPA Headquarters. The EPA Office of Solid Waste is responsible for the maintenance and administration of that database.

The RCRIS Compliance Subsystem contains files on evaluation of handlers, violations, and compliance monitoring and enforcement. These activities fall under the purview of the Office of Enforcement and Compliance Assurance (OECA). OECA oversees compliance monitoring and enforcement activities associated with RCRA. State and Regional offices conduct evaluations of the waste handlers and detect any violations.

Evaluations

Evaluations are conducted routinely on an annual or biennial schedule for TSD facilities. All other facilities are evaluated routinely as resources permit or requirements dictate. Ten percent of the facilities evaluated by the States are also evaluated by the Regional Offices. The evaluation is primarily an on-site inspection of the compliance status of the handler with regard to all applicable RCRA regulations and permits. It includes an examination of the records and other documents maintained by the handler. The evaluations may also include:

- Sampling for analysis by State agencies or Regional offices
- Detailed evaluation of the adequacy and design of a facility's groundwater monitoring system
- Operation and maintenance inspection of the groundwater monitoring system
- Verification of compliance with enforcement actions associated with prior violations
- Intense investigation to gather information to support enforcement actions
- Determination of Significant Non-Complier (SNC) status¹

Violations

Violations may be detected by an inspection. There are different types of violations which indicate the regulation that has been violated.

Enforcement

Enforcement actions may be imposed if there are violations. They include informal administrative actions involving verbal and written communication; and formal administrative actions including compliance orders, imminent hazard orders, and monitoring, analysis, and testing orders. There are also administrative referrals between State and Federal agencies as well as judicial referrals, civil actions, judicial actions and criminal actions.

Detailed information pertaining to evaluations, violations, and enforcement are noted in the Compliance Subsystem. OECA uses this database to manage the compliance and enforcement issues associated with the Hazardous Waste Program. The database is also used to determine the allocation of grant monies -- typically, additional dollars are provided in those cases where significant cleanup and inspection are required. Other uses include targeting investigations, multimedia sector analysis, public access, and answers to freedom of information requests. This document reviews the Compliance Subsystem of RCRIS. The sections on facility identification, permitting, closure, and post closure are reviewed separately (see the review of RCRIS Database).

RCRIS Compliance Subsystem is one of the major EPA databases that are being reviewed to characterize their overall quality and applicability.

¹ A SNC is a facility which has caused actual exposure or a substantial likelihood of exposure to hazardous waste or hazardous waste constituents; is a chronic or recalcitrant violator; or deviates substantially from the terms of a permit, order, or agreement, or from RCRA statutory or regulatory requirements.

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BIENNIAL REPORTING SYSTEM (BRS) DATABASE

CEIS
Review
of BRS

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Executive Summary

The **Biennial Reporting System (BRS)** is a repository of information collected under the Resource Conservation and Recovery Act of 1976 (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). The BRS database contains information on a variety of wastes regulated under the RCRA program. The majority of the data in BRS is collected by States and/or EPA Regions using the Hazardous Waste Report, Instructions and Forms (commonly called the Biennial Report) produced by EPA Headquarters (HQ). Some States, however, chose to use a different data collection instrument, such as a State-specific reporting form. States using State-specific forms are responsible for collecting information that is similar in content, definition, and scope to the Federal forms package.

The BRS database contains data as reported by Large Quantity Generators (LQGs) and Treatment, Storage, and Disposal sites (TSDs). The information from LQGs includes the source, characteristics, and quantities of hazardous waste generated, managed on-site, and shipped off-site for treatment, storage, and disposal. TSDs report the receipt and the processes of managing hazardous wastes. Hazardous waste generation and management data are self-reported by the regulated facilities, and facilities use engineering and monitoring methods to collect the information that is included in their reports.

The data on hazardous waste generation and management have been collected every two years since 1981. Data from the 1989, 1991, 1993, 1995, and 1997 biennial report cycles are included in the BRS database. Data from 1981, 1983, 1985, and 1987 cycles are not available. (Note: A Biennial report cycle is referenced by the calendar year in which the activities the respondent is reporting on occurred. For example, the 1997 Biennial report cycle covers activities that occurred during 1997, but respondents do not report any information on these activities until 1998). The 1995 cycle is the latest year for which final data are available. (Preliminary data for the 1997 cycle are available now and final data will be available later in 1999.)

Reporting requirements have remained relatively unchanged over the reporting period. This allows comparison of waste generation and management activities over time. Major changes over the period of 1989 to 1997 include:

- In 1990, due to promulgation of the Toxicity Characteristic Leaching Procedure rule (TCLP), 26 new waste codes were added. These changes mean that the wastes covered under the TCLP rule were not considered as RCRA wastes prior to 1990.
- During the 1997 reporting cycle, respondents were not asked to provide information on their waste minimization activities, and detailed questions on on-site waste processing systems were not asked.
- Respondents are required to provide the addresses of their physical locations, which makes it possible to compare waste generation and management information among geographical locations. Reporting facilities are not required to provide latitude and longitude data.

When collecting Biennial Report data, respondents are requested to provide their generator status according to the Federal generation status standards. Some States, however, have a more stringent definition of LQG, or use a different State-specific forms package that only asks respondents about their generator classification based on State standards. This interpretational inconsistency may have an impact when performing State-to-State

comparisons on the number of LQGs.

The BRS database stores the respondents' RCRA identification numbers, which allows users to link information with other databases that store this information (specifically including the Resource Conservation and Recovery Information System (RCRIS)). Facilities across different databases can also be linked through the physical location addresses.

Data on waste generation and management are characterized by the use of RCRA waste codes. Some waste codes correspond to specific chemical compounds, while other waste codes define sources of waste or characteristics of waste. Information on chemical concentrations is not stored in BRS. The use of waste codes means that for some wastes, users will not be able to identify the specific chemical compounds that are present in the waste. It is not possible to link RCRA waste codes as found in BRS to information in other databases that contain information on chemical codes.

The BRS data are made available to the public through published reports, CD-ROMs, and the internet. The Office of Solid Waste publishes the National Biennial RCRA Hazardous Waste Report which includes a subset of wastes reported by respondents (those that were managed in units subject to RCRA permitting requirements). More information on the Biennial Report, including copies of the National Biennial RCRA Hazardous Waste Report and the national data files, can be found at the following site:

<http://www.epa.gov/epaoswer/hazwaste/data/index.htm#brs>

BRS data are also available through Envirofacts (which is EPA's public access data warehouse). Envirofacts supports a standard report interface and also allows users to perform their own customized data queries:

<http://www.epa.gov/enviro>



Introduction

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA) amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). Large Quantity Generators (LQGs) report information on RCRA hazardous waste generation. LQGs and Treatment Storage and Disposal (TSD) facilities report information about hazardous waste management. The term hazardous waste refers to solid waste which is assigned a Federal hazardous waste code and is regulated by RCRA. EPA uses the census approach and requires all LQGs and TSDs to report waste generation and management information to the delegated States or EPA Regions.

Biennial Reporting System (BRS) is a repository of information collected under RCRA and HSWA. BRS data allow RCRA program managers to conduct programmatic assessments to determine quantities and types of hazardous waste generated in the US, and to follow the management, treatment, and disposal of hazardous waste. BRS data are used for a variety of rule-making and rule-analysis activities. Data from BRS are used by many States to levy taxes on hazardous waste generators based on the amount of hazardous waste they generate. Data are also used to perform capacity analysis, and inform the public, the regulated community, and government agencies about the scope and nature of hazardous activities and how these activities have been changing over time.

The EPA Office of Solid Waste and Emergency Response (OSWER) is responsible for the

maintenance and administration of BRS. Every two years, EPA produces National and State-level reports based on BRS data. The scope of this document is limited to a review of the national BRS database.

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Toxics Release Inventory (TRI)

CEIS
Review
of TRI

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Executive Summary

The **Toxics Release Inventory (TRI)** is a major EPA database tabulating the releases of toxic chemicals into the environment. Developed as part of the **Emergency Planning and Community Right to Know Act** of 1986, the TRI is the first EPA database planned, designed, and operated for public access. It is also one of the few EPA databases operated centrally at EPA headquarters, with all inputs arriving to one location for processing.

TRI stores the information that is self-reported annually from industries that conduct manufacturing operations within certain specified standard industrial classification codes (SIC Codes 20-39 until the 1998 reports, as to which additional sectors have been added). In addition to industrial classification, facilities are only required to report if they manufacture or process more than 25,000 pounds of a listed chemical during a year, or otherwise used more than 10,000 pounds, and have the equivalent of more than 10 full-time employees. They must report the on-site releases of toxic chemicals into the air, water, and land; and quantities treated, combusted for energy recovery, and recycled on-site. They also report on transfers of wastes that are disposed, treated, combusted for energy recovery, or recycled at a separate facility. Approximately 650 chemicals have been designated for reports under TRI. In all about 73,000 reports are submitted annually by 21,000 manufacturing facilities and 200 Federal facilities in 1996.

The inventory represents the first real attempt to quantify toxic chemical pollution. Congress stipulated the types and sizes of industry that had to report. In general, reports are received from the largest chemical manufacturers, although many non-industrial sources contribute to toxic pollution (e.g. dry-cleaners, and mobile sources such as cars) and these are not reported under TRI. Also, reports are in many cases estimates of the pollution, since actual monitored data are required only if available. Most of the entities report estimates. Since the reporting is annual, there is no accounting for changing levels of toxic releases. The total release could have occurred all in one day, or occurred evenly throughout the year. TRI requires considerable information from facilities to link them with identifiers from other programs. This includes their Dun & Bradstreet, RCRA, and NPDES identification.

TRI is handled centrally, so the extensive quality controls are easier to apply, affording good assurance that what is reported actually makes it to the database. Every facility reports for each chemical using the same form, except for facilities that certify that they do not exceed a threshold of 500 pounds of the chemical released, treated, or transferred, and do not manufacture, process, or use more than one million pounds of the listed chemical. Input forms are checked for completeness, valid formats, chemical identification numbers, and internal consistency. Additionally, electronic submission of forms is another attempt to reduce the number of possible transcription errors. EPA sends out reports showing all the release for a submitter's own review, so that facilities which have reported have the opportunity to verify their data. EPA also conducts inspections and training to raise the quality of the reported data.

TRI is an expanding program and since its inception has increased the coverage of the reporting universe and reported chemicals. As a result, depending on the particular spatial or temporal analysis, some caution is advised in using TRI data exclusively.

Introduction

The Toxics Release Inventory (TRI) is a key feature of the landmark Emergency Planning and

Community Right to Know Act (EPCRA) of 1986. EPCRA was enacted to promote emergency planning, to minimize the effects of accidental large releases of chemicals and to provide public with information on releases of toxic chemicals in their communities. Section 313 of EPCRA established the Toxic Release Inventory (TRI) Program that identifies facilities, chemicals manufactured and used in the identified facilities, and the annual amounts of these chemicals released and managed on and off site in waste. Under the same section, a national database was established to maintain the TRI information for public use. The Office of Prevention, Pesticides and Toxic Substances of EPA is responsible for the TRI Program and the maintenance and administration of the TRI database.

TRI is one of the major EPA databases that are being reviewed to characterize their suitability for secondary uses.

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The Environmental Protection Agency (EPA) created the Envirofacts Warehouse to provide the public with direct access to the wealth of information contained in its databases. The Envirofacts Warehouse allows you to retrieve environmental information from EPA databases on [Air](#), [Chemicals](#), [Facility Information](#), [Grants/Funding](#), [Hazardous Waste](#), [Risk Management Plans](#), [Superfund](#), [Toxic Releases](#), and [Water Permits](#), [Drinking Water](#), [Drinking Water Contaminant Occurrence](#), and [Drinking Water Microbial and Disinfection Byproduct Information](#) (Information Collection Rule [ICR]). You may retrieve information from several databases at once, or from one database at a time. Online queries allow you to retrieve data from these sources and create reports, or you may generate maps of environmental information by selecting from several mapping applications available through EPA's [Maps On Demand](#).

You can also read about the [spatial data](#) used by the Maps On Demand mapping applications. The [Locational Reference Tables](#) contain all of the latitude and longitude coordinate information available through Envirofacts.

URL: http://www.epa.gov/enviro/html/ef_overview.html
This page was updated on May 01, 2000.



Metadata for Geographic Names Information System

These metadata describe the Geographic Names Information System holdings of the USGS for the conterminous United States. This is a data-set level implementation of the Content Standards for Digital Geospatial Metadata.

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Identification Information:

Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 19810501

Title: Geographic Names Information System

Publication_Information:

Publication_Place: Reston, VA

Publisher: U.S. Geological Survey

Description:

Abstract:

An automated inventory of the names and locations of physical and cultural geographic features located throughout the United States

Purpose:

To promote geographic feature name standardization and to serve as the Federal Government's repository of information regarding feature name spellings and applications for features in U.S. The names listed in the inventory can be published on Federal maps, charts, and in other documents. The feature locative information has been used in emergency preparedness, marketing, site-selection and analysis, genealogical and historical research, and transportation routing applications.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Geographic Names Information System

Beginning_Date: Unknown

Ending_Date: Present

Currentness_Reference: ground condition

Status:

Progress: In work.

Maintenance_and_Update_Frequency: As needed.

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -180.00

East_Bounding_Coordinate: 172.00

North_Bounding_Coordinate: 72.00

South_Bounding_Coordinate: -12.00

Keywords:

Theme:

Theme_Keyword_Thesaurus: None.

Theme_Keyword: geographic feature

Theme_Keyword: feature name

Theme_Keyword: place name

Place:

Place_Keyword_Thesaurus: None.

Place_Keyword: United States

Place_Keyword: Territories

Place_Keyword: Outlying Areas

Access_Constraints: None

Use_Constraints: None

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Roger L. Payne

Contact_Organization: U.S. Geological Survey

Contact_Position: Chief, Branch of Geographic Names

Contact_Address:

Address_Type: mailing address

Address: 523 National Center

City: Reston

State_or_Province: Virginia

Postal_Code: 20192

Contact_Voice_Telephone: 1 703 648 4544

Contact_Electronic_Mail_Address: rpayne@usgs.gov

Hours_of_Service: 0730-1700

Data_Set_Credit:

The Geographic Names Information System was developed

by the U.S. Geological Survey in cooperation with the U.S. Board on

Geographic

Names.

Native_Data_Set_Environment:

The Geographic Names Information System is resident on a Sun Enterprise 4000 computer.

It uses Sun Solaris Version 2.6 as its operating system. The system contains approximately

1.5 million records, averaging 500 bytes in length.

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

A random sample of 10% of the entries in the system were visually verified against the compilation source data (large-scale USGS topographic maps) to ensure an accuracy rate of at least 95%.

Logical_Consistency_Report:

Locative references (geographic coordinates, topographic map, and county) are cross-checked for logical consistency.

Completeness_Report:

This dataset contains information about physical and cultural geographic features identified by a proper name, with the exception of most roads and highways.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

Accuracy of these digital data is based upon the use of source graphics which are compiled to meet National Map Accuracy

Standards.

Comparison to the graphic source is used as control to assess digital positional accuracy.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: unknown

Title: 1:24,000-scale topographic maps

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Reston, VA

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 24000

Type_of_Source_Media: paper

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: unknown

Ending_Date: present

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: USGS

Source_Contribution: Feature names and attribute information

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Board on Geographic Names

Publication_Date: Unpublished material

Title: Records of the U.S. BGN

Type_of_Source_Media: card files

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1932
Ending_Date: present
Source_Currentness_Reference: creation date
Source_Citation_Abbreviation: USBGN
Source_Contribution: Feature names and attribute information
Source_Information:
Source_Citation:
Citation_Information:
Originator: U.S. Forest Service
Publication_Date: unknown
Title: U.S. Forest Service 1:24,000-scale topographic maps
Type_of_Source_Media: paper
Source_Time_Period_of_Content:
Time_Period_Information:
Range_of_Dates/Times:
Beginning_Date: unknown
Ending_Date: present
Source_Currentness_Reference: publication date
Source_Citation_Abbreviation: USFS
Source_Contribution: Feature names and attribute information
Process_Step:
Process_Description:
GNIS Phase I data compilation and edit--Feature name and attribute data are collected from the largest-scale USGS topographic maps available. These data are compared to the records of the U.S.
Board
on Geographic Names.
Source_Used_Citation_Abbreviation: USGS, USBGN
Process_Date: 198105
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Roger L. Payne
Process_Date: not complete
Process_Contact:
Contact_Information:
Contact_Person_Primary:
Contact_Person: Robin D. Worcester
Contact_Organization: U.S. Geological Survey
Contact_Position: Chief, Geographic Names Information Section
Contact_Address:
Address_Type: mailing address
Address: 523 National Center
City: Reston
State_or_Province: Virginia
Postal_Code: 20192
Contact_Voice_Telephone: 1 703 648 4551
Contact_Electronic_Mail_Address: rwrocest@usgs.gov
Process_Step:
Process_Description:
GNIS Maintenance program--Maintenance cooperators feed GNIS new names and corrections discovered in the course of new mapping and revision activities and implementation of the national geographic names standardization program.
Source_Used_Citation_Abbreviation: USBGN, USGS, USFS

Process_Date: ongoing
Process_Contact:
 Contact_Information:
 Contact_Person_Primary:
 Contact_Person: Robin D. Worcester
 Contact_Organization: U.S. Geological Survey
 Contact_Position: Chief, Geographic Names Information Section
 Contact_Address:
 Address_Type: mailing address
 Address: 523 National Center
 City: Reston
 State_or_Province: Virginia
 Postal_Code: 20192
 Contact_Voice_Telephone: 1 703 648 4551
 Contact_Electronic_Mail_Address: rworcest@usgs.gov
 Hours_of_Service: 0900-1700

Spatial_Data_Organization_Information:

Indirect_Spatial_Reference:
 Features are located by State and county, and related to the USGS
topographic
 map on which the feature is shown.
Direct_Spatial_Reference_Method: point
Point_and_Vector_Object_Information:
 SDTS_Terms_Description:
 SDTS_Point_and_Vector_Object_Type: point

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:
 Geographic:
 Latitude_Resolution: 1
 Longitude_Resolution: 1
 Geographic_Coordinate_Units: degrees, minutes, and seconds

Entity_and_Attribute_Information:

Overview_Description:
 Entity_and_Attribute_Overview:
 The dataset contains records for named geographic features located in
the
 United States, its Territories and Outlying Areas. The records are
organized
 by State (or State equivalent). Each record includes: the official
name of
 the feature; the feature type; the county(s) in which the feature is
located;
 the name(s) of the USGS 1:24,000-scale topographic map(s) on which the
feature

is shown; geographic coordinates locating the mouth of linear features and the approximate center of areal features, and coordinates locating the feature on each additional (if any) USGS 1:24,000-scale map on which the feature is shown; a bibliographic code referring to the source of information for each record, and other names by which the feature may be or may have been known. Some records include information about the history of the feature or the origin of the feature name.

Entity_and_Attribute_Detail_Citation:

U.S. Department of the Interior, U.S. Geological Survey, 1987
Geographic Names Information System--Data Users Guide 6;
Reston, Virginia

Softcopy in hypertext format is available at:

[<URL:http://mapping.usgs.gov/www/ti/GNIS/gnis_users_guide_toc.html>](http://mapping.usgs.gov/www/ti/GNIS/gnis_users_guide_toc.html)

Softcopy in ASCII format is available at:

[<URL:ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.txt>](ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.txt)

Softcopy in WordPerfect format is available at:

[<URL:ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.wp5>](ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.wp5)

Softcopy in Postscript format is available at:

[<URL:ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.ps>](ftp://mapping.usgs.gov/pub/ti/GNIS/gnisguide/gnisdug.ps)

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Earth Science Information Center,
U.S. Geological Survey

Contact_Address:

Address_Type: mailing address

Address: 507 National Center

City: Reston

State_or_Province: Virginia

Postal_Code: 20192

Contact_Voice_Telephone: 1 888 ASK USGS

Hours_of_Service:

In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at:

[<URL:http://mapping.usgs.gov/esic/esic_index.html>](http://mapping.usgs.gov/esic/esic_index.html)

Resource_Description: Geographic Names Information System

Distribution_Liability:

Although these data have been processed successfully on a computer system at the U.S. Geological Survey, no warranty expressed or implied is made by the USGS regarding the utility of the data on any other system, nor shall the act of

distribution constitute any such warranty. The Geological Survey will warrant the delivery of this product in computer-readable format, and will offer appropriate adjustment of credit when the product is determined unreadable by correctly adjusted computer input peripherals, or when the physical medium is delivered in damaged condition. Requests for adjustment of credit must be made within 90 day from the date of this shipment from the ordering site.

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name:

[<URL:http://mapping.usgs.gov/www/gnis/gnisftp.html>](http://mapping.usgs.gov/www/gnis/gnisftp.html)

Offline_Option:

Offline_Media: CD-ROM

Recording_Format: ISO 9660

Compatibility_Information:

Requires an IBM PC-XT-AT or compatible microcomputer with 512 kilobytes of memory, with DOS operating system

3.0 or greater; one 20 megabyte hard disk drive; and a

reader with software drivers that read ISO-9660 formatted

The CD-ROM contains software for searching, sorting,

printing, and exporting the data. The software must be

installed onto a hard disk before the data can be used.

Fees:

The charge is \$57 for the CD-ROM

A \$3.50 handling charge is applied to all mail orders.

Metadata_Reference_Information:

Metadata_Date: 19950121

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing address

Address: 508 National Center

City: Reston

State_or_Province: Virginia

Postal_Code: 20192

Contact_Voice_Telephone: 1 703 648 4543

Metadata_Standard_Name: Content Standards for Digital Geospatial Metadata

[USGS Node of NSDI Clearinghouse](#)

<<http://nsdi.usgs.gov/nsdi/maps/gnis.HTML>>.

Maintained by <nsdi@usgs.gov>

Last modified: 3 December 1999 ltd

Identification_Information:

Citation:

Citation_Information:

Originator:

U.S. Department of Commerce
Bureau of the Census
Geography Division

Publication_Date: 1999

Title: TIGER/Line Files, 1998

Edition: 1998

Series_Information:

Series_Name: TIGER/Line Files

Issue_Identification: Version (MMYY) represents the month and year file created

Publication_Information:

Publication_Place: Washington, DC

Publisher:

U.S. Department of Commerce
Bureau of the Census
Geography Division

Description:

Abstract:

TIGER, TIGER/Line, and Census TIGER are registered trademarks of the Bureau of the Census. The 1998 TIGER/Line files are an extract of selected geographic and cartographic information from the Census TIGER data base. The geographic coverage

for

a single TIGER/Line file is a county or statistical equivalent entity, with the coverage

area

based on January 1, 1998 legal boundaries. A complete set of 1998 TIGER/Line

files

includes all counties and statistically equivalent entities in the United States,

the

U.S. Virgin Islands, Puerto Rico, American Samoa, Guam, the Northern Mariana Islands,

U.S.

Minor Outlying Areas, and the Pacific Island Areas. The Census TIGER data

base

represents a seamless national file with no overlaps or gaps between parts.

However,

each county-based TIGER/Line file is designed to stand alone as an independent data

set

or the files can be combined to cover the whole Nation and its territories. The

1998

TIGER/Line files consist of line segments representing physical features and

governmental

and statistical boundaries. The files contain information distributed over a

series of

record types for the spatial objects of a county. There are 17 record types,

including

the basic data record, the shape coordinate points, and geographic codes that can

be used

with appropriate software to prepare maps. Other geographic information contained

in the

files includes attributes such as feature identifiers/census feature class codes

(CFCC) used to

differentiate feature types, address ranges and ZIP Codes, codes for legal and

statistical

entities, latitude/longitude coordinates of linear and point features, landmark

point features,

area landmarks, key geographic features, and area boundaries. The 1998 TIGER/Line

data

dictionary contains a complete list of all the fields in the 17 record types.

Purpose:

In order for others to use the information in the Census TIGER data base in a geographic information system (GIS) or for other geographic applications, the Census Bureau releases to the public extracts of the data base in the form of TIGER/Line files. Various versions of the TIGER/Line files have been released; previous versions include the 1990 Census TIGER/Line files, the 1992 TIGER/Line files, the 1994 TIGER/Line files, the 1995 TIGER/Line files, and the 1997 TIGER/Line files. The 1998 TIGER/Line files were originally produced for use by the states participating in the Census 2000 Redistricting Data Program, Phase 2, the Voting District project (VTDP) to submit their voting districts to the Census Bureau.

Supplemental_Information:
To find out more about TIGER/Line files and other Census TIGER data base derived data sets visit <http://www.census.gov/geo/www/tiger>.

Time_Period_of_Content:
Time_Period_Information:
Single_Date/Time:
Calendar_Date: 1998
Currentness_Reference: 1998

Status:
Progress: Complete
Maintenance_and_Update_Frequency:
TIGER/Line files are extracted from the Census TIGER data base when needed for geographic programs required to support the census and survey programs of the Census Bureau. No changes or updates will be made to the 1998 TIGER/Line files. Future releases of TIGER/Line files will reflect updates made to the Census TIGER data base and will be released under a version numbering system based on the month and year the data is extracted.

Spatial_Domain:
Bounding_Coordinates:
West_Bounding_Coordinate: +131.000000
East_Bounding_Coordinate: -64.000000
North_Bounding_Coordinate: +72.000000
South_Bounding_Coordinate: -15.000000

Keywords:
Theme:
Theme_Keyword_Thesaurus: None
Theme_Keyword: Line Feature
Theme_Keyword: Feature Identifier
Theme_Keyword: Census Feature Class Code (CFCC)
Theme_Keyword: Address Range
Theme_Keyword: Geographic Entity
Theme_Keyword: Point/Node
Theme_Keyword: Landmark Feature
Theme_Keyword: Political Boundary
Theme_Keyword: Statistical Boundary
Theme_Keyword: Polygon
Theme_Keyword: County/County Equivalent
Theme_Keyword: TIGER/Line
Theme_Keyword: Topology
Theme_Keyword: Street Centerline
Theme_Keyword: Latitude/Longitude

Theme_Keyword: ZIP Code
Theme_Keyword: Vector
Theme_Keyword: TIGER/Line Identification Number (TLID)
Theme_Keyword: Street Segment
Theme_Keyword: Coordinate
Theme_Keyword: Boundary

Place:

Place_Keyword_Thesaurus:
 FIPS Publication 6-4
 FIPS Publication 55
Place_Keyword: United States
Place_Keyword: U.S. Virgin Islands
Place_Keyword: Puerto Rico
Place_Keyword: Pacific Island Areas
Place_Keyword: County

Access_Constraints: None

Use_Constraints:

None. Acknowledgment of the U.S. Bureau of the Census would be appreciated for products derived from these files. TIGER, TIGER/Line, and Census TIGER are registered trademarks of the Bureau of the Census.

Native_Data_Set_Environment:

TIGER/Line files are created and processed in a VMS environment. The environment consists of two Alpha Server 8400s clustered together running OpenVMS version 6.2-1H3 used for production operations. The Census TIGER system is driven by DEC Command language (DCL) procedures which invoke C software routines to extract selected geographic and cartographic information (TIGER/Line files) from the operational Census TIGER data base.

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:
Accurate against Federal information Processing Standards (FIPS), FIPS Publication 6-4, and FIPS-55 at the 100% level for the codes and base names. The remaining attribute information has been examined but has not been fully tested for accuracy.

Logical_Consistency_Report:

The feature network of lines (as represented by Record Types 1 and 2) is complete for census purposes. Spatial objects in TIGER/Line belong to the "Geometry and topology" (GT) class of objects in the "Spatial Data Transfer Standard" (SDTS) FIPS Publication 173 and are topologically valid. Node/geometry and topology (GT)-polygon/chain relationships are collected or generated to satisfy topological

edit

requirements. These requirements include:

- * Complete chains must begin and end at nodes.
- * Complete chains must connect to each other at nodes.
- * Complete chains do not extend through nodes.
- * Left and right GT-polygons are defined for each complete chain element and are

consistent

throughout the extract process.

- * the chains representing the limits of the files are free of gaps.

The Census Bureau performed automated tests to ensure logical consistency and limits of

files. All polygons are tested for closure. The Census Bureau uses its internally developed

Geographic Update System to enhance and modify spatial and attribute data in the Census

TIGER data base. Standard geographic codes, such as FIPS codes for states, counties, municipalities, and places, are used when encoding spatial entities. The Census Bureau

performed spatial data tests for logical consistency of the codes during the compilation of the original Census TIGER data base files. Most of the Codes themselves were provided to the Census Bureau by the USGS, the agency responsible for maintaining FIPS 55. Feature attribute information has been examined but has not been fully tested for consistency.

Completeness_Report:

Data completeness of the TIGER/Line files reflects the contents of the Census TIGER data base at the time the TIGER/Line files (1998 version) were created.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

The information present in these files is provided for the purposes of statistical analysis and census operations only. Coordinates

in the TIGER/Line files have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest. The positional accuracy varies

with the source materials used, but generally the information is no better than the established national map Accuracy standards for 1:100,000-scale maps from the U.S. Geological Survey

(USGS); thus it is NOT suitable for high-precision measurement applications such as engineering problems, property transfers, or other uses that might require highly accurate measurements of the earth's surface. The USGS 1:100,000-scale maps met national

map accuracy standards and use coordinates defined by the North American Datum, 1983. For

the contiguous 48 States, the cartographic fidelity of most of the 1998 TIGER/Line files, in areas outside the 1980 census Geographic Base File/Dual Independent map Encoding (GBF/DIME) file coverage and selected other large metropolitan areas, compare favorable

with the USGS 1:100,000-scale maps. The Census Bureau cannot specify the accuracy of

features inside of what was the 1980 GBF/DIME-File coverage or selected metropolitan

areas. The Census Bureau added updates to the TIGER/Line files that enumerators annotated on maps sheets prepared from the Census TIGER data base as they attempted to

traverse every street feature shown on the 1990 census map sheets; the Bureau also made

other corrections from updated map sheets supplied by local participants for Census Bureau

programs. The locational accuracy of these updates is of unknown quality. In addition to

the Federal, State, and local sources, portions of the files may contain information obtained

in part from maps and other materials prepared by private companies. Despite the fact the

TIGER/Line data positional accuracy is not as high as the coordinate values imply, the six-

decimal place precision is useful when producing maps. The precision allows features that

are next to each other on the ground to be placed in the correct position, on the map,

relative to each other, without overlap.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator:

U.S. Department of Commerce
Bureau of the Census
Geography Division

Publication_Date: Unpublished material

Title: Census TIGER data base

Edition: 1998

Type_of_Source_Media: On line

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1998

Source_Currentness_Reference:

Date the file was made available to create TIGER/Line
File extracts.

Source_Citation_Abbreviation: TIGER

Source_Contribution:

Selected geographic and cartographic information (line segments) from
the Census TIGER data base.

Process_Step:

Process_Description:

In order for others to use the information in the Census TIGER data
base in a GIS or for other geographic applications, the Census Bureau releases

periodic

extracts of selected information from the Census TIGER data base, organized as
topologically consistent networks. Software (TIGER DB routines) written by the
Geography Division allows for efficient access to Census TIGER system data.

TIGER/Line

files are extracted from the Census TIGER data base by county or statistical

equivalent

area. Census TIGER data for a given county or statistical equivalent area is

then distributed

among 17 fixed length record ASCII files, each one containing attributes for

either line,

polygon, or landmark geographic data types. The Bureau of the Census has

released

various versions of the TIGER/Line files since 1988, with each version having

more updates

(feature and feature names, address ranges and ZIP Codes, coordinate updates,

revised field

definitions, etc.) than the previous version.

Source_Used_Citation_Abbreviation: Census TIGER data base

Process_Date: 1999

Spatial_Data_Organization_Information:

Indirect_Spatial_Reference:

Federal Information Processing Standards (FIPS) and feature names
and addresses.

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Node, network

Point_and_Vector_Object_Count: 570 to 56,000

SDTS_Point_and_Vector_Object_Type: Entity point

SDTS_Point_and_Vector_Object_Type: Complete chain

Point_and_Vector_Object_Count: 790 to 83,000

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains

Point_and_Vector_Object_Count: 290 to 33,000

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000458

Longitude_Resolution: 0.000458

Geographic_Coordinate_Units: Decimal degrees

Entity_and_Attribute_Information:

Overview_Description:

Entity_and_Attribute_Overview: The TIGER/Line files contain data describing three major

types of features/entities;

Line Features -

1) Roads

2) Railroads

3) Hydrography

4) Miscellaneous transportation features and selected power lines and pipe lines

5) Political and statistical boundaries

Landmark Features -

1) Point landmarks, e.g., schools and churches.

2) Area landmarks, e.g., Parks and cemeteries.

3) Key geographic locations (KGLs), e.g., apartment buildings and factories.

Polygon features -

1) Geographic entity codes for areas used to tabulate the 1990 census statistical data and

current geographic areas

2) Locations of area landmarks

3) Locations of KGLs

The line features and polygon information form the majority of data in the TIGER/Line files.

Some of the data/attributes describing the lines include coordinates, feature identifiers

(names), CFCCs (used to identify the most noticeable characteristic of a feature), address

ranges, and geographic entity codes. The TIGER/Line files contain point and area labels that

describe landmark features and provide locational reference. Area landmarks consist of a

feature name or label and feature type assigned to a polygon or group of polygons.

Landmarks may overlap or refer to the same set of polygons.

The Census TIGER data base uses collections of spatial objects (points, lines, and polygons) to model or describe real-world geography. The Census Bureau uses these spatial

objects to represent features such as streets, rivers, and political boundaries and assigns

Entity_and_Attribute_Detail_Citation: U.S. Bureau of the Census, TIGER/Line files, 1997

Technical Documentation. The TIGER/Line documentation defines the terms and definitions

used within the files.

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

U.S. Department of Commerce

Bureau of the Census

Geography Division

Products and Services Staff

Contact_Address:

Address_Type: Physical address

Address: 8903 Presidential Parkway, WP I

City: Upper Marlboro

State_or_Province: Maryland

Postal_Code: 20772

Contact_Voice_Telephone: (301) 457-1128

Contact_Address:

Address_Type: Mailing address

Address: Bureau of the Census

City: Washington

State_or_Province: District of Columbia

Postal_Code: 20233-7400

Contact_Voice_Telephone: (301) 457-1128

Contact_Facsimile_Telephone:

(301) 457-4710

Contact_Electronic_Mail_Address: tiger@census.gov

Resource_Description: 1998 TIGER/Line Files

Distribution_Liability: No warranty, expressed or implied is made and no liability is assumed by

the U.S. Government in general or the Bureau of the Census in specific as to the positional or

attribute accuracy of the data. The act of distribution shall not constitute any such warranty

and no responsibility is assumed by the U.S. Government in the use of these files.

Standard_Order_Process:

Digital_Form:

Digital_Transfer_Information:

Format_Name: TGRLN (compressed)

Format_Version_Number: 1998

Format_Version_Date: 1998

File-Decompression_Technique: PK-ZIP, version 1.93A or higher

Digital_Transfer_Option:

Offline_Option:

Offline_Media: CD-ROM

Recording_Format: ISO 9660

Fees: The TIGER/Line files are grouped by states or statistical equivalent (\$490 for the

complete seven-disc set or \$70 per CD-ROM/disc). Technical documentation is included on

disc or may be downloaded in PDF format over the Internet.

TIGER98: All States (7 CD-ROMs) CD-TGR98-ALL-KIT \$490.

TIGER98: CD-TGR98-01 \$70; Connecticut, Delaware, District of Columbia, Maine, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, Vermont, West Virginia, Puerto Rico, and U.S. Virgin Islands.

TIGER98: CD-TGR98-02 \$70; Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina.

TIGER98: CD-TGR98-03 \$70; Illinois, Indiana, Kentucky, Michigan, Ohio, Tennessee, and Wisconsin.

TIGER98: CD-TGR98-04 \$70; Iowa, Kansas, Minnesota, Missouri, North Dakota, Nebraska, and South Dakota.

TIGER98: CD-TGR98-05 \$70; Arkansas, Louisiana, Oklahoma, and Texas.

TIGER98: CD-TGR98-06 \$70; Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming.

TIGER98: CD-TGR98-07 \$70; Alaska, California, Hawaii, Nevada, Oregon, Washington, and the Outlying Areas of the Pacific.

Ordering_Instructions:

To purchase 1998 TIGER/Line files; order from the U.S. Department

of Commerce, Bureau of the Census, by calling the Customer Services Center at (301)

457-

4100; FAX (301) 457-3842. To obtain more information about ordering TIGER/Line files

visit <http://www.census.gov/geo/www/tiger>.

Turnaround:

Priority Next Day Service; Telephone orders charged to a credit card

(Mastercard or Visa) received by 2:00PM of a business day using priority next day service

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subject to an additional priority fee of \$25 per order for priority (overnight) processing of

CD-ROM orders. Regular Service; 3 to 5 working days following receipt of payment.

Technical_Prequisites: The 1998 TIGER/Line files contain geographic data only and do not

include display or mapping software or statistical data. A list of vendors who have

developed software capable of processing TIGER/Line files can be found by visiting <http://www.census.gov/geo/www/tiger>

Metadata_Reference_Information:

Metadata_Date: 1998

Metadata_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

U.S. Department of Commerce

Bureau of the Census

Geography Division

Products and Services Staff

Contact_Address:

Address_Type: Physical Address

Address: 8903 Presidential Parkway, WP I

City: Upper Marlboro

State_or_Province: Maryland

Postal_Code: 20772

Contact_Voice_Telephone: (301) 457-1128

Contact_Electronic_Mail_Address: tiger@census.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: 19940608

U.S. Census Bureau

[Cartographic Boundary Files](#)

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Cartographic Boundary File Metadata

Boundary File Metadata by Geographic Area

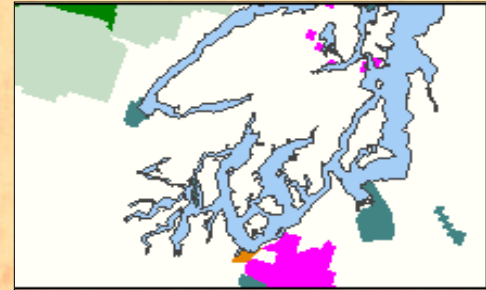


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Federal and Indian Lands: Map Layer Description File



This map layer portrays the federally and Indian administered lands of the United States that have any area equal to or greater than 640 acres. The government agencies that administer these lands include the [Bureau of Indian Affairs](#), the [Bureau of Reclamation](#), the [Bureau of Land Management](#), the [Department of Defense](#), the [Forest Service](#), the [Fish and Wildlife Service](#), the [National Park Service](#), and the [Tennessee Valley Authority](#).

This map layer was produced by the [U.S. Geological Survey](#). It does not include linear (long, relatively narrow) features. Linear features are available in a separate map layer that portrays the locations of [parkways and scenic rivers](#). This Federal and Indian Lands map layer also does not include any federally and Indian held land that has an areal extent smaller than 640 acres (though a separate map layer for these lands is in the works).

[Download this map layer in Shapefile format.](#)

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Metadata

What follows is very detailed technical information about this map layer. This is often called metadata. Metadata (or "data about data") describe the content, quality, condition, and other characteristics of data. Metadata are used to organize and maintain investments in data, to provide information to data catalogs and clearinghouses, and to aid data transfers. The [Federal Geographic Data Committee](#) (FGDC) publishes the [Content Standard for Digital Geospatial Metadata](#). Many organizations within and outside

of the federal government have adopted the FGDC metadata standard and are using automated indexing and serving mechanisms to provide access to their holdings through the Internet. Visit the [FGDC Clearinghouse](#) to learn more about how metadata is used in clearinghouses and to search for other data sets.

- [Identification Information](#)
 - [Data Quality Information](#)
 - [Spatial Data Organization Information](#)
 - [Spatial Reference Information](#)
 - [Entity and Attribute Information](#)
 - [Distribution Information](#)
 - [Metadata Reference Information](#)
-

Identification_Information:

Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1997

Title: Federal Land Features of the U.S. (polygon)

Publication_Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Description:

Abstract:

This data set is an ARC/INFO shapefile that portrays the federally owned land polygon features of the United States. The data set was created by extracting federal land polygon features from the individual 1:2,000,000-scale state boundary DLG files produced by the U.S. Geological Survey. These files were then paneled into a single coverage.

Purpose:

These data were created to serve as a layer for the National Atlas of the United States of America.

Supplemental_Information:

Revisions: 1) 3/22/98 - Corrected topological problems along state lines, corrected coding errors (Lake Tahoe), and added Escalante national monument. State attribute codes were removed. Fort Frederica, GA was deleted because it was below the minimum mapping area of 640 acres. 2) 6/17/98 - Corrected URL for Glacier National Park. 3) 6/29/98 - Corrected ellipsoid name from WGS84 to GRS1980 and changed flattening ratio.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1972

Ending_Date: 1998

Currentness_Reference: publication date

Status:

Progress: Complete

Maintenance_and_Update_Frequency: Irregular

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: 172

East_Bounding_Coordinate: -66

North_Bounding_Coordinate: 72

South_Bounding_Coordinate: 18

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: federal lands

Theme_Keyword: polygon

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1995, Countries, dependencies, areas of special sovereignty, and their principal administrative divisions (Federal Information Processing Standard 10-4): Washington, D.C., National Institute of Standards and Technology.

Place_Keyword: United States

Access_Constraints: None

Use_Constraints:

None. Acknowledgment of the National Atlas of the United States of America would be appreciated in products derived from these data.

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Steve Kambly

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing and physical address

Address: 561 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 703-648-5094

Contact_Electronic_Mail_Address: skambly@usgs.gov

Native_Data_Set_Environment:

This data are presently stored in ESRI ARC/INFO version 7.1.1 shapefile format.

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

Accuracy at the DLG level was tested by one or more of the following methods: - manual comparison of the source with hard copy plots. - symbolized display of the digital line graph on an interactive computer graphic system. - Selected attributes that could not be visually verified on plots or on screen were interactively queried and verified on screen. As the DLG files were directly converted to ARC/INFO coverages, attributes have not been checked in the ARC/INFO format.

Logical_Consistency_Report:

Using ESRI's ARC/INFO GIS software, the data set was checked for label errors, dangling nodes, and intersections. Polygon topology was built for the data set using the "BUILD" command.

Completeness_Report:

Data completeness generally reflects the content of the original DLG file.

Positional_Accuracy:

Horizontal_Positional_Accuracy:

Horizontal_Positional_Accuracy_Report:

In DLG format, files underwent comparison to a graphic source or image source that was used as control to assess digital positional accuracy. During conversion to ARC/INFO coverage format and during the append process to panel the states together, node snapping and fuzzy tolerances may have caused minimal positional shifts.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1995

Title: 1:2,000,000-scale Digital Line Graph Data

Publication_Information:

Publication_Place: Reston, VA

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 2000000

Type_of_Source_Media: CD-ROM

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1970

Ending_Date: 1995

Source_Currentness_Reference: publication date

Source_Contribution: Spatial and attribute information

Source_Citation_Abbreviation: nn2milbd.do where nn = state abbreviation

Process_Step:

Process_Description:

This file was originally digitized by the National Mapping Division based on the sectional maps contained in 'The National Atlas of the United States of America' published by the USGS in 1970. The sectional maps were updated during 1978-1981 and digitized in the early 1980's. The data were updated in 1995 using 1:1,000,000-scale and 1:2,000,000-scale BLM state base maps. These data were published on CD-ROM in 1995. Using ARC/INFO software, the DLG optional format files were converted to ARC/INFO coverages using the DLGARC command. Only federal land polygons and attribute information were extracted for inclusion. The sections were then paneled together using the ARC/INFO command APPEND. "Slivers" created during the append process were identified and deleted using the ELIMINATE command. The attribute AGBUR was added for plotting purposes. The codes used are: BIA (Bureau of Indian Affairs), BOR (Bureau of Reclamation), BLM (Bureau of Land Management), DOD (Dept. of Defense), FS (Forest Service), FWS (Fish and Wildlife Service), NPS (National Park Service), TVA (Tennessee Valley Authority), and OTHER. In 1998, topological errors introduced when the state files were paneled were corrected. Grand Staircase-Escalante National Monument was added. Coding of Lake Tahoe was corrected, and Fort Frederica, GA was deleted because it was smaller than the minimum area of 640 acres. The data were converted to shapefile format for use in National Atlas applications and for distribution to the public.

Source_Used_Citation_Abbreviation: nn2milbd.do where nn = state abbreviation

Process_Date: 1997

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: Ring composed of chains

Point_and_Vector_Object_Count: 50763

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: complete chain

Point_and_Vector_Object_Count: 91840

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000278

Longitude_Resolution: 0.000278

Geographic_Coordinate_Units: Decimal Degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum 1983

Ellipsoid_Name: GRS1980

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: FEDLANP020.PAT

Entity_Type_Definition: Attribute table of FEDLANP020 polygons.

Entity_Type_Definition_Source: ARC/INFO

Attribute:

Attribute_Label: AREA

Attribute_Definition: Area of poly/region in square coverage units

Attribute_Definition_Source: software computed

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Maximum: positive real number

Range_Domain_Minimum: positive real number

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: PERIMETER

Attribute_Definition: Perimeter of poly/region in coverage units

Attribute_Definition_Source: software computed

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: positive real number

Range_Domain_Maximum: positive real number

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: FEDLANP020#

Attribute_Definition: Polygon internal identification number

Attribute_Definition_Source: software computed

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: positive integer

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: FEDLANP020-ID

Attribute_Definition: Polygon user identification number

Attribute_Definition_Source: software computed

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: positive integer

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: FEATURE1

Attribute_Definition: Primary Federal agency/bureau

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: FEATURE2

Attribute_Definition: Secondary Federal agency/bureau

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: FEATURE3

Attribute_Definition: Tertiary Federal agency/bureau

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: AGBUR

Attribute_Definition: Agency code

Attribute_Definition_Source: none

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Agency/Bureau codes

Codeset_Source: none (See Process_Description)

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: STATE_FIPS

Attribute_Definition: 2-digit state FIPS code

Attribute_Definition_Source: FIPS PUB 5-2

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name:

Codes for the identification of the States, the District of Columbia and the outlying areas of the United States, and associated areas.

Codeset_Source: FIPS PUB 5-2

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: NAME1

Attribute_Definition: Primary name of the federal land feature

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: NAME2

Attribute_Definition: Secondary name of the federal land feature

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: NAME3

Attribute_Definition: Tertiary name of the federal land feature

Attribute_Definition_Source: US GeoData Data Users Guide 3

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Boundary layer attribute codes

Codeset_Source: US GeoData Data Users Guide 3

Attribute_Measurement_Frequency: None planned

Attribute:

Attribute_Label: STATES

Attribute_Definition: Name of state

Attribute_Definition_Source: FIPS PUB 5-2

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name:

Codes for the identification of the States, the District of Columbia and the outlying areas of the United States, and associated areas.

Codeset_Source: FIPS PUB 5-2

Attribute_Measurement_Frequency: None planned

Overview_Description:

Entity_and_Attribute_Overview:

!The polygon attribute table: !COLUMN ITEM NAME WIDTH OUTPUT TYPE
N.DEC ! 1 AREA 4 12 F 3 ! 5 PERIMETER 4 12 F 3 ! 9 FEDLP020# 4 5 B - ! 13
FEDLP020-ID 4 5 B - ! 17 FEATURE1 80 80 C - ! 97 FEATURE2 80 80 C - !177
FEATURE3 80 80 C - !257 AGBUR 7 7 C - !264 STATE_FIPS 2 2 C - !266 NAME1
80 80 C - !346 NAME2 80 80 C - !426 NAME3 80 80 C - !506 STATES 50 50 C -

Entity_and_Attribute_Detail_Citation: none

Distribution_Information:

Distributor:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Bruce Wright

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing address

Address: 521 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 703-648-4528

Contact_Electronic_Mail_Address: bwright@usgs.gov

Distribution_Liability: None

Metadata_Reference_Information:

Metadata_Date: 19980520

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Bruce Wright

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing and physical address

Address: 521 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 703-648-4528

Contact_Electronic_Mail_Address: bwright@usgs.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Security_Information:

Metadata_Security_Classification_System: None

Metadata_Security_Classification: Unclassified

Metadata_Security_Handling_Description: None



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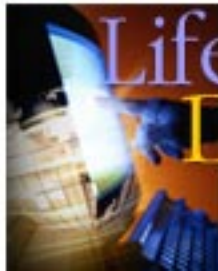
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Welcome to TVA, a unique federal corporation that is America's largest public power company, the steward of the Tennessee River system, and a regional economic development agency.



tvaretirees



LifeStyles Destinations

Through volunteer service, through public-policy activism, through habitual acts of good citizenship, some 20,000 [TVA retirees](#) continue to make a difference for the good of the region and the country. Find out how their energetic involvement with the world around them enriches all of our lives.

TVA University

Designed to give TVA the ability to adapt quickly to a fluid business environment, TVA University is internationally recognized as a model for employee training. [Find out how TVAU transforms a corporation from the ground up.](#)

The Big Picture

Flash Gray brought a strong character and broad vision to the Tennessee Valley. [TVA Heritage](#) describes the legacy of TVA's "planning pioneer."

Annual Environmental Report

TVA must balance its mission of supplying low-cost, reliable power with its duties as a steward of the Valley's natural resources. TVA's first [Annual Environmental Report](#) records our accomplishments to date, and what still has to be done.

Regional Resource Stewardship Council

TVA manages a complex river system to benefit all the people of the Tennessee Valley. The Regional Resource Stewardship Council helps open the process to public participation. [Meet the Council members and view meeting reports here.](#)

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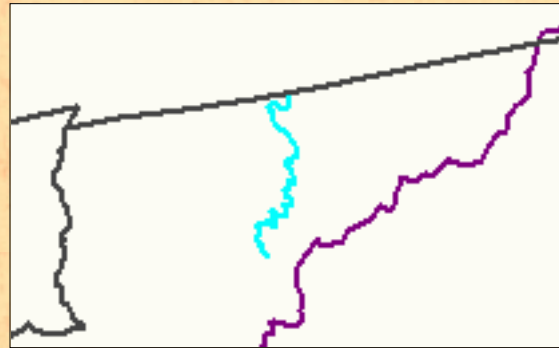


**CLEAN WATER
ACTION PLAN**

[Unified Federal Policy](#)



Parkways and Scenic Rivers: Map Layer Description File



This map layer portrays the locations of federally administered parkways and wild and scenic rivers. This map layer was produced by the [U.S. Geological Survey](#).

[Download this map layer in Shapefile format.](#)

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Metadata

What follows is very detailed technical information about this map layer. This is often called metadata. Metadata (or "data about data") describe the content, quality, condition, and other characteristics of data. Metadata are used to organize and maintain investments in data, to provide information to data catalogs and clearinghouses, and to aid data transfers. The [Federal Geographic Data Committee](#) (FGDC) publishes the [Content Standard for Digital Geospatial Metadata](#). Many organizations within and outside of the federal government have adopted the FGDC metadata standard and are using automated indexing and serving mechanisms to provide access to their holdings through the Internet. Visit the [FGDC Clearinghouse](#) to learn more about how metadata is used in clearinghouses and to search for other data sets.

- [Identification Information](#)
- [Data Quality Information](#)
- [Spatial Data Organization Information](#)
- [Spatial Reference Information](#)

- [Entity and Attribute Information](#)
 - [Distribution Information](#)
 - [Metadata Reference Information](#)
-

Identification_Information:

Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 20000403

Title:

Federal Land Features of the United States - Parkways and Scenic Rivers

Publication_Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Online_Linkage: <http://www-atlas.usgs.gov/atlasftp.html>

Description:

Abstract:

This data set portrays the linear federally-owned land features (i.e., national parkways, wild and scenic rivers, etc.) of the United States. The data set was created by extracting linear federal land features from the 1:2,000,000-scale individual State DLG files produced by the U.S. Geological Survey. These files were then merged into a single coverage. This is a revised version of the March 1999 data set.

Purpose:

These data are intended for geographic display and analysis at the national level, and for large regional areas. The data should be displayed and analyzed at scales appropriate for 1:2,000,000-scale data. No responsibility is assumed by the U.S. Geological Survey in the use of these data.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1972

Ending_Date: 2000

Currentness_Reference: Ground condition

Status:

Progress: Complete

Maintenance_and_Update_Frequency: Irregular

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -162

East_Bounding_Coordinate: -69

North_Bounding_Coordinate: 69

South_Bounding_Coordinate: 26

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: Federal lands

Theme_Keyword: Parkways

Theme_Keyword: Rivers

Theme_Keyword: Scenic Rivers

Theme_Keyword: Wild and Scenic Rivers

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1995, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions (Federal Information Processing Standard (FIPS) 10-4): Washington, D.C., National Institute of Standards and Technology.

Place_Keyword: United States

Place:

Place_Keyword_Thesaurus:

U.S. Department of Commerce, 1987, Codes for the Identification of the States, the District of Columbia and the Outlying Areas of The United States, and Associated Areas (Federal Information Processing Standard (FIPS) 5-2): Washington, D.C., National Institute of Standards and Technology.

Place_Keyword: USA

Place_Keyword: Alabama

Place_Keyword: Alaska

Place_Keyword: Arizona

Place_Keyword: Arkansas

Place_Keyword: California

Place_Keyword: Colorado

Place_Keyword: Connecticut

Place_Keyword: Delaware

Place_Keyword: District of Columbia

Place_Keyword: Florida

Place_Keyword: Georgia

Place_Keyword: Hawaii

Place_Keyword: Idaho
Place_Keyword: Illinois
Place_Keyword: Indiana
Place_Keyword: Iowa
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Place_Keyword: Massachusetts
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Place_Keyword: Mississippi
Place_Keyword: Montana
Place_Keyword: Nebraska
Place_Keyword: Nevada
Place_Keyword: New Hampshire
Place_Keyword: New Jersey
Place_Keyword: New Mexico
Place_Keyword: New York
Place_Keyword: North Carolina
Place_Keyword: North Dakota
Place_Keyword: Ohio
Place_Keyword: Oklahoma
Place_Keyword: Oregon
Place_Keyword: Pennsylvania
Place_Keyword: Rhode Island
Place_Keyword: South Carolina
Place_Keyword: South Dakota
Place_Keyword: Tennessee
Place_Keyword: Texas
Place_Keyword: Utah
Place_Keyword: Vermont
Place_Keyword: Virginia
Place_Keyword: Washington

Place_Keyword: West Virginia

Place_Keyword: Wisconsin

Place_Keyword: Wyoming

Place_Keyword: Puerto Rico

Place_Keyword: Virgin Islands

Place_Keyword: U.S. Virgin Islands

Access_Constraints: None

Use_Constraints:

None. Acknowledgment of the National Atlas of the United States of America and (or) the U.S. Geological Survey would be appreciated in products derived from these data.

Point_of_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Woodley Chu

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing and physical address

Address: 561 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 703-648-6375

Contact_Electronic_Mail_Address: wchu@usgs.gov

Data_Quality_Information:

Logical_Consistency_Report:

No additional checks for topological consistency were performed on this data set.

Completeness_Report:

This data set includes linear Federal Lands for all 50 States, Puerto Rico, and the U.S. Virgin Islands. Data completeness generally reflects the content of the original DLG files.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1995

Title: 1:2,000,000-scale Digital Line Graph Data - Boundaries

Publication_Information:

Publication_Place: Reston, VA

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 2000000

Type_of_Source_Media: CD-ROM

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1970

Ending_Date: 1995

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: 2MILBD

Source_Contribution: Spatial and attribute information

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1998

Title: Linear Federal Land Features of the United States

Publication_Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 2000000

Type_of_Source_Media: online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1998

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: ATLAS-FEDL

Source_Contribution: Spatial and attribute information

Source_Information:

Source_Citation:

Citation_Information:

Originator: National Park Service

Publication_Date: 200002

Title: Wild and Scenic Rivers web site

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: National Park Service

Online_Linkage: <<http://www.nps.gov/rivers/index.html>>

Type_of_Source_Media: online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 200002

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: Wild and Scenic Rivers web site

Source_Contribution: Spatial and attribute information

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1998

Title: Hydrography Features of the United States

Publication_Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 2000000

Type_of_Source_Media: online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1998

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: ATLAS-HY

Source_Contribution: Spatial information

Source_Information:

Source_Citation:

Citation_Information:

Originator: U.S. Geological Survey

Publication_Date: 1998

Title: Major roads of the United States

Publication_Information:

Publication_Place: Reston, Virginia

Publisher: U.S. Geological Survey

Source_Scale_Denominator: 2000000

Type_of_Source_Media: online

Source_Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: 1998

Source_Currentness_Reference: publication date

Source_Citation_Abbreviation: ATLAS-RD

Source_Contribution: Spatial information

Process_Step:

Process_Description:

This file was originally digitized by the National Mapping Division based on the sectional maps contained in 'The National Atlas of the United States of America' published by the USGS in 1970. The sectional maps were updated during 1978-1981 and digitized in the early 1980's. The data were updated in 1995 using 1:1,000,000-scale and 1:2,000,000-scale Bureau of Land Management State base maps. These data were published on CD-ROM in 1995. Using ARC/INFO software, the DLG optional format files were converted to ARC/INFO coverages using the DLGARC command. Only linear federal land features and attribute information were extracted for inclusion. The individual State coverages were then merged together using the ARC/INFO command APPEND. The resulting data set was ATLAS-FEDL.

Source_Used_Citation_Abbreviation: 2MILBD

Process_Date: 1998

Source_Produced_Citation_Abbreviation: ATLAS-FEDL

Process_Step:

Process_Description:

Using ATLAS-FEDL the spatial and attribute data were updated using the Wild and Scenic Rivers web site. The spatial data was aligned with ATLAS-HY and ATLAS-RD.

Source_Used_Citation_Abbreviation: ATLAS-FEDL

Source_Used_Citation_Abbreviation: Wild and Scenic Rivers web site

Source_Used_Citation_Abbreviation: ATLAS-HY

Source_Used_Citation_Abbreviation: ATLAS-RD

Process_Date: 1999

Process_Step:

Process_Description:

Sudbury, Assabet, and Concord Wild and Scenic Rivers, MA were added.

Source_Used_Citation_Abbreviation: Wild and Scenic Rivers web site

Source_Used_Citation_Abbreviation: ATLAS-HY

Process_Date: 2000

Spatial_Data_Organization_Information:

Indirect_Spatial_Reference:

U.S. Department of Commerce, 1995, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions. (FIPS 10-4): Washington, D.C., National Institute of Standards and Technology.

U.S. Department of Commerce, 1987, Codes for the Identification of the States, the District of Columbia and The Outlying Areas of the United States, and Associated Areas (FIPS 5-2): Washington, D. C., National Institute of Standards and Technology.

U.S. Department of Commerce, 1990, Counties and Equivalent Entities of the United States, Its Possessions, and Associated Areas (FIPS 6-4): Washington, D.C., National Institute of Standards and Technology.

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: complete chain

Point_and_Vector_Object_Count: 356

Spatial_Reference_Information:

Horizontal_Coordinate_System_Definition:

Geographic:

Latitude_Resolution: 0.000278

Longitude_Resolution: 0.000278

Geographic_Coordinate_Units: Decimal Degrees

Geodetic_Model:

Horizontal_Datum_Name: North American Datum of 1983

Ellipsoid_Name: GRS1980

Semi-major_Axis: 6378137

Denominator_of_Flattening_Ratio: 298.257222

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label:

Linear Federal Lands described by FEDLANL020.AAT or fedlanl020.dbf)

Entity_Type_Definition:

Linear federally-owned land features (i.e., national parkways, wild and scenic rivers, etc.) of the United States.

Entity_Type_Definition_Source: U.S. Geological Survey

Attribute:

Attribute_Label: Shape

Attribute_Definition: The representation of the entity in the data.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Polyline

Enumerated_Domain_Value_Definition:

1-dimensional element that may or may not surround a 2-dimensional element.

Enumerated_Domain_Value_Definition_Source: ESRI GIS software

Attribute:

Attribute_Label: Fnode# or Fnode_

Attribute_Definition: Internal number of the from-node.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: 541

Attribute:

Attribute_Label: Tnode# or Tnode_

Attribute_Definition: Internal number of the to-node.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 3

Range_Domain_Maximum: 543

Attribute:

Attribute_Label: Lpoly# or Lpoly_

Attribute_Definition: Internal number of the polygon to the left of the arc.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 1

Attribute:

Attribute_Label: Rpoly# or Rpoly_

Attribute_Definition: Internal number of the polygon to the right of the arc.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0

Range_Domain_Maximum: 1

Attribute:

Attribute_Label: Length

Attribute_Definition: The length of the arc in coverage units.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0.000

Range_Domain_Maximum: 5.226

Attribute:

Attribute_Label: FEDLANL020# or fedlanl020

Attribute_Definition: Internal feature number

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: 356

Attribute:

Attribute_Label: FEDLANL020-ID or fedlanl020

Attribute_Definition: User-assigned feature number

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 1

Range_Domain_Maximum: 356

Attribute:

Attribute_Label: Name

Attribute_Definition: Name of the Federal land feature.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Unrepresentable_Domain: There is no predefined set of valid Federal land feature names.

Attribute:

Attribute_Label: Feature

Attribute_Definition: Type of Federal land feature.

Attribute_Definition_Source: U.S. Geological Survey

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: National Monument NPS

Enumerated_Domain_Value_Definition:

Landmarks, structures, and other objects of historic or scientific interest situated on lands owned or controlled by the government. Managed by the National Park Service.

Enumerated_Domain_Value_Definition_Source:

National Park Service

(<http://www.nps.gov/legacy/nomenclature.html>)

Enumerated_Domain:

Enumerated_Domain_Value: National Park NPS

Enumerated_Domain_Value_Definition:

Generally large natural places having a wide variety of attributes, at times including significant historic assets. Managed by the National Park Service.

Enumerated_Domain_Value_Definition_Source:

National Park Service

(<http://www.nps.gov/legacy/nomenclature.html>)

Enumerated_Domain:

Enumerated_Domain_Value: National Parkway NPS

Enumerated_Domain_Value_Definition:

A roadway and the parkland paralleling the roadway, that is intended for scenic motoring along a protected corridor and often connecting cultural sites. Managed by the National Park Service.

Enumerated_Domain_Value_Definition_Source:

National Park Service

(<http://www.nps.gov/legacy/nomenclature.html>)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
ACOE/USFS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Army Corps of Engineers and the U.S. Forest Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River BLM

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Bureau of Land Management.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River BLM/NPS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Bureau of Land Management and the National Park Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
BLM/NPS/USFS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Bureau of Land Management, the National Park Service, and the U.S. Forest Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
BLM/USFS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Bureau of Land Management and the U.S. Forest Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
BLM/USFWS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the Bureau of Land Management and the U.S. Fish and Wildlife Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River NPS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the National Park Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
NPS/USFS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the National Park Service and the U.S. Forest Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River

Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River
NPS/USFWS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the National Park Service and the U.S. Fish and Wildlife Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River USFS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the National Forest Service.

Enumerated_Domain_Value_Definition_Source: Wild and Scenic River Act (P.L. 90-542)

Enumerated_Domain:

Enumerated_Domain_Value: National Wild and Scenic River USFWS

Enumerated_Domain_Value_Definition:

Certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. Managed by the National Fish and Wildlife Service.

Enumerated_Domain_Value_Definition_Source:

Wild and Scenic River Act (P.L. 90-542)

Distribution_Information:

Distributor:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Earth Science Information Center, U.S. Geological Survey

Contact_Address:

Address_Type: mailing address

Address: 507 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 1-888-ASK-USGS (1-888-275-8747)

Hours_of_Service: 0800-1600

Contact_Instructions:

In addition to the address above there are other ESIC offices throughout the country. A full list of these offices is at

[<http://mapping.usgs.gov/esic/esic_index.html>](http://mapping.usgs.gov/esic/esic_index.html)

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Digital_Form:

Digital_Transfer_Information:

Format_Name: ESRI Shapefile

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name:

[<http://www-atlas.usgs.gov/atlasftp.html>](http://www-atlas.usgs.gov/atlasftp.html)

Digital_Transfer_Option:

Offline_Option:

Offline_Media: CD-ROM

Recording_Format: tar

Digital_Form:

Digital_Transfer_Information:

Format_Name: SDTS

Digital_Transfer_Option:

Online_Option:

Computer_Contact_Information:

Network_Address:

Network_Resource_Name:

<http://www-atlas.usgs.gov/atlasftp.html>

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Offline_Media: CD-ROM

Recording_Format: tar

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<http://www.nationalatlas.gov/atlasftp.html#q12>.

Metadata_Reference_Information:

Metadata_Date: 20000407

Metadata_Contact:

Contact_Information:

Contact_Person_Primary:

Contact_Person: Gita Urban-Mathieux

Contact_Organization: U.S. Geological Survey

Contact_Address:

Address_Type: mailing address

Address: 521 National Center

City: Reston

State_or_Province: VA

Postal_Code: 20192

Contact_Voice_Telephone: 703-648-5175

Contact_Electronic_Mail_Address: burbanma@usgs.gov

Metadata_Standard_Name: FGDC Content Standards for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Security_Information:

Metadata_Security_Classification_System: None

Metadata_Security_Classification: Unclassified

Metadata_Security_Handling_Description: None

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URL: <http://nationalatlas.gov/parkwaysm.html>

Public access to these map layers is provided by the [EROS Data Center](#)

Comments and feedback: [atlasmail](#)

Last modification: 27JUL00 jld

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Federal Geographic Data Committee

The Federal Geographic Data Committee coordinates the development of the National Spatial Data Infrastructure ([NSDI](#)). The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data. The 17 federal agencies that make up the FGDC are developing the NSDI in cooperation with organizations from state, local and tribal governments, the academic community, and the private sector.

l a t e s t n e w s

- [F.E.M.A. / North Carolina Agreement](#) 15 September 2000
- [FGDC Endorses Utilities Data Content Standard](#)
- [Announcing the FY 2000 Cooperative Agreement Program Projects](#)
- [NSDI Boilerplate Procurement Language](#)
- [FGDC Register Review of ISO Metadata Standard 19115.3](#)
- [Improving Federal Agency Geospatial Data Coordination](#)
- [**GeoData Alliance Organizational Initiative**](#)
- [Evaluation of FGDC's NSDI Grants Programs](#)
- [FGDC Releases Hydrographic Standard for Public Review](#)
- [FGDC Electronic Metadata Workbook](#)
- [The Community/Federal Information Partnership](#)

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Updated: Tuesday, 19-Sep-2000 12:57:59 EDT

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metadata

Metadata or "data about data" describe the content, quality, condition, and other characteristics of data. The Federal Geographic Data Committee approved the Content Standard for Digital Geospatial Metadata (FGDC-STD-001-1998) in June 1998. Visit the FGDC [Clearinghouse](#) to learn more about how metadata is used in Internet-based clearinghouses to search for specific data sets.

- [ISO Metadata Standard Register Review](#)
- [What's new with metadata](#)
- [FGDC Ad Hoc Metadata Working Group](#)
- [Metadata Factsheet \(pdf\)](#)
- [Metadata PowerPoint Presentations](#)
- Metadata [Frequently Asked Questions](#)
- [The Value of Metadata, Manager's Brochure](#)
- [Content Standard for Digital Geospatial Metadata \(CSDGM\)](#) (includes references and links to Endorsed Profiles and Profiles Under Development)
- [Metadata Electronic Workbook \(Version 2\)](#)
- [Metadata Tutorials](#)
- [Metadata Tools](#)
- [Development of Metadata Education Strategies for University Curriculum in GIS/GIScience](#), [Univ. of Wyoming, Jan.2000]
- [Metadata Trainers](#)
- [Metadata Training Calendar](#)
- [METADATA TRADEMARK](#)

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URI: <http://www.fgdc.gov/metadata/metadata.html>

Updated: Monday, 26-Jun-2000 07:04:55 EDT

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March 1997

Geospatial Metadata

WHAT ARE METADATA?

Recognize this? It is the food label required by the Food and Drug Administration on all food packaged and transferred from one place to another. As a nation, we have been putting some form of labels on our food since 1913. Today, this label, with its mandatory and voluntary components, tells the consumer everything they need to know to make a decision about the packaged food's ingredients and nutritional content. Using this label the consumer can make an informed decision about the product's fitness for use or consumption.

Nutrition Facts	
Serving Size ½ cup (114g)	
Servings Per Container 4	
Amount Per Serving	
Calories 90	Calories from Fat 30
% Daily Value*	
Total Fat 3g	5%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 300mg	13%
Total Carbohydrate 13g	4%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 3g	
Vitamin A 80%	Vitamin C 60%
Calcium 4%	Iron 4%
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Sound familiar? Just as food is our body's fuel, spatial data is the fuel of the GIS. How do you determine the "really good stuff" from the "junk food"? How do you know if the spatial data is "good" for your system?

The Content Standards for Digital Geospatial Metadata were adopted by the Federal Geographic

Data Committee (FGDC) to label geospatial datasets. Like a company whose product is food, the metadata standard documents the characteristics of data so that consumers can determine the data's fitness for their purpose.

WHY METADATA?

The major uses of metadata are:

- to help organize and maintain an organization's internal investment in spatial data,
- to provide information about an organization's data holdings to data catalogues, clearinghouses, and brokerages, and
- to provide information to process and interpret data received through a transfer from an external source.

THE STANDARD

What do we need to know about our datasets? The standard provides a common set of terminology and definitions for the documentation of geospatial data, including data elements for the following topics:

Identification Information — basic information about the data set. Examples include title, geographic area covered, currentness, and rules for acquiring or using the data.

Data Quality Information — an assessment of the quality of the data set. Examples include positional and attribute accuracy, completeness, consistency, sources of information, and methods used to produce the data. Recommendations on information to be reported and tasks to be performed are in the Spatial Data Transfer Standard (Federal Information Processing Standard 173 - 1992).

Spatial Data Organization Information — the mechanism used to represent spatial information in the data set. Examples include the method used to represent spatial positions directly (such as raster or vector) and indirectly (such as street addresses or county codes) and the number of spatial objects in the data set.

Spatial Reference Information — description of the reference frame for, and means of encoding, coordinates in the data set. Examples include the name of and parameters for map projections or grid coordinate systems, horizontal and vertical datums, and the coordinate system resolution.

Entity and Attribute Information — information about the content of the data set, including the entity types and their attributes and the domains from which attribute values may be assigned. Examples include the names and definitions of features, attributes, and attribute values.

Distribution Information — information about obtaining the data set. Examples include a contact for the distributor, available formats, information about how to obtain data sets online or on physical media

(such as cartridge tape or CD-ROM), and fees for the data.

Metadata Reference Information — information on the currentness of the metadata information and the responsible party.

The standard has sections that specify contact information for organizations or individuals that developed or distribute the data set, temporal information for time periods covered by the data set, and citation information for the data set and information sources from which the data were derived.

The standard does not specify how this information is organized in a computer system or in a data transfer, nor the means by which this information is transmitted or communicated to the user. At this point in time, these formats are optional.

ADDITIONAL INFORMATION

The standard and other metadata materials, along with the implementation guidelines for the clearinghouse, are available from the FGDC Secretariat at the above address or from the FGDC server connected to the Internet via: Anonymous FTP

Metadata - [www.fgdc.gov](http://www.fgdc.gov/pub/metadata) under the subdirectory /pub/metadata

Clearinghouse - [www.fgdc.gov](http://www.fgdc.gov/pub/clearinghouse) under the subdirectory /pub/clearinghouse

The README files in the subdirectories give detailed information about the available files.

FGDC Web Server <<http://www.fgdc.gov/>>

USGS
NSDI

[Tools for creation of formal metadata](#)

Frequently-asked questions on FGDC metadata

This list of frequently asked questions (FAQs) carries no official sanction with USGS or FGDC.

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 - [How does mp handle URLs and other HTML code?](#)
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 - [Can you forecast the fate of mp? A number of my colleagues here have expressed concern about committing to tools that "go away."](#)
 - [Are mp, xtme, Tkme, and cns Year-2000 compliant?](#)
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-



Motivation

What is metadata?

Metadata consist of information that characterizes data. Metadata are used to provide documentation for data products. In essence, metadata answer **who, what, when, where, why**, and **how** about every facet of the data that are being documented.

Online systems for handling metadata need to rely on their (*metadata* is plural, like *data*) being predictable in both form and content. Predictability is assured only by conformance to standards. The standard referred to in this document is the [Content Standard for Digital Geospatial Metadata](#). I refer to this as the *FGDC standard* even though FGDC deals with other standards as well, such as the Spatial Data Transfer Standard (SDTS).

Why should I create metadata?

Metadata helps publicize and support the data you or your organization have produced.

Metadata that conform to the FGDC standard are the basic product of the National Geospatial Data Clearinghouse, a distributed online catalog of digital spatial data. This clearinghouse will allow people to understand diverse data products by describing them in a way that emphasizes aspects that are common among them.

Who should create metadata?

Data managers who are either technically-literate scientists or scientifically-literate computer specialists. Creating correct metadata is like library cataloging, except the creator needs to know more of the scientific information behind the data in order to properly document them. Don't assume that every -ologist or -ographer needs to be able to create proper metadata. They will complain that it is too hard and they won't see the benefits. But ensure that there is good communication between the metadata producer and the data producer; the former will have to ask questions of the latter.

Why is this so hard?!

While gain need not be proportional to pain, certainly if there is no pain, there will likely be no gain. Library catalog records aren't produced by the authors of books or magazines, and with good reason. To get consistency in documentation that emphasizes the common aspects of highly diverse products, you need some sophistication with MARC. The FGDC metadata effort is quite similar, but asks for more detail about the products themselves.

How do we deal with people who complain that it's too hard? The solution in most cases is to redesign the work flow rather than to develop new tools or training. People often assume that data producers must generate their own metadata. Certainly they should provide informal, unstructured documentation, but they should not necessarily have to go through the rigors of fully-structured formal metadata. For scientists or GIS specialists who produce one or two data sets per year it simply isn't worth their time to learn the FGDC standard. Instead, they should be asked to fill out a less- complicated form or template that will be rendered in the proper format by a data manager or cataloger who is familiar (not necessarily expert) with the subject and well-versed in the metadata standard. If twenty or thirty scientists are passing data to the data manager in a year, it *is* worth the data manager's time to learn the FGDC standard. With good communication this strategy will beat any combination of software tools and training.



The metadata standard

Why is the metadata standard so complex?

The standard is designed to describe all possible geospatial data.

There are 334 different *elements* in the FGDC standard, 119 of which exist only to contain other elements. These *compound elements* are important because they describe the relationships among other elements. For example, a bibliographic reference is described by an element called `Citation_Information` which contains both a `Title` and a `Publication_Date`. You need to know *which* publication date belongs to a particular title; the hierarchical relationship described by `Citation_Information` makes this clear.

What about Metadata-Lite?

The most cogent discussion of this topic is from Hugh Phillips, posted to the email list NSDI-L.

Begin excerpt from Hugh Phillips

Over the past several months there have been several messages posted in regard to Metadata 'Core.' Several messages reflected frustration with the complexity of the CSDGM and suggested the option of a simplified form or 'Core' subset of the full standard. At the other end of the spectrum was concern the full standard already is the 'Core' in that it represents the information necessary to evaluate, obtain, and use a data set.

One suggestion has been for the definition of a 'Minimum Searchable Set' i.e. the fields which Clearinghouse servers should index on, and which should be individually searchable. There have been proposals for this set, e.g. the Dublin Core or the recently floated 'Denver Core.' The suggested fields for the 'Denver Core' include:

Theme_Keywords
Place_Keywords
Bounding_Coordinates
Abstract
Purpose
Time_Period_of_Content
Currentness_Reference
Geospatial_Data_Presentation_Form
Originator
Title
Language
Resource_Description

Language (for the metadata) is an element not currently appearing the CSDGM. I have no problem with the Denver Core as a Minimum Searchable Set, it is mainly just a subset of the mandatory elements of the CSDGM, and hence should *always* be present.

In contrast, I am very much against the idea of defining a Metadata Content 'Core' which represents a subset of the CSDGM. If this is done, the 'Core' elements will become the Standard. No one will create metadata to the full extent of the Standard and as a result it may be impossible to ascertain certain aspects of a data set such as its quality, its attributes, or how to obtain it. I have sympathy for those who feel that the CSDGM is onerous and that they don't have time to fully document their data sets. Non-federal agencies can do whatever parts of the CSDGM they want to and have time for. As has been said, 'There are no metadata police.' However, whatever the reason for creating abbreviated metadata, it shouldn't be validated by calling it 'Core.' 'Hollow Core' maybe.

Okay. Let us cast aside the term 'Core' because it seems like sort of a loaded word. The fact is, there are many people and agencies who want a shortcut for the Standard because "It's too hard" or because they have "Insufficient time."

"It's too hard" is a situation resulting from lack of familiarity with the CSDGM and from frustration with its structural overhead. This could be remedied if there were more example metadata and FAQs available to increase understanding, through the act of actually trying to follow through the standard to the best of ones ability, and metadata tools that insulated the user from the structure. The first data set documented is always the worst. The other aspect to "Its too hard" is that documenting a data set fully requires a (sometimes) uncomfortably close look at the data and brings home the realization of how little is really known about its processing history.

"Insufficient time" to document data sets is also a common complaint. This is a situation in which

managers who appreciate the value of GIS data sets can set priorities to protect their data investment by allocating time to document it. Spending one or two days documenting a data set that may have taken months or years to develop at thousands of dollars in cost hardly seems like an excessive amount of time.

These 'pain' and 'time' concerns have some legitimacy, especially for agencies that may have hundreds of legacy data sets which could be documented, but for which the time spent documenting them takes away from current projects. At this point in time, it seems much more useful to have a lot of 'shortcut' metadata rather a small amount of full blown metadata. So what recommendations can be made to these agencies with regard to a sort of 'minimum metadata' or means to reduce the documentation load?

1. Don't invent your own standard. There already is one. Try to stay within its constructs. Subtle changes from the CSDGM such as collapse of compound elements will be costly in the long run - you won't be able to use standard metadata tools and your metadata may not be exchangeable.

Don't confuse the metadata presentation (view) with the metadata itself.

2. Consider data granularity. Can you document many of your data sets (or tiles) under an umbrella parent? Linda Hill and Mary Larsgaard have recently proposed a robust way to accomplish this in a modification of the standard which seems very insightful.
3. Prioritize your data. Begin by documenting those data sets which have current or anticipated future use, data sets which form the framework upon which others are based, and data sets which represent your organization's largest commitment in terms of effort or cost.
4. Document at a level that preserves the value of the data within *your* organization. Consider how much you would like to know about your data sets if one of your senior GIS operators left suddenly in favor of a primitive lifestyle on a tropical island.

End of excerpt from Hugh Phillips

Can I make new metadata elements?

Certainly. These are called *extensions* and should be used with caution. First of all, you should not add any element that you think is an obvious omission. If you think that FGDC left out something that everybody is going to need, you probably will find a place for the information in the existing standard. But the name or position of the standard element might be different than what you are expecting.

Application-specific extensions, on the other hand, will be common. Every scientific discipline has terms and qualities that are unique or shared with only a few others. These cannot be practically incorporated into the Standard. Here are guidelines for creating extensions that will work:

1. Extensions are elements not already in the Standard that are added to convey information used in a particular discipline.

Example: in the NBII, Taxonomy is a component of Metadata, and is the root of a subtree describing biological classification.

2. Extensions should not be added just to change the name of an existing element. Element names are essentially a problem to be solved in the user-interface of metadata software.
3. Extensions must be added as children of existing compound elements. Do not redefine an existing scalar element as compound.

Example: Do not add elements to Supplemental_Information; that field is defined as containing free text.

4. Redefining an existing compound element as a scalar does not constitute an extension, but is an error.

Example: Description contains the elements Abstract, Purpose, and Supplemental_Information. These components must not be replaced with free text.

- Existing elements may be included as children of extensions, but their inclusion under the extensions must not duplicate their functions within the standard elements.

Example: To indicate contact information for originators who are not designated as the Point_of_Contact, create an additional element Originator_Contact, consisting of Contact_Information. But the element Point_of_Contact is still required even if the person who would be named there is one of the originators.

How do I create metadata?

First you have to understand both the data you are trying to describe and the standard itself. Then you need to decide about how you will encode the information. Normally, you will create a single disk file for each metadata record, that is, one disk file describes one data set. You then use some tool to enter information into this disk file so that the metadata conform to the standard. Specifically,

- Assemble information about the data set.
- Create a digital file containing the metadata, properly arranged.
- Check the syntactical structure of the file. Modify the arrangement of information and repeat until the syntactical structure is correct.
- Review the content of the metadata, verifying that the information describes the subject data completely and correctly.

A digression on *conformance* and *interoperability*

The FGDC standard is truly a *content* standard. It does not dictate the layout of metadata in computer files. Since the standard is so complex, this has the practical effect that *almost any metadata can be said to conform to the standard*; the file containing metadata need only contain the appropriate information, and that information need not be easily interpretable or accessible by a person or even a computer.

This rather broad notion of conformance is not very useful. Unfortunately it is rather common. Federal agencies wishing to assert their conformance with the FGDC standard need only claim that they conform; challenging such a claim would seem to be petty nitpicking. But to be truly useful, the metadata must be clearly comparable with other metadata, not only in a visual sense, but also to software that indexes, searches, and retrieves the documents over the internet. For real value, metadata must be both *parseable*, meaning machine-readable, and *interoperable*, meaning they work with software used in the Clearinghouse.

○ *Parseable*

To *parse* information is to analyze it by disassembling it and recognizing its components. Metadata that are parseable clearly separate the information associated with each element from that of other elements. Moreover, the element values are not only separated from one another but are clearly related to the corresponding element names, and the element names are clearly related to each other as they are in the standard.

In practice this means that your metadata must be arranged in a hierarchy, just as the elements are in the standard, and they must use standard names for the elements as a way to identify the information contained in the element values.

- *Interoperable*

To operate with software in the Clearinghouse, your metadata must be readable by that software. Generally this means that they must be parseable and must identify the elements in the manner expected by the software.

The FGDC Clearinghouse Working Group has decided that metadata should be exchanged in Standard Generalized Markup Language (SGML) conforming to a Document Type Declaration (DTD) developed by USGS in concert with FGDC.

What tools are available to create metadata?

You can create metadata in SGML using a text editor. However, this is not advisable because it is easy to make errors, such as omitting, misspelling, or misplacing the tags that close compound elements. These errors are difficult to find and fix. Another approach is to create the metadata using a tool that understands the Standard.

One such tool is [Xtme](#) (which stands for Xt Metadata Editor). This editor runs under UNIX with the X Window System, version 11, release 5 or later. Its output format is the input format for mp (described below).

Hugh Phillips has prepared an excellent summary of metadata tools, including reviews and links to the tools and their documentation. It is at

<http://badger.state.wi.us/agencies/wlib/sco/metatool/mtools.htm>

What tools are available to check the structure of metadata?

[mp](#) is designed to parse metadata encoded as indented text, check the syntactical structure against the standard, and reexpress the metadata in several useful formats (HTML, SGML, TEXT, and DIF).

What tools are available to check the accuracy of metadata?

No tool can check the accuracy of metadata. Moreover, no tool can determine whether the metadata properly include elements designated by the Standard to be mandatory if applicable. Consequently, human review is required. But human review should be simpler in those cases where the metadata are known to have the correct syntactical structure.

Can't I just buy software that conforms to the Standard?

No! *Tools* cannot be said to conform to the Standard. Only metadata records can be said to conform or not. A tool that claimed to conform to the Standard would have to be incapable of producing output that did not conform. Such a tool would have to anticipate all possible data sets. This just isn't realistic. Instead, tools should assist you in entering your metadata, and the output records must be checked for both conformance and accuracy in separate steps.

Why is Attribute a component of Range_Domain and Enumerated_Domain?

This element appears to be intended to describe attributes that explain the value of another attribute. I have actually seen such a situation in one of the data sets I have studied. In that case the author of the data provided a real-valued number (meaning something like 0.1044327) in one attribute, and another attribute nearby could have the values "x" or not (empty). The presence of the value "x" in the second attribute indicated that the first attribute value was extremely suspect due to characteristics of the measured sample that were observed after the measurement was done. So, for example, we had something like this:

Sample-ID	Measurement1	Quality1	Measurement2
-----------	--------------	----------	--------------

A1	0.880201		0.3
B2	0.910905	x	0.4
C3	0.570118	x	0.2
C3	0.560518		0.1

So the variable Quality1 exists only to indicate that some values of Measurement1 are questionable. Note that values of Measurement2 are not qualified in this way; variations in the quality of Measurement2 are presumably described in the metadata.

In summary, the Attribute component of Range_Domain and Enumerated_Domain allow the metadata to describe data in which some attribute qualifies the value of another attribute.

I agree with Doug that this describes data with more structural detail than many people expect, and in the case I described there were so many variables (430) in the data set that I quickly gave up on the entire Detailed_Description and provided an Overview_Description instead. If we had some fancy tools (Visual Data++?) that understood relationships among attributes like this, people would be more interested in providing the metadata in this detailed manner. Nevertheless I think the basic idea makes sense.

What if my Process_Step happened over a period of time, not just one day, month, or year?

This is a weakness in the metadata standard. It assumes that the "date" of a process can be described well as a day, a month, or a year. I have encountered process steps that spanned multiple years, and I agree that it seems pointless to attach a single date to such things. It's especially annoying when the single date would probably be the date the process was completed, which is often the same as the publication date of the data set. That date shows up so often anyway in the metadata that it becomes meaningless.

There are two solutions. The first is to "fix the standard" by using an extension. For example, I could define an extension as

Local:

```
Name: Process_Time_Period
Parent: Process_Step
Child: Time_Period_Information
SGML: procter
```

Then to describe something that happened between 1960 and 1998, I could write

```
...
Process_Step:
  Process_Description: what happened over these many years...
  Process_Date: 1998
  Process_Time_Period:
    Time_Period_Information:
      Range_of_Dates/Times
        Beginning_Date: 1960
        Ending_Date: 1998
```

This is elegant in its way, but is likely to be truly effective only if many people adopt this convention. A more practical solution for the present would be to skirt the rules about the content of the `Process_Date` element. In this example, I would just write

```
...
Process_Step:
  Process_Description: what happened over these many years...
  Process_Date: 1960 through 1998
```

Now see that the value of `Process_Date` *begins* with a proper date, and contains some additional text. So any software that looks at this element will see a date, and may complain that there's more stuff there, but will at least have that first date. That's what mp does; if it finds a date, it won't complain about any additional text it finds after the date.



Metadata file format

What is the file format for metadata?

The format for exchange of metadata is SGML conforming to the FGDC [Document Type Declaration](#). This is not generally something you want to make by hand. The most expedient way to create such a file is to use [mp](#), a compiler for formal metadata. That tool takes as its input an ASCII file in which the element names are spelled out explicitly and the hierarchical structure of the metadata are expressed using consistent indentation. A more complete specification of this encoding format is at <http://geology.usgs.gov/tools/metadata/tools/doc/encoding.html>

Could you explain a little about the rationale behind recommending SGML?

Arguments FOR SGML:

1. It is an international standard, used extensively in other fields such as the publishing industry.
2. It is supported by a lot of software, both free and commercial.
3. It can check the structure of the metadata as mp does. (It can't check the values well, but this isn't a serious limitation because mp doesn't check the values especially well either--it is designed to assist human reviewers by assuring them that the structure is correct. In theory we could use SGML's attribute mechanism to check values, but this will make the DTD more complicated. I think that would be unwise until we have developed a broad base of expertise in using SGML among metadata producers.)
4. Additional tools (relatively new, unfortunately) allow SGML documents to be reexpressed in arbitrary ways using a standard scripting language, Document Style Semantics and Specification Language (DSSSL), also an ISO standard.
5. It can handle arbitrary extensions (in principle).

Arguments AGAINST SGML:

1. The metadata-producing community doesn't have much experience using it to solve problems yet.
2. We aren't using SGML tools; the only thing we do with SGML is create our searchable indexes with it.
3. Learning to use SGML effectively adds significantly to the educational cost of handling metadata. Imagine an interested GIS user, struggling to learn Arc/Info. He or she wants to produce

well-documented data, and so starts to learn the metadata standard, with its 335 elements in a complex hierarchy. To use SGML effectively, she'll need to know the general principles of SGML, along with some procedures. She'll have to select, locate, install, and learn to use some SGML software too. To create customized reports she'll need to learn DSSSL (300-page manual), which is really written in a subset of LISP called Scheme (another 50-page manual). Until the use of SGML for metadata is pioneered, this is not a satisfactory solution.

4. Our current DTD doesn't allow extensions yet. I'm the only one working on the DTD, and I don't have enough experience with SGML to really exploit it, although I sort of understand what to do to make the DTD more flexible. There's a shortage of manpower and time needed to solve this problem.

Conclusion:

We should aim to handle metadata using SGML in the future, but I should continue to develop mp and its relatives, ensuring that my tools support the migration to SGML. We need much more expertise devoted to SGML development, and that isn't happening yet. For practical purposes the more complete solution at the moment is `xtme->mp` or `cns->xtme->mp`. These tools handle arbitrary extensions already, and mp can create SGML output if needed for subsequent processing. Where possible, we should encourage agencies to invest in the development of tools for handling metadata in SGML, but this isn't a "buy it" problem, it's a "learn it" problem--much more expensive. With the upcoming revision of the metadata standard, we need to build a DTD that can be easily extended.

Why do I have to use indentation?

You don't. What you have to do is communicate by some method the hierarchical nature of your metadata. You have to present the hierarchy in a way that a computer can understand it, without user intervention. The simplest readable way to do this is by using [indented text](#) with the element names as tags. You can use SGML directly, but you have to make sure that you close each element properly. The DTD doesn't allow end-tags to be omitted. And mp will generate SGML for you, if you feed it indented text.

Why shouldn't I use the section numbers from the Standard?

1. They will probably change. They are essentially like page numbers; with a revision of the standard, both the page numbers and the section numbers will change.
2. They aren't meaningful. Readers will generally be less aware of the metadata standard's structure than will data producers, and they won't understand the numbers at all.
3. They express the hierarchy but not the instance information. For elements that are nested and repeated, the numbers show the nesting but not the repetition. Thus they don't really convey the structure well.
4. It isn't easier to use the numbers. The long names can be pasted into your metadata using the dynamic data exchange of your window system, so you don't have to type them. Better still, start with a template that contains the long names, or use an editor that provides them.

But I have already been using a template for metadata that mp can't read. What do I do with the records?

Put them through `cns`. This is a pre-parser that will attempt to figure out the hierarchical structure from metadata that aren't properly indented. This job is tricky, and `cns` isn't likely to understand everything you've done. So you'll have to look carefully at its output, and merge information from its `leftovers` file in with the parseable output that it generates. Then you should run the results through mp.

How does mp handle elements that are "mandatory if applicable"?

"Mandatory if applicable" is treated by mp the same as optional. Remember that mp is a tool to check syntactical structure, not accuracy. A person still has to read the metadata to determine whether what it says about the data is right.

In principle, you could create elaborate rules to check MIA dependencies, but I think that would complicate mp too much, making it impossible to support and maintain.

Can I start an element's value right after the element name and continue the value on subsequent lines?

Yes! Previously not permitted, this form is now supported:

```
Title: Geometeorological data collected by the USGS Desert Winds
      Project at Gold Spring, Great Basin Desert, northeastern
      Arizona, 1979 - 1992
```

Can I vary the indentation in the text

Yes! But the variations in indentation won't be preserved in the output files. Don't try to maintain any formatting of the text in your input files; the formatting will not survive subsequent processing. We hope eventually to be able to exploit the DTD of the TEI for this purpose, but at the moment those tags will be passed through as is. The variation of indentation that is permitted looks like this:

```
Title:
      Geometeorological data collected
          by the USGS Desert Winds
              Project at Gold Spring, Great Basin Desert, northeastern
                  Arizona, 1979 - 1992
```



Running mp, xtme, and cns

Help!

Help is available. Please email pschweitzer@usgs.gov asking to be put on the mp-users mailing list. I generally try to notify these users of changes to the software, and I ask these users for assistance.

Why do I get so many messages?

Sometimes a single error will produce more than one message. If you put in too many of something, you'll get a message at the parent element and you'll get a similar message at the offending child element.

What are these line numbers?

The numbers correspond to lines in your input metadata file. Use a text editor that can indicate what line you're on (or better, can jump to any particular line by number) to help you understand the message. You can find one such editor at <http://geochange.er.usgs.gov/pub/tools/xed/>.

What are these errors "(unknown) is not permitted in name"?

You've got something in the wrong place. If you think it *is* in the right place, look closely--you may have omitted a container such as `Citation_Information`, `Time_Period_Information`, or `Contact_Information`. Mp requires that the full hierarchy be included even when the structure is clear from the context.

Can I just ignore warnings?

Always read them to understand what they mean. Sometimes a warning is just an unexpected arrangement. Other times a warning may indicate that your metadata are not being interpreted the way you think they should be.

What are these warnings "Element *name 1* has child *name 2*, expected (unknown); reclassified as text"?

An official element name appears at the beginning of a line in the text of the element *name 1*. mp is telling you that it considers this to be plain text rather than a node of the hierarchy. Ignore the warning if it really is plain text. If it isn't, see if it was supposed to go somewhere else.

How does mp handle URLs and other HTML code?

(Revised 25-March-1998) mp now recognizes URLs in all contexts and makes them live links in the HTML output. You should not use HTML code in your element values because there's no reason to believe that in the future the metadata will be processed by systems that understand HTML. If you must add HTML to the resulting documents, I recommend that you hack the HTML output of mp for this purpose.

Note that mp now provides "preformatting" in which groups of lines that begin with greater-than symbols will be rendered *preformatted*, prefaced with `<pre>` and followed by `</pre>` in the HTML output. The leading `>`'s will be omitted from the HTML output. For example, the following metadata element

```
Completeness_Report:
  Data are missing for the following days
  >19890604
  >19910905
  >19980325
```

will be rendered as follows in HTML:

```
<dt><em>Completeness_Report:</em>
<dd>
<pre>
19890604
19910905
19980325
</pre>
```

Why does cns choke when an element name appears at the beginning of a line in the text?

This is a limitation of cns. It's not an automatic procedure. The logic that it uses to determine what's in the file cannot cope well with some of these situations. The reason why it does this is that it's trying to divine the hierarchical structure in text that isn't structured hierarchically. It has to make assumptions about where standard element names will be, so that it can recognize them properly when they are in the right places. When you're using cns, you have to look carefully at both the input and the output. Always look at the leftovers file, because it will show where really severe problems occur. But be aware that some less obvious problems sometimes occur; sometimes an element that's spelled wrong will be lumped into the text of the previous element.

Can you forecast the fate of mp? A number of my colleagues here have expressed concern about

committing to tools that "go away."

In the long run this is an argument in favor of SGML. In the short run that doesn't carry much weight, because we haven't developed the capability to do with SGML what mp now does with indented text. Moreover, I don't see anybody working on that problem yet.

Also, I would point out that during the two years of its existence mp has a better support history than many of the other tools for producing metadata (see mp-doc). Corpsmet and MetaMaker are probably the next-best-supported tools. The PowerSoft-based NOAA tool was created by contractors who have since disappeared. USGS-WRD tried to pass maintenance of DOCUMENT off to ESRI, and ESRI hasn't made needed improvements; Sol Katz (creator of blmdoc) still works for BLM but has been assigned to other work. None of the other tools seems to have gotten wide acceptance. Paying contractors to write software seems to carry no guarantee that the software will be adequately supported. Home-grown software carries no guarantee either. Whether you "pays your money" or not, you still "takes your chances".

On the other hand...

The source code of mp is freely available. It has been built for and runs on many systems--I support 6 different varieties of Unix, MS-DOS, and Win95+NT, and I know it is working on several other Unix systems. The task of updating it might be daunting for an individual not conversant in C, but if I were hit by a truck tomorrow, the task wouldn't likely fall to an individual--it would be a community effort because lots of people have come to depend on it.

And remember...

The most fundamental thing we can do to make progress is to create parseable, structured documentation. The key to the whole effort is to emphasize what is consistent about our diverse data sets, and to exploit that consistency as a way of making it easier to discover and use spatial data of all types. You can always combine metadata elements to fit a more general schema; the difficult operation (because it requires a sophisticated person devote attention and time to each record) is to go the other way, searching through an unstructured text to cull out key facts.

Are mp, xtme, Tkme, and cns year-2000 compliant?

Yes, dates are handled using the standard ANSI C date structures and functions. On most UNIX systems dates are stored internally as signed 32-bit integers containing the number of seconds since January 1, 1970, so the problems, if any, would not occur until 2038. None of these programs bases any decision on the difference between two dates.

Do mp, Tkme, and cns run on Windows 2000?

Yes

How can I make the text output fit within the page?

This shouldn't be necessary, since metadata are best printed from one of the HTML formats, and the web browser will wrap the text to fit the screen and page. However, for those who really want to have the plain text version fit within an 80-column page, there is a way to do it. Use a config file, with an output section, and within that a text section. Within `output : text`, specify `wrap 80` like this:

```
output
  text
    wrap 80
```

You don't have to use 80. I think it looks better with a narrower page, like 76. mp factors in the indentation of each line, assuming 2 spaces per level of indentation. Blank lines are preserved. Any line beginning with the greater-than sign > is preserved as is.

Note that this affects only the text *output*. Neither mp nor cns ever modifies the input file. But if you like the resulting text file, you can replace your input file with it.



Metadata storage and management

How do I put FGDC metadata into my relational database?

This turns out to be a fairly complicated problem. I had originally answered this question with a simplistic assumption that it could not be easily done in a general way, but I now defer to others who know much more about relational database management systems than I do.

Jim Frew writes:

You can easily *represent* recursion in a relational model. For example:

```
CREATE TABLE attribute (
  pk_attribute          key_t  PRIMARY KEY
  fk_enumerated_domain key_t  REFERENCES enumerated_domain

  attribute_stuff ...
)

CREATE TABLE enumerated_domain (
  pk_enumerated_domain key_t  PRIMARY KEY
  fk_attribute          key_t  REFERENCES attribute

  enumerated_domain_stuff ...
)
```

where `key_t` is a type for storing unique identifiers (e.g., Informix's `SERIAL`).

The tricky part, of course, is getting the information back OUT again. It's true, you can't write a query in standard SQL-92 that will traverse the tree implicit in the above example (i.e., will ping-pong between `fk_enumerated_domain` and `fk_attribute` until `fk_attribute` is `NULL`.)

However, most (all?) DBMS vendors support procedural extensions (e.g., looping) to SQL, which make the query possible. Additionally, some vendors have extended SQL to directly support tree-structured information (e.g., Oracle's `CONNECT BY`.)

Ultimately, you have to consider *why* you're storing FGDC metadata in a relational database. As we learned on the Alexandria Project:

1. Attributes that are likely to be searched (e.g. `Bounding_Coordinates`) can be managed differently from attributes that will only be regurgitated for an occasional report (e.g. `Metadata_Security_Handling_Description`)

2. Some nooks and crannies of the standard (e.g. Dialup_Instructions) just aren't worth supporting, period. Often these are the pieces that add the most complexity.

In other words, while it's *possible* to do everything with a fully-normalized relational schema, it may not be *desirable*.

Examples of recursive SQL queries (references from Jim Frew)

- Celko, Joe (1995) Joe Celko's SQL for Smarties : Advanced SQL programming. Morgan Kaufmann, San Francisco. [see chapter 26, "Trees"]
- Date, C. J. (1995) An Introduction to Database Systems, 6th ed. Addison-Wesley, Reading, MA. [see pp. 266..267]
- Informix Software, Inc. (1996) Informix Guide to SQL (Tutorial, Version 7.2). Informix Press, Menlo Park, CA. [see pp. 5-27..5-29]
- Koch, George, and Kevin Loney (1997) ORACLE8: The Complete Reference. Osborne/McGraw-Hill, Berkeley, CA. [see pp. 313..324]

Some other references

- Alexandria Digital Library [schema and scripts](#) for FGDC and USMARC metadata.
- Prototype [BLM create-table instructions](#) to generate a relational implementation of the Metadata Standard in Informix.

I ran DOCUMENT in ARC/INFO. Now what do I do?

Run DOCUMENT FILE to extract the metadata from the INFO tables, then rewrite the metadata using what DOCUMENT FILE supplies as input. More details are in [How to fix metadata created by DOCUMENT.aml](#).

How do I handle data that already has metadata?

When we acquire a GIS map layer that was created by some other entity, and that entity has already created metadata for the layer, how should that layer be documented in our metadata? Should that metadata be part of, or referenced, in the metadata we create for it?

I think how you handle it depends on what you do with the data:

1. **You use the data layer pretty much as is, maybe changing projection. You don't intend to distribute the modified layer to the public.**

Use their metadata. No real need to change it, but if you do some non-destructive change like reprojection, just add a Process_Step to the metadata indicating what you did. You can even add a Process_Contact with your info so that anyone who has questions about that particular operation can ask questions.

2. **You modify the data and repackage it for distribution to the public, perhaps as part of a group of layers making up a map set.**

Start with their metadata. Take the Contact_Information in Point_of_Contact, and move it to all of the Process_Steps that don't already have a Process_Contact. Replace Point_of_Contact with yourself. Take Metadata_Contact, move it into a new Process_Step whose description is "create initial metadata", where Process_Date is the previous value of Metadata_Date. Modify other parts of the metadata to reflect your changes to the data (document these in your own Process_Step,

too), then make yourself the Metadata_Contact. Tag--you're IT!

3. **You use it as a basis for a study of the same information, adding and changing features and attributes as you make new observations.**

Use the existing metadata record to create a Source_Information which you will annotate (Source_Contribution) to describe how you incorporated this layer in your own work. Put this Source_Information into a new metadata record that describes your data; it will thus properly attribute the work of the people who created the source data.



Metadata dissemination

How do I become a Clearinghouse node?

I defer to FGDC. Specifically, look at Doug Nebert's December 1995 discussion paper [What it means to be an NSDI Clearinghouse Node](#), also his on-line training materials for the [preparation, validation, and service of FGDC metadata](#) using the spatial Isite software.

This page is <<http://geology.usgs.gov/tools/metadata/tools/doc/faq.html>>

Maintained by [Peter Schweitzer](#)

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Content Standard for Digital Geospatial Metadata (CSDGM)

OBJECTIVES:

The objectives of the standard are to provide a common set of terminology and definitions for the documentation of digital geospatial data. The standard establishes the names of data elements and compound elements (groups of data elements) to be used for these purposes, the definitions of these compound elements and data elements, and information about the values that are to be provided for the data elements.

SCOPE:

Executive Order 12906, "Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure," was signed on April 11, 1994, by President William Clinton. Section 3, Development of a National Geospatial Data Clearinghouse, paragraph (b) states: "Standardized Documentation of Data, ... each agency shall document all new geospatial data it collects or produces, either directly or indirectly, using the standard under development by the FGDC, and make that standardized documentation electronically accessible to the Clearinghouse network." This standard is the data documentation standard referenced in the executive order.

The standard was developed from the perspective of defining the information required by a prospective user to determine the availability of a set of geospatial data, to determine the fitness the set of geospatial data for an intended use, to determine the means of accessing the set of geospatial data, and to successfully transfer the set of geospatial data. As such, the standard establishes the names of data elements and compound elements to be used for these purposes, the definitions of these data elements and compound elements, and information about the values that are to be provided for the data elements. The standard does not specify the means by which this information is organized in a computer system or in a data transfer, nor the means by which this information is transmitted, communicated, or presented to the user.

In addition to use by the Federal Government, the FGDC invites and encourages organizations and persons from State, local, and tribal governments, the private sector, and non-profit organizations to use the standard to document their geospatial data.

Download the Content Standard for Digital Geospatial Metadata

Please note: to download the linked files, some browsers may require you to Shift-click the link

- CSDGM Version 2 - FGDC-STD-001-1998

Electronic format ([WordPerfect6.1 \(wpd\)](#), [Portable Document File \(pdf\)](#), [HTML](#), [Text \(txt\)](#))

Explanation of [CSDGM Production Rules \(Version 1\)](#)

[Graphical Representation](#) of the metadata standard [*S.Stitt, USGS/BRD*]
['Colorized' Content Standard for Digital Geospatial Metadata](#),
[*H.Phillips, 199991120*]
[Document Type Declaration \(DTD\)](#) for FGDC-STD-001-1998 (Version
2)
[DTD Tagset \(alphabetical order\)](#) for FGDC-STD-001-1998

Profiles or Extensions of the CSDGM Version 2 (FGDC-STD-001-1998)

A key feature of the CSDGM Version 2 is the ability of geospatial data communities to develop profiles of the base standard. Many of these profiles have extended the base standard by adding metadata elements to meet their specific community metadata requirements.

FGDC Endorsed Profiles of the CSDGM Version 2 (FGDC-STD-001-1998) include:

- [Biological Data Profile of the Content Standard for Digital Geospatial Metadata](#) (*Biological Data Working Group*)

FGDC Profiles of the CSDGM Version 2 (FGDC-STD-001-1998) under development include:

- [Metadata Profile for Shoreline Data](#) (*Bathymetric Subcommittee*)
- [Content Standard for Digital Geospatial Metadata: Thematic Supplement for Geospatially Referenced Cultural and Demographic Data Metadata](#) (*Cultural and Demographic Subcommittee*)
- [Content Standard for Digital Geospatial Metadata: Extensions for Remote Sensing Metadata](#) (*Standards Working Group*)

FGDC, USGS, 590 National Center, Reston, VA 20192

URI: <http://www.fgdc.gov/metadata/constan.html>

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