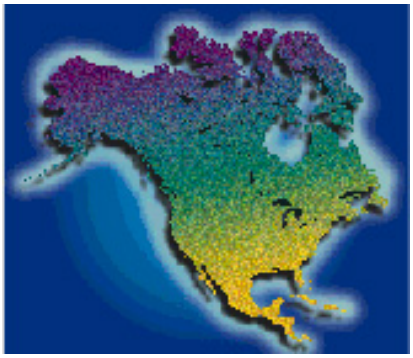
U.S. Census Bureau 10 Years on the Web



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

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LandView 6 User Notes, Bugs and Fixes

1. 07/29/2404
   A reconfiguration of the Bureau's internal web server resulted in the failure of the **"Online Help from the Census web site"** on the DVD, to connect directly to the **"LandView 6 Help Table of Contents"**. To remedy this problem, we have updated the LandView 6 hyperlinks in the URL.LV6 file.

   Download the file to the C:\LV6A program folder on your hard drive by right clicking on the link. Respond **"YES"** to the warning message "The file already exists, do you wish to overwrite it?"

2. 05/24.2004
   LandView 6 DP2 Errata Note for Congressional District Summaries:
   The statistic shown for **"Total population (excl. born at sea)"** in the **"REGION OF BIRTH OF FOREIGN BORN"** portion of the LandView 6 - Census 2000 Profile of Selected Social Characteristics (DP-2) table, was incorrectly computed for the 108th Congressional District summaries shown on the LandView 6 East/West DVDs.

   This **"Total population (excl. born at sea)"** statistic should have been computed by subtracting "Born at Sea" (SF3 Table PCT019126) from "Total Foreign Born Population" (SF3 Table PCT019001). Instead "Born at Sea" was added to the "Total Foreign Born Population".

   The error only affects the 46 congressional districts that had foreign born persons born at sea.

   The attached Excel spreadsheet contains the corrected "Total (excluding born at sea)" statistics as well as the component statistics from which this statistic was calculated.

3. 04/27/2004.
   The MARPLOT help file (MARPLOT.HLP) is missing from the installer program of the LandView 6 DVD product and the LandView 6 demo file. We have corrected this by posting a new demo file.

   For DVD users, to make the MARPLOT help file available, download the MARPLOT_Help.EXE to the ***c:\lv6a***\ folder. Double click on the file name to install to the c:\lv6a folder.

4. The **Metadata** button on the LandView 6 Home screen of the LandView 6 DVD product links to the LandView 5 Metadata Web page instead of the LandView 6 Metadata Web page.

5. **Occupants per Room calculation:**
   Users may find slight differences in the Occupants Per Room calculations between the published Demographic Profile and Summary File 3, Summary File 4, and LandView 6. ‘‘Occupants per room’’ is obtained by dividing the number of people in each occupied housing unit by the number of rooms in the unit. The Summary File 3 products correctly used a topcode value of ‘‘10 rooms’’ for those occupied housing units with ‘‘9 or more rooms.’’ In the published Demographic Profiles, an incorrect topcode value of ‘‘9 rooms’’ was used. This data item is correct in LandView 6.

6. **DP-2 User Note for Exporting Data for Puerto Rico:**
   Please note that if you perform a query using the DP-2 table and wish to export the records, you should export the records for the 50 states and Washington D.C. separately from Puerto Rico. The DP-2 table for

Puerto Rico contains different fields under "Residence in 1995" and "Nativity and Place of Birth" then the DP-2 table for the states.

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Revisions Made to On-Line Help Documents

These integrated Help files will be updated in response to comments from users. While, in many cases, **Help** as contained in the LandView® release versions will satisfy a user's needs, users are encouraged to check **here**, for revisions as documented below.

Revision History:

1. July 29, 2004: A new **URL.LV6** file has been posted on the Problems, Bugs and Fixes page. This file corrects the problem of the failure of the **"Online Help from the Census web site"** on the DVD, to connect directly to the **"LandView 6 Help Table of Contents"**.

2. May 24, 2004: An Excel file containing the corrected "Total population (excl. born at sea)" in the "REGION OF BIRTH OF FOREIGN BORN" portion of the LandView 6 - Census 2000 Profile of Selected Social Characteristics (DP-2) table, posted to the Problems, Bugs and Fixes page.

3. April 30, 2004: Three Help files concerned with accessing LandView and MARPLOT data copied to a LAN or a local drive have been completely rewritten. These are The LandView 6 National DVD, Network Installation of LandView, and Alternate LandView Installations. Additionally, a new Help article has been added to Unique Solutions that provides additional background information—Notes on LandView Installation Procedures [PDF]. In part, these changes were made to accommodate differences in **The LandView 6 National DVD** as conceived and as published.

4. February 23, 2004: The Help Topic **"The Shape File Import Utility "** was updated. The first paragraph was replaced with wording indicating that the SHP2MIE utility can be downloaded from this Help topic.

5. February 3, 2004: A new section, **Converting Latitude/Longitude data to Map Points** was added to the Importing LandView Data/LandView User Files section of the Help.

6. February 2, 2004: A new section, **Creating and Organizing New MARPLOT Layers** was added to the Unique Solutions section of the Help.

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The LandView® 6 National DVDs

Two LandView 6 Releases

LandView 6 is published in two release formats--**LandView 6 National DVD Kit (2 National DVDs and the East/West set)**, intended for users who prefer to access LandView data and MARPLOT maps from a LAN network or a workstation hardrive, and **LandView 6 East and West on DVD**, primarily intended for accessing LandView data and MARPLOT maps from a DVD drive.

The **LandView 6 National DVD Kit** contains all the datasets and maps for the 50 States, the District of Columbia and Puerto Rico. This version of LandView is designed for users who have sufficient capacity to contain the necessary data and map files either on a Local Area Network (LAN) or on a local drive. For the National dataset, this is in the order of 12 GB. While the National DVDs contain the MARPLOT® map files specific to the LandView data files, they do not contain the TIGER/Line® map layers--those files providing topological data such as roads, rivers, railroads, etc. These files must be copied from the LandView East and West DVDs which are a part of the kit. Ordering information.

LandView 6 East and West on DVD is designed primarily for users intending to access the LandView data and map sets from a DVD drive on a workstation or laptop. LandView East contains **complete data and map sets** for all States east of the Mississippi while LandView West contains similar data for all States west of the Mississippi. The States of Minnesota, Iowa, Missouri, Arkansas and Louisiana are common to both DVDs.

While the primary concern of this Help file is the National LandView release, it is well to point out that either release of LandView 6 can be installed to a workstation or LAN. The selection criterion being whether the data on either the LandView East or the LandView West DVD is sufficient to a users needs or whether access to the entire national dataset is required. A LandView Help file, Network Installation of LandView, provides instructions for installation of either format on LAN servers. A LandView Help file, Alternate LandView Installations, provides instructions for installing the formats on a work station or laptop. There are occaisional users who are more restricted in their placement of files. To meet their needs, a Help article has been created in Unique Solutions, as Notes on LandView Installation Procedures.

Workstation or LAN Installations of LandView

All installations of LandView and MARPLOT data to a workstation or LAN have these points in common:

The LandView application files should be installed on one or more workstations. By default installation is to the root of the C:\ drive, at **c:\lv6a**. If there are multiple users, a means should be provided for placing the application program on additional workstations. One method is to have the LandView Installation directory available at the same location as the data files. On startup of a newly installed LandView, LandView will automatically access properly installed data and map sets. Disk 1 of the National release contains the Install directory. Sub-directories identify a Windows installation and a Macintosh installation. Only the "install" appropriate to the LAN need be retained. The executable may be moved to the higher level in the Install folder,

and it can be renamed as, for example, **Install LandView.exe**

An LV6 directory that contains LandView data files should be copied to a drive location accessible to the LandView . The LandView application is directed to find an LV6 directory containing a LandView dataset at the root of an available drive. For the National release, because of size constraints, the LV6 directory is split between the two DVDs. Disk 1 contains an LV6 directory with the largest single file in the dataset, **blocks.lv6**. The LV6 directory on Disk 2 contains the remaining data files. These need to be copied to the LV6 directory copied from Disk 1 to complete the installation.

A Maps directory should be copied to a location so that its contents exactly match file identities and path statements as specified in a **marplot.vnx file**. As contained on Disk 1 of the National release, the Maps directory has four agency mapsets-Census, EPA and two USGS mapsets, one linked to the GNIS data in LandView and a second for Federal Lands. What is not included and what is required for proper LandView usage is a directory entitled TIGER[1.] TIGER contains the topological mapsets for all counties (or county equivalents) appropriate to the LandView geography. To complete the installation of the National release, TIGER/Line files need to be copied from mapsets available from the 2-DVD East/West versions of either LandView 5 or landView 6.

An appropriately edited **marplot.vnx** file needs to be placed at the root level of an available drive. As contained on Disk 1, the VNX file for the National release is generically set to a volume label, LV6. This needs to be replaced by an appropriate drive letter that will complete the path statements. For example, if Maps directory is placed at the root of the R:\ drive, the **marplot.vnx** file should also reside there, and "LV6", its first line of text, changed to read "R:". Do not write this as "R:\", as the backslash is already contained in each of the subsequent path statements.

Obtaining TIGER Files for the LandView 6 National DVD

As stated above, each of the 2-DVD (East/West) releases of LandView 5 and LandView 6 contains all data necessary to LandView including the TIGER/Line files appropriate to its geography. On each CD is a Maps directory containing a TIGER directory. Nested in TIGER are state directories identified by their postal abbreviations. Nested in each state directory are its county directories identified by FIPS code (a 5-diget numerical identifier). However, these do not concern us at the moment. Common to both TIGER directories are five states-Minnesota, Iowa, Missouri, Arkansas and Louisiana.

To complete a proper installation of **The LandView 6 National DVD**, a complete set of TIGER files need to be copied to the Maps directory installed above. From either LandView East or LandView West, the entire TIGER directory can be copied to the Maps directory. On the second DVD, the TIGER directory needs to be opened and the remaining map files copied to complete the set.

A simple method is as follows: With TIGER opened, use **Edit/Select All** to place the entire contents of the directory in **Select mode.** By holding down, the [Control] key, de-select the five common state files (MN, IA, MO, AK and LA). Right-mouse click in the highlighted blue area, and **Copy.** Go to the previously installed TIGER directory and again right-mouse click to Paste. This completes the installation. In Marplot, using **List/ Map List . . . ,** you should be be able to identify both agency mapsets and county map files from across the country.

[1.] A characteristic of the marplot.vnx file is that it continues to identify mapsets to MARPLOT as path statements are verified. Upon failure to find an identified mapset, MARPLOT stops reading the VNX file. As path statements to the

agency mapsets are listed first, the VNX file fails only on absence of a TIGER directory. Agency mapsets are available to LandView, but topological data necessary to proper interpretation is missing.

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Network Installation of LandView®®

The primary concern of this Help file is providing instructions for installing LandView data and map sets on a LAN (local area network) server. There are three associated Help files that provide background and insights into the process. The LandView 6 National DVD Help file provides background not only for copying files from the National release, but it similarly applies to installing files from **LandView 6 on DVD,** the 2-DVD (East/West) release of LandView 6. A LandView Help file, Alternate LandView Installations, provides instructions for installation of either format on a local harddrive. There are occasional users who are more restricted in their placement of files. To meet their needs, a Help article has been created in Unique Solutions, as Notes on LandView Installation Procedures.

There are two releases of LandView 6, and each is suitable for network installation. The first is **The LandView 6 National DVD,** actually a 2-DVD set. Unique to this release is that installation requires copying datasets from both DVDs. A second release is **LandView 6 on DVD,** also a 2-DVD set. However, here each DVD contains an independent dataset, and only one, either LandView East or LandView West, can be installed.

LandView Installation by the Network Administrator

Refer to The LandView 6 National DVD. That Help file describes the elements common to all installations of LandView data and map sets to either a LAN or a local drive. Basic is the concept that LandView as a data application and MARPLOT, its associated mapping application, each find their associated data or map files by different methodologies. An associated principle is that each methodology requires that its datasets be located at the root level of a drive available to all potential users.

For talking purposes, we will identify this drive as, R:\. Proper installation requires that, at the root level of the R:\ drive, there be two directories, **r:\LV6** and **r:\maps,** and a free-standing file, r:\marplot.vnx.

For the **LandView 6 on DVD** release, the LV6 directory (from the selected LandView East or LandView West) can be copied directly to the R:\ drive. For **The LandView 6 National DVD,** the contents of the LV6 directories on both DVDs need to be copied to the R:\ drive.

From the selected DVD from **LandView 6 on DVD,** the complete Maps directory should be copied to R:\. However, as explained in The LandView 6 National DVD, the National LandView release does not include TIGER/Line map files, essential to LandView operation. The Help file explains the selection and installation procedure.

The **marplot.vnx** file provides instructions as to how MARPLOT finds its map files. As copied from the DVD, the file's instructions direct MARPLOT to the installation DVD. The first line of text within the file reads as, LV6. To redirect MARPLOT to the relocated maps, the first line of text needs to be changed to identify the containing drive by drive letter as, in this example, R:. Do not write this as R:\, as the backslash is included as part of the path statements in the following text.

An Install directory on the DVD should be made available to potential new users. Invoking **Install** will place the LandView application on a user workstation in a **c:\lv6a** directory. On opening the application, it is self-directed to the location of properly installed data and map sets. An appropriate location for the Install file would be nested in an Install directory in **r:\LV6.** For easier recognition, the file could be renamed as **Install LandView.exe.** The LandView file sets are voluminous; some data searches can be time consuming. If it becomes apparent that

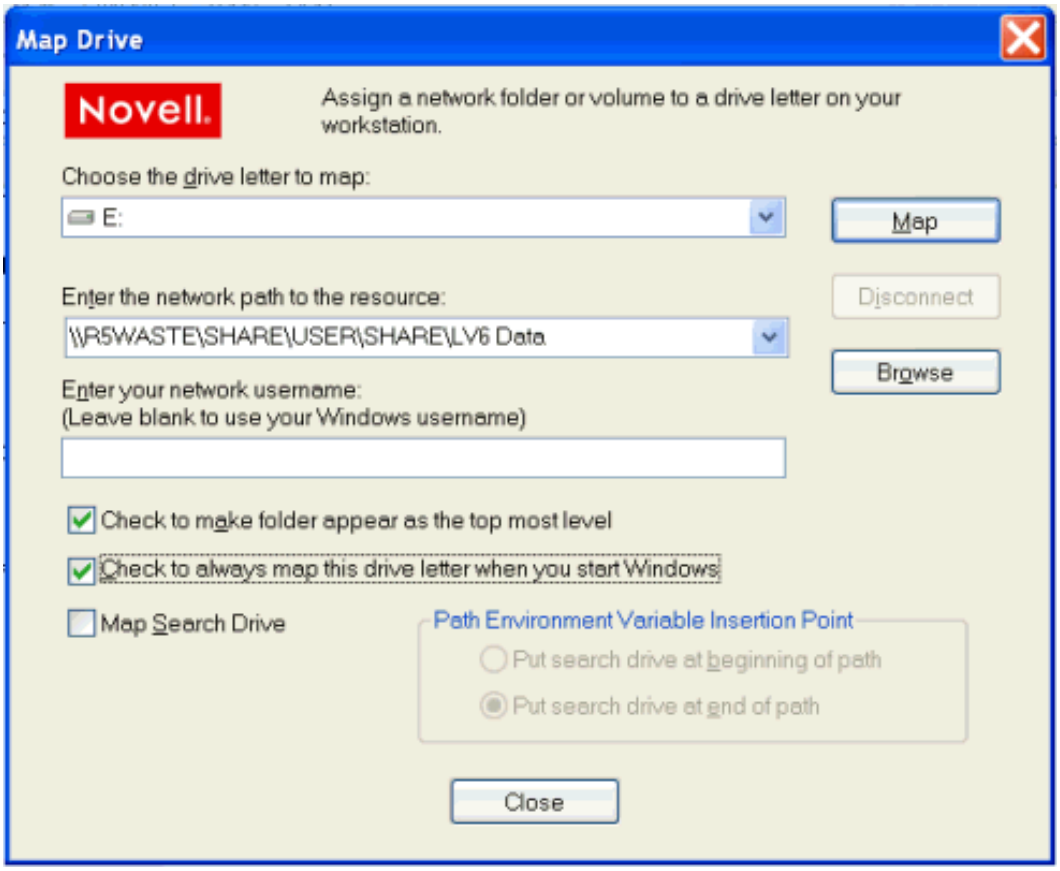
indexing of files is desirable, consult the Help file, Indexing LandView Files.

LandView 6 Installation to a Mapped Drive

If a LandView user has read/write privileges to a sub-directory on a LAN server of sufficient capacity, it is possible to create a new sub-directory, a suggested name--LV6 Data, and to use this directory as a container for the LandView data and map directories and the **marplot.vnx** file. This one time installation allows all LAN users, who can **Map** to this directory as an available LAN drive, to access these files. **The original installer, in essence, assumes the role of LAN Administrator and is responsible for providing the installation procedure and instructions to additional users.**

The Map to a Directory procedure may vary somewhat between Network systems, but the following approach is representative. Installation is as follows:

1. Create a LV6 Data directory, as above. Right-mouse clicking on the directory should display a mapping option. A mapping dialogue is as below. While the dialogue defaults to the first available drive, this may be overwritten to a drive letter known to be available to all users. It is important that options similar to those checked below be selected.



2. From an appropriate DVD or DVDs, proceed as above to create the two Directories, LV6 and MAPS, and the **marplot.vnx** file in the LV6 Data directory. Additionally, if other users are to access these data and map files, the Install directory should also be copied to LV6 Data.
3. As for an installation under the control of a Network Administrator, the **marplot.vnx** file needs to be redirected to the drive letter identifying the mapped drive.

For Each New User

The LandView application files need to be installed on each user workstation in the default directory, **c:\lv6a.**

This may be from an automatic download of the application by IM support, or it can be by direct installation by the end user from a LAN available installation directory. The installation places a LandView shortcut icon on the Desktop, which opens the LandView application.

If LandView datasets are installed on a mapped drive, each new user needs to follow the above procedure for mapping to a drive, with the target directory being LV6 Data, or similarly named directory. **Only the drive letter selected by the original installer can be used by secondary installers.** If this drive letter is not available to all users, see Notes on LandView Installation Procedures.

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Alternate LandView® Installations

The primary aim of this Help file is to provide instructions for installing LandView 6 East/West data and map sets to a local hard drive. There are three associated Help files that provide background and insights into the process. The LandView 6 National DVD provides background not only for copying files for the LandView National release, but it similarly applies to installing files from **LandView 6 on DVD,** the 2-DVD (East/West) release of LandView 6. A LandView Help file, Network Installation of LandView, provides instructions for the installation of either format to Local Area Network (LAN) servers. There are occasional users who are more restricted in their placement of files. To meet their needs, a Help article has been created in Unique Solutions, as Notes on LandView Installation Procedures. [PDF] or [HTML].

Installing the LandView Data and Map sets on a Local Hard Drive

Either LandView release installs an identical application directory on the C:\ drive, at **c:\lv6a**. In the case of **LandView 6 East/West on DVD**, an autoplay menu simplifies the task. For the **LandView 6 National DVD,** access to the Install directory on Disk 1 is required. On first use, the application is programmed to find appropriately installed data and map files. It is important to remember is that LandView as a data application and MARPLOT as a mapping engine are independent programs, and each has its own method of accessing data.

Installing LandView Data

For **LandView 6 East/West on DVD**, each DVD, East and West , contains a complete set of LandView data and map files for its related geography in an LV6 directory. Not the directory, but the contents of the LV6 directory from **either** of these DVDs needs to be copied and pasted to **c:\lv6a**[1.] LandView, finding its data within the application directory, looks no further for its data. **Note: Data and maps from either the East DVD or the West DVD may be installed to a hard drive, but not both simultaneously.**

For the **LandView 6 National DVD Kit,** because of space limitations, LandView data files are contained on both DVDs; on each is an LV6 directory. Again the contents of, **in this case,** both LV6 directories need to be copied to **c:\lv6a.** Similarly, LandView finds its data files within the application directory.

Installing MARPLOT Map Data

It is important to understand the difference in the Maps content on each of the LandView releases. **LandView 6 East/West on DVD** contains complete map sets for data-related geographies. **LandView 6 National DVD** contains only agency-related map files - those whose contents changed in moving from an East-West view of the United States to a National view. Because of space limitations, the TIGER/Line map files are not included on the **LandView 6 National DVD.** Users installing this release to a hard drive should refer to The LandView 6 National DVD for instructions on installing the TIGER/Line map files.

On each DVD of **LandView 6 on DVD** and on Disk 1 of the **LandView 6 National DVD** is a directory, MAPS, and a file, **marplot.vnx.** Both the directory and the file need to be copied to the root level of the C:\ drive as **c:\maps** and **c:\marplot.vnx.**

The **marplot.vnx** file provides instructions as to how MARPLOT finds its map files. As copied from the DVD, the file's instructions direct MARPLOT to a volume name, LV6. (The 'Volume Name' of each DVD in **LandView 6 on DVD** is LV6). Thus, the first line of text within the file reads as, LV6. To direct MARPLOT to

the relocated maps, the first line of text needs to be changed to identify the containing drive by Drive Letter as, in this example, "C:". (Caveat: Do not write this as "C:\". The 'backslash' is already part of the path statements in the following text.)

Copying Selected Maps to a Hard Drive

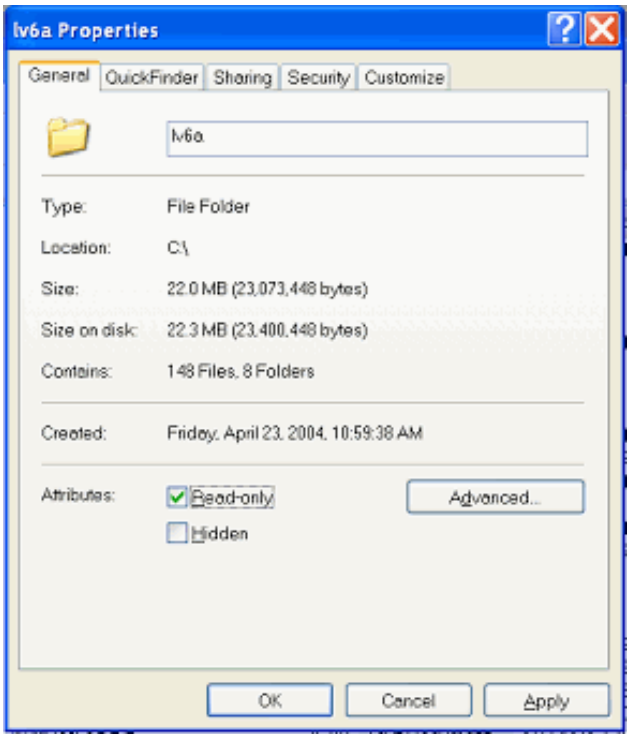
There are users of LandView installed on a laptop who do not want to unnecessarily carry the LandView DVD into the field and who are primarily concerned with topological map data. It is sufficient for them to have only the maps for a few select counties available on their laptop. For these users, all map copied directly to the **c:\lv6a** directory are immediately available to MARPLOT. County maps are referenced by FIPS Code-a five digit identifier where the first two digits identify a state and the last three digits identify specific counties within a state. On the **LandView 6 on DVD** release, county map sets are nested within a state-named subdirectory which, in turn, is nested within a TIGER subdirectory nested within the MAPS directory. Use 'Copy and Paste' to move selected county mapsets to **c:\lv6a.**

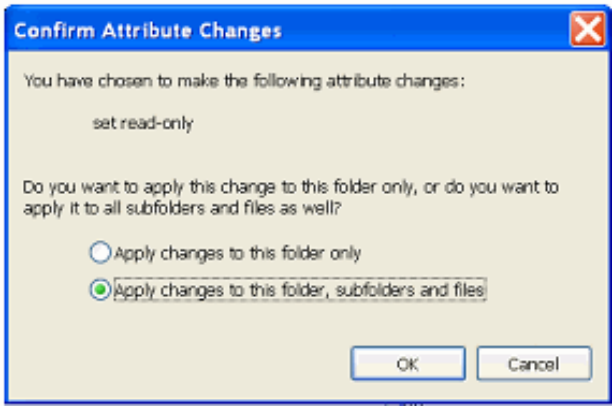
Copying county maps to the C:\ drive does not prevent using the DVD when the occasion demands. When MARPLOT accesses the maps available on the DVD, it ignores those maps already available to it inside of **c:\lv6a,** and only opens the additional maps contained on the DVD.

An Important Warning for Users of Windows XP

Previous to the release of Windows XP, files copied from a CD/DVD were copied in 'Read Only' format. In Windows XP, such files are copied 'Unlocked'. Inadvertently, these files can be written to and data changed. Users are advised to reset the attribute for transferred data and map files to Read Only.

To lock these files: Upon completion of formatting, select both the LV6A and the MAPS directories, separately or both together, and right-mouse click to select Properties. The display screens below illustrates the process. The Read-only attribute is selected. Upon "OK", a new dialogue box allows applying the changes to both this folder and sub-folders. If you intend to create data files of your own choosing (see User Files), you will want to unlock those files in **c:\lv6a** identified as: **file_01.lv6, file_02.lv6, . . .**





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[1] Some users may wish to install LandView to an auxiliary drive, e.g., D:\. Such an installation would be very similar to installation on a LAN.

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Unique Solutions

In response to LandView®user queries, the LandView staff has occasionally developed methodology, using inherent LandView functionality, to meet the users' needs. Users, too, have identified innovative uses of LandView/MARPLOT®material. LandView feels it important to share these **Unique Solutions**with our users in the hope that they meet the needs of others with the same concerns or catch the imagination of our users.

- Thematic Mapping of Multiple Variables [PDF]
  LandView's **Thematic** mapping utility is designed to create a thematic map examining the spread of data values within a single data variable. Pathways are available to explore multiple variables in LandView and to display the variation in properties in MARPLOT.

- Subsets of Latitude/Longitude Values from Polyline or Polygon Map Objects [PDF]
  In MARPLOT, polyline or polygon objects are defined by a series of latitude/longitude pairs connected by line segments. It can be of value to create a new map object formed by a sub-set of these values. An example could be that portion of a state's boundary that is a **coastline** and fronts an ocean.

- Bringing Internet Data into LandView User Files [PDF]
  The Internet is a valuable source of GIS data, yet such data is frequently available only in higher order GIS applications. This article, by Jerry McFaul-USGS, demonstrates how the GIS data available on the Web may be shared with LandView/MARPLOT users. This article was originally written in support of the LandView 5 application. Screen shots and references to files names refer to that application. Similar LV6 files replace all files referenced as LV5.

- Other Population Searches Defined in MARPLOT [PDF]
  LandView has automated searches for populations at a radius around a point. Population searches in a defined map area, a polygon, require additional user input. Several methods are discussed.

- Creating and Organizing New MARPLOT Layers [PDF]
  User created layers in MARPLOT add significantly to LandView MARPLOT functionality. The article provides insights in using this utility more effectively.

- Notes on LandView Installation Procedures [PDF] or [HTML]
  This Help article was written to supplement Help file associated with installing LandView and MARPLOT data on Networks and local drives. Additionally, it provides insights to users who want to better understand the structure of the LandView program.

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Notes on LandView Installation Procedures

An Overview

This Help article was written to supplement information contained in three Help files concerned with accessing LandView data and map files as written to a LAN or local drive. The LandView 6 National DVDs provides background not only for copying files for the National release, but it similarly applies to installing files from *LandView 6 on DVD*, the 2-DVD (East/West) release of LandView 6. A LandView Help file, Network Installation of LandView, provides instructions for installation of either format on LAN servers. A third Help file, Alternate LandView Installations, provides instructions for installing data on a local drive.

For some users, problems arise when data cannot be installed exactly as described above.

LandView and MARPLOT are Independent Applications

LandView and MARPLOT are two independent applications that work together—one as a data management program and the other as a map viewer. Their executable files, *landview6.exe* and *marplot.exe*, are nested in the default LandView 6 installation directory, *c:\lv6a*. Either application can run independently of the other, but, for convenience, MARPLOT generally starts from a button at LandView Home[1]. As independent applications, each has inherent characteristics governing their use. This is particularly evident in how each accesses its associated datasets.

LandView Datasets

On first use of LandView following initial installation, LandView wants to find its data files within the application directory. Not finding them, it calls an executable file, *make_links.exe*, which locates the datasets and creates a set of shortcuts to them within the application directory. It looks for the installation DVD which carries the volume name, LV6, and which contains a similarly named data directory, LV6. Finding this, shortcuts are written to each of its contained data files—*this is the primary method for accessing LandView data*.

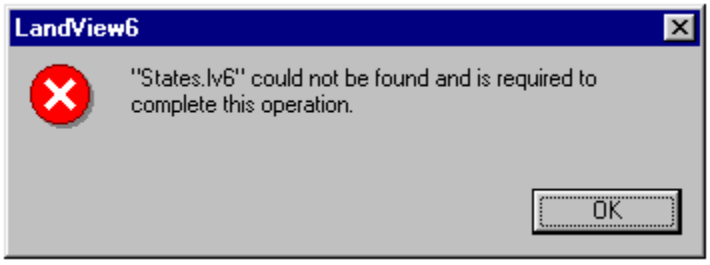
If the installation DVD is not found, LandView searches the root level of all available drives for an LV6 directory. Finding this directory (and if it contains the appropriate datasets), the shortcut files point to this new directory. Generally, a search is in alphabetical order. If there is a user-mapped directory, H:\, and a LAN-administered directory, R:\, and each contains an LV6 directory, the H:\ directory would be found first, and the shortcuts would point to it.

This is not true for LandView data installed in an LV6 directory on the C:\ drive of a workstation or laptop. (It would be true, however, for this directory on an auxiliary drive, such as D:\.) If an LV6 directory was installed on *c:* alongside of a *c:\lv6a* directory, and LandView was directed to find a Census file, an error message would appear as follows[2]:

---

[1] Some users may occasionally want to start MARPLOT as an independent application. MARPLOT can be started from a shortcut to *marplot.exe* placed on the Desktop.

[2] Similarly, if an EPA or GNIS file was attempted to be accessed, the dialogue would request pointing to an appropriate EPA or GNIS file.



On “OK”, LandView would open a Browse screen. Once the States file was located in *c:\lv6*, LandView would create a complete set of data shortcuts.

As independent installation of LandView on a work station or laptop is common, we should comment additionally as follows: The LandView dataset can be copied to a companion LV6 directory on the C:\ drive and the error message can be dealt with as above. However, the LV6 data files can be copied directly to the *c:\lv6a* directory. If LandView finds its data files within the application directory, it ceases to search further, and no shortcut files are created.

Other LandView Data Options

Once LandView has written a valid set of shortcut files, it no longer searches for LV6 directories; it will access data files as directed by the shortcuts. If there is a valid LAN or local dataset installed and a LandView DVD is in the DVD drive, the DVD will be ignored in favor of previously established shortcuts. If it is desired to access an LV dataset other than the installed dataset, it is recommended that the current *c:\lv6a* be deleted and replaced by a clean install.

If a ‘clean’ installation is not elected, the following could occur. Suppose LandView data was available from both a user-mapped directory, H:\, and a LAN Administrator-controlled directory, R:\, as stated above. LandView is currently directed to the user-mapped directory. If the mapped directory were made inactive for any reason and LandView was started, the following error message would appear:

On “OK”, similar messages might repeat several times before LandView would reset itself and find the files on the R:\ drive or before it would open a browse window requiring the user to find *states.lv6*.

A variation of the above procedure can force LandView to find data files on other than a mapped drive. For example, LandView files could be created, as above, on a LAN in the previously mentioned LV6 Data directory, but not as a mapped drive. A clean install of LandView would not find available files at any expected location and would request the user to locate the *states.lv6* file. Locating it at . . . *\LV6 Data\LV6\states.lv6* would create the necessary shortcuts.

MARPLOT in LandView

To MARPLOT, data means maps. A map, as computer data, is a directory containing a MARPLOT-generated file, *name.map*. A map directory can contain data for a single map layer or multiple map layers, or it can contain none. It can be an empty container awaiting layer data from a user.

MARPLOT accesses maps in priority order as follows: All map directories nested in the same directory as the MARPLOT executable file, *marplot.exe*[3], and at the same level as the executable file are immediately recognized by MARPLOT on startup. (Maps nested in sub-directories are not recognized.) When a map is identified with the **Find New Map** button, a path statement is written to MARPLOT, and such maps are also recognized on MARPLOT startup and continue to be recognized on subsequent startups as long as the file statements are valid. A third method is external instruction. For LandView, this is provided by an information file, *marplot.vnx*. It needs to be available to the MARPLOT application—normally at the root level of an available drive.

MARPLOT cannot contain two identically named maps. If MARPLOT finds a named map at priority one, above, it will display this map and ignore similarly named maps at priorities two or three.

All MARPLOT maps available with the LandView application are contained in Maps directories on LandView release DVDs. The maps are of two types—agency maps associated with LandView data and County TIGER/Line topological map files. Consult The LandView 6 National DVD for further details.

As there are more than 3,000 U. S. Counties, if MARPLOT had to follow its normal startup procedure and identify the contents of each map, startup would be interminable. Instead, MARPLOT accepts the content of each map—its containing layers and the number of objects on each layer— as stated in *marplot.vnx* and only verifies the path statement. However, if a map identified in the VNX file is not found, MARPLOT immediately stops reading the VNX file. Only those maps previously verified become available to MARPLOT!

Unless otherwise instructed, MARPLOT looks for the VNX file at the root level of available drives, most normally at the same location as the MAPS directory copied from the DVD.

Let us examine the anatomy of a VNX file. Remember that this is a *text file*. You should not edit it with a word processor, such as MS Word, which can introduce coding other than simple text. Yet, editing the VNX file (and often other text files) can require some sophisticated processing tools. For Windows PC computers, the recommended text file processor is WordPad.

[3] For MARPLOT as used with LandView, this is the *c:\lv6a* directory.

```
LV6
A AIRPORTS, Airports
M BUREAU_2, Bureau of Land Management
R BUREAU_O, Bureau of Reclamation
V CEMETERI, Cemeteries
1 CENSUSB, Census Block Groups
          X X X X X
X WATER_FE, Water Features
Z ZIP_CODE, Zip Code Tabulation Areas
MAPS
\maps\census\ 00000 Census
B 82767837 107932195 114747787 139357471 3740878
O 82760787 107831508 114831497 139384357 45383
1 82760787 107831508 114831497 139384357 144855
T 82760787 107831508 114831497 139384357 299
G 82760784 107831512 114831496 139384352 293
          X X X X X
\maps\tiger\al\01001\ 01001 Autauga County, AL
6 93079414 122311187 93588630 122708110 2235
2 93090240 122319641 93588729 122707683 59
8 93078628 122307575 93588829 122707916 1319
3 93099105 122321239 93587669 122707481 367
5 93087013 122407035 93587394 122707641 28
7 93095939 122308345 93588829 122690570 239
```

The first line of text, LV6, directs MARPLOT to the Installation DVD. As discussed in the associated Help files, MARPLOT needs to be redirected to the current location of its Maps directory, at the root level of an available drive.

Following that are a series of symbols that are shorthand for the names of layers contained on the various maps. Next, a line of text labeled “MAPS” signals the start of the map directories.

The first map is the Census map. Its path statement indicates that it is contained in a MAPS directory at the root level of the LV6 volume, and its map name is Census. Subsequent lines of text identify its contained layers, indicated by symbols. Four groups of numerals are coded latitude/longitude values identifying points on a rectangle bounding the objects on the layer. The final numerical set identifies the number of map objects contained on the layer.

The file continues through the contained agency maps until the first of the contained TIGER/Line map files is reached. Here, the path statement shows that the map is contained in a subdirectory, TIGER, nested in the MAPS directory. The map is nested further in another directory, AL, and it is named by its FIPS code as”01001”. This identifies it as the first county alphabetically in Alabama. An independent text identifier further interprets this as Autauga County, Alabama. The VNX file continues until the last county in the last state, alphabetically, is identified.

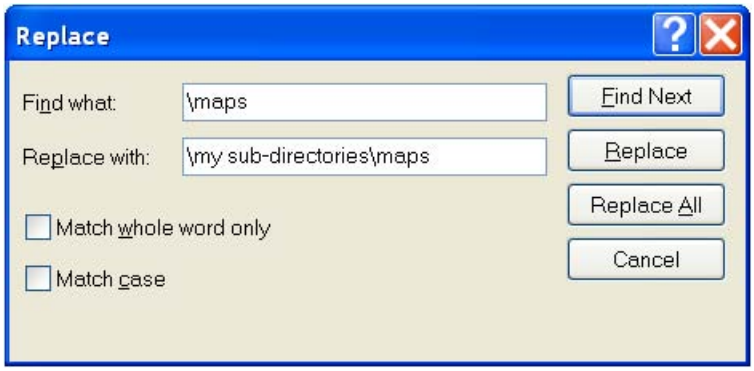
Supporting Alternate Installations of LandView

There is an earlier MARPLOT map functionality still available that can be useful in problem installations. An example of this would be where all users could not map to an identical drive letter for a user-installed LAN directory. Another example could be providing a map set to match the example cited above when the LandView data files are not installed to a directory accessible as a mapped drive.

To employ this older map search functionality, proceed as follows:

In *c:\lv6a*, create a directory called CDmaps. Copy the *marplot.vnx* file to this directory, but do not also copy it to the location of the Maps directory. Change the file suffix, presently VNX, to TXT. Edit the first line of text to display the drive letter containing the Maps directory. MAPLOT, finding instructions at this location, will access the maps in the same manner as finding a marplot.vnx file at the root of an available drive.

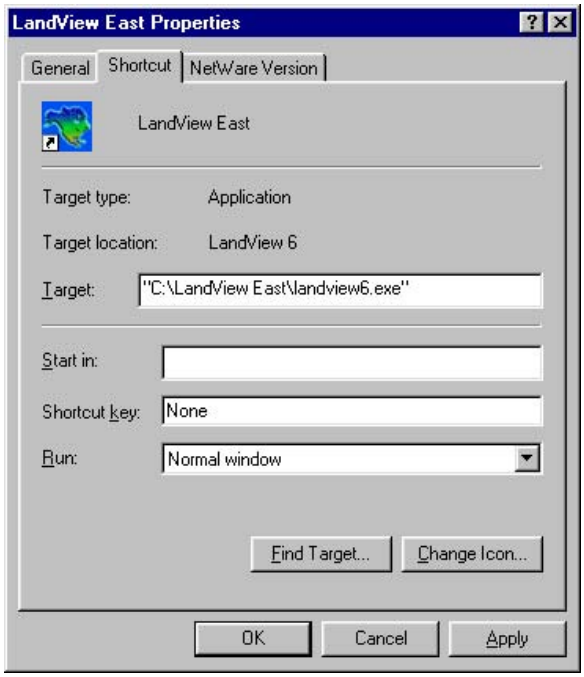
For MARPLOT to find a Maps directory nested in a subdirectory of an available drive requires some additional effort, and here is where WordPad functionality is helpful. Notice above in the VNX file displayed as text that a complete path statement for any given map starts with the identified drive letter as the first line of text and continues for each map as, \maps\ . . . Using WordPad, we can edit the TXT file by replacing "\Maps", currently at the root of an available drive, with a more appropriate statement. Use WordPad/Edit/Replace similarly to that shown below and "Replace All".



For PC LandView, the LandView Executables need not be in *c:\lv6a*

While not generally recommended, it is possible to have two independent LandView directories on the same workstation or LAN. For example, both LandView East and LandView West could be available from the same computer. In this instance, it would be better for each installation to be in its own 'mapped' drive in directories identified as LandView East and LandView West.

Assume that LandView East is installed first. On completion of installation, a *c:\lv6a* directory is created and, on tracking to the mapped drive, a set of shortcut files are created in *c:\lv6a*. Rename this directory as LandView East. To complete installation, the LandView Desktop shortcut needs to be edited as below:



The procedure can now be repeated to create a similar Desktop icon, LandView West.

For these procedures to be successful, each MARPLOT application needs to be directed to its own set of map files. The VNX approach cannot be used. You must employ the CDmaps approach. An important warning. Do not run both applications concurrently, and, especially, close a first version of MARPLOT before opening the second. If the first version of MARPLOT is running and the second version of LandView is opened, the second LandView will track to the original MARPLOT instead of opening its own linked version.

Do You Use MARPLOT More Frequently than LandView?

A final installation mode should be considered. There are occasional users of LandView who are more frequently concerned with the topological map files for their Home County (emergency planners, etc.). These may wish to access LandView from the DVD yet more frequently visit the MARPLOT map. They can '**Copy** and **Paste**' their County map file (and possibly the files for adjacent collar counties) to *c:\lv6a*. Such users would be well advised to create a Desktop shortcut that will start MARPLOT independently.

U.S. Census Bureau 10 Years on the Web

Importing Data
LandView® User Files

In a very limited way, LandView 6, as did LandView 5, returns to a feature that was available in the LandView III release and which was missing in LandView IV-user created or user modified data files where records in the database link to related objects in the MARPLOT®mapping application. LandView 6 is a runtime version of the underlying support application-FileMaker®Pro. As a runtime version, only data files included as part of formatting the runtime version are available for viewing.

LandView programmers have included five generic data files available for user customizing-*file_01.lv6*, *file_02.lv6*, etc. Each file is structured so as to receive (or not receive, as best suits a user's need) information into generically named fields. Additionally, there is a core group of named fields which, again, can either be used or ignored. These are:

Name An object identifier field

Description Allows as extended text description of the object

Latitude Allows for the creation of related MARPLOT point objects

Longitude Allows for the creation of related MARPLOT point objects

IDMARPLOT Unique identifier common to both MARPLOT and the data record

Each **User file** contains four sets of generically named fields with five fields to each set, of type: *character*, *numerical*, *data* and *logic*. These are named as follows: Text Field 1 thru 5, Number Field 1 thru 5, Data Field 1 thru 5 and Check Box Field 1 thru 5. A customizing option allows display of user assigned descriptive labels for each fields when displaying entered data. An unused field, while remaining in the Form View, would best be displayed with neither its generic name nor the user assigned descriptive label.

Communication, or linking, between a LandView data file record and its related MARPLOT map object requires that the LandView file identifies the exact Map name and the exact Layer name containing the map object and that the unique identifier of the MARPLOT map objects, its MARPLOT ID, either be known to LandView or be assigned by LandView.

If the latitude/longitude fields in a User File are populated, a LandView export file can be created, as *C:\lv6\export.txt*, which can be imported into MARPLOT [1] so as to place **Point** map objects on the named **Map** and the named **Layer**. A User file can force population of its **Idmarplot** field and MARPLOT will use these identifiers in creating the Point objects. Linkage between a record and its map object is thus

established.

Refer to Converting Latitude / Longitude data to Map Points for an example of the procedure.

Bringing Internet Data into LandView User Files [PDF], an article by E. J. McFaul of the U.S. Geological Survey and one of several Help articles presented as Unique Solutions, is a more comprehensive exploration of the same subject. Additionally, the article explores the use of the Internet as a source of GIS data for display in LandView/MARPLOT.

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[1] MARPLOT has two import-export options-a MARPLOT Import-Export format with files identified as *name.mie* and a Simple Point format with files identified as *name.txt*.

The letters PDF or symbol indicate a document is in the Portable Document Format (PDF). To view the file, you will need the Adobe® Acrobat® Readerwhich is available for **free**from the Adobe web site.

Source: U.S. Census Bureau
Geography Division
Last Revised: *Tuesday, 03-Feb-2004 15:00:27 EST*

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U.S. Census Bureau 10 Years on the Web

Notes on LandView Installation Procedures

An Overview

This Help article was written to supplement information contained in three Help files concerned with accessing LandView data and map files as written to a LAN or local drive. The LandView 6 National DVD provides background not only for copying files for the National release, but it similarly applies to installing files from **LandView 6 on DVD**, the 2-DVD (East/West) release of LandView 6. A LandView Help file, Network Installation of LandView, provides instructions for installation of either format on LAN servers. A third Help file, Alternate LandView Installations, provides instructions for installing data on a local drive. For some users, problems arise when data cannot be installed exactly as described above.

LandView and MARPLOT are Independent Applications

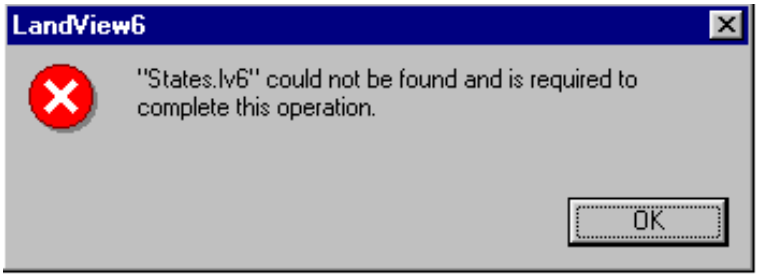
LandView and MARPLOT are two independent applications that work together-one as a data management program and the other as a map viewer. Their executable files, **landview6.exe** and **marplot.exe,** are nested in the default LandView 6 installation directory, **c:\lv6a**. Either application can run independently of the other, but, for convenience, MARPLOT generally starts from a button at LandView Home[1] . As independent applications, each has inherent characteristics governing their use. This is particularly evident in how each accesses its associated datasets.

LandView Datasets

On first use of LandView following initial installation, LandView wants to find its data files within the application directory. Not finding them, it calls an executable file, **make_links.exe**, which locates the datasets and creates a set of shortcuts to them within the application directory. It looks for the installation DVD which carries the volume name, LV6, and which contains a similarly named data directory, LV6. Finding this, shortcuts are written to each of its contained data files **- this is the primary method for accessing LandView data.**

If the installation DVD is not found, LandView searches the root level of all available drives for an LV6 directory. Finding this directory (and if it contains the appropriate datasets), the shortcut files point to this new directory. Generally, a search is in alphabetical order. If there is a user-mapped directory, H:\, and a LAN-administered directory, R:\, and each contains an LV6 directory, the H:\ directory would be found first, and the shortcuts would point to it.

This is not true for LandView data installed in an LV6 directory on the C:\ drive of a workstation or laptop. (It would be true, however, for this directory on an auxiliary drive, such as D:\.) If an LV6 directory was installed on **c:** alongside of a **c:\lv6a** directory, and LandView was directed to find a Census file, an error message would appear as follows[2] :



On "OK", LandView would open a Browse screen. Once the States file was located in **c:\lv6**, LandView would create a complete set of data shortcuts.

As independent installation of LandView on a work station or laptop is common, we should comment additionally as follows: The LandView dataset can be copied to a companion LV6 directory on the C:\ drive and the error message can be dealt with as above. However, the LV6 data files can be copied directly to the **c:\lv6a** directory. If LandView finds its data files within the application directory, it ceases to search further, and no shortcut files are created.

Other LandView Data Options

Once LandView has written a valid set of shortcut files, it no longer searches for LV6 directories; it will access data files as directed by the shortcuts. If there is a valid LAN or local dataset installed and a LandView DVD is in the DVD drive, the DVD will be ignored in favor of previously established shortcuts. If it is desired to access an LV dataset other than the installed dataset, it is recommended that the current **c:\lv6a** be deleted and replaced by a clean install. If a "clean" installation is not elected, the following could occur. Suppose LandView data was available from both a user-mapped directory, H:\, and a LAN Administrator-controlled directory, R:\, as stated above. LandView is currently directed to the user-mapped directory. If the mapped directory were made inactive for any reason and LandView was started, the following error message would appear:

On "OK", similar messages might repeat several times before LandView would reset itself and find the files on the R:\ drive or before it would open a browse window requiring the user to find **states.lv6**.

A variation of the above procedure can force LandView to find data files on other than a mapped drive. For example, LandView files could be created, as above, on a LAN in the previously mentioned LV6 Data directory, but not as a mapped drive. A clean install of LandView would not find available files at any expected location and would request the user to locate the **states.lv6** file. Locating it at . . . **\LV6 Data\LV6\states.lv6** would create the necessary shortcuts.

MARPLOT in LandView

To MARPLOT, data means maps. A map, as computer data, is a directory containing a MARPLOT-generated file, **name.map**. A map directory can contain data for a single map layer or multiple map layers, or it can contain none. It can be an empty container awaiting layer data from a user.

MARPLOT accesses maps in priority order as follows: All map directories nested in the same directory as the

MARPLOT executable file, **marplot.exe**[3], and at the same level as the executable file are immediately recognized by MARPLOT on startup. (Maps nested in sub-directories are not recognized.) When a map is identified with the **Find New Map** button, a path statement is written to MARPLOT, and such maps are also recognized on MARPLOT startup and continue to be recognized on subsequent startups as long as the file statements are valid. A third method is external instruction. For LandView, this is provided by an information file, **marplot.vnx**. It needs to be available to the MARPLOT application-normally at the root level of an available drive.

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Unless otherwise instructed, MARPLOT looks for the VNX file at the root level of available drives, most normally at the same location as the MAPS directory copied from the DVD.

Let us examine the anatomy of a VNX file. Remember that this is a **text file**. You should not edit it with a word processor, such as MS Word, which can introduce coding other than simple text. Yet, editing the VNX file (and often other text files) can require some sophisticated processing tools. For Windows PC computers, the recommended text file processor is WordPad.

```
LV6
A AIRPORTS, Airports
M BUREAU_2, Bureau of Land Management
R BUREAU_O, Bureau of Reclamation
V CEMETERI, Cemeteries
1 CENSUSB, Census Block Groups
          X X X X X
X WATER_FE, Water Features
Z ZIP_CODE, Zip Code Tabulation Areas
MAPS
\maps\census\ 00000 Census
B 82767837 107932195 114747787 139357471 3740878
O 82760787 107831508 114831497 139384357 45383
1 82760787 107831508 114831497 139384357 144855
T 82760787 107831508 114831497 139384357 299
G 82760784 107831512 114831496 139384352 293
          X X X X X
\maps\tiger\al\01001\ 01001 Autauga County, AL
6 93079414 122311187 93588630 122708110 2235
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The first line of text, LV6, directs MARPLOT to the Installation DVD. As discussed in the associated Help files, MARPLOT needs to be redirected to the current location of its Maps directory, at the root level of an available drive.

Following that are a series of symbols that are shorthand for the names of layers contained on the various maps. Next, a line of text labeled "MAPS" signals the start of the map directories.

The first map is the Census map. Its path statement indicates that it is contained in a MAPS directory at the root level of the LV6 volume, and its map name is Census. Subsequent lines of text identify its contained layers, indicated by symbols. Four groups of numerals are coded latitude/longitude values identifying points on a rectangle bounding the objects on the layer. The final numerical set identifies the number of map objects contained on the layer.

The file continues through the contained agency maps until the first of the contained TIGER/Line map files is reached. Here, the path statement shows that the map is contained in a subdirectory, TIGER, nested in the MAPS directory. The map is nested further in another directory, AL, and it is named by its FIPS code as"01001". This identifies it as the first county alphabetically in Alabama. An independent text identifier further interprets this as Autauga County, Alabama. The VNX file continues until the last county in the last state, alphabetically, is identified.

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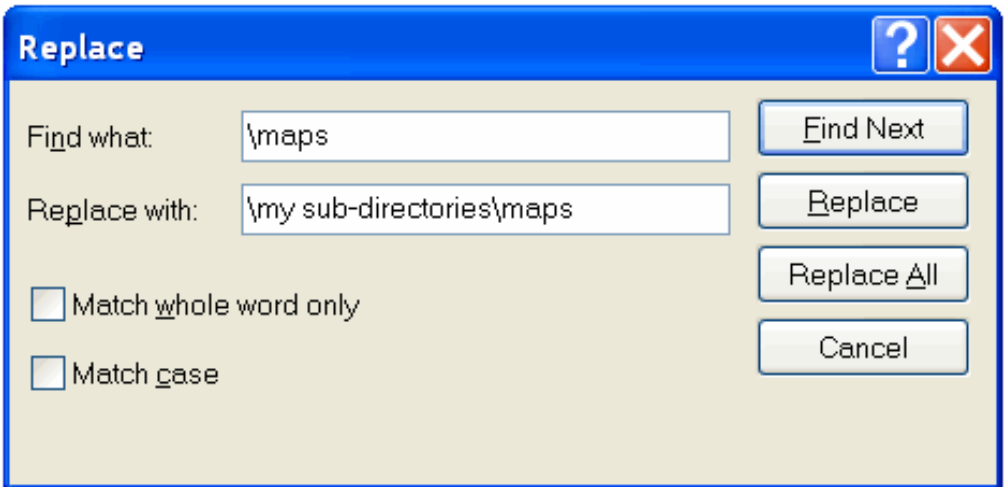
There is an earlier MARPLOT map functionality still available that can be useful in problem installations. An example of this would be where all users could not map to an identical drive letter for a user-installed LAN directory. Another example could be providing a map set to match the example cited above when the LandView data files are not installed to a directory accessible as a mapped drive.

To employ this older map search functionality, proceed as follows:

In **c:\lv6a,** create a directory called CDmaps. Copy the **marplot.vnx** file to this directory, but do not also copy it to the location of the Maps directory. Change the file suffix, presently VNX, to TXT. Edit the first line of text to display the drive letter containing the Maps directory. MARPLOT, finding instructions at this location, will access the maps in the same manner as finding a marplot.vnx file at the root of an available drive.

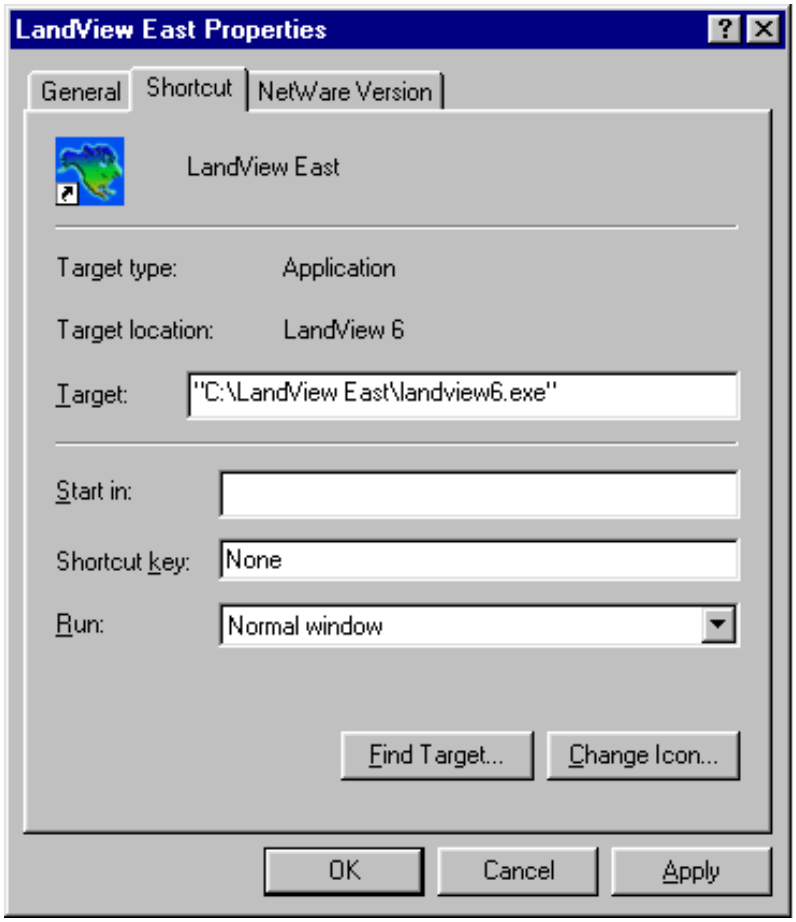
For MARPLOT to find a Maps directory nested in a subdirectory of an available drive requires some additional effort, and here is where WordPad functionality is helpful. Notice above in the VNX file displayed as text that a complete path statement for any given map starts with the identified drive letter as the first line of text and continues for each map as, \maps\ . . . Using WordPad, we can edit the TXT file by replacing "\Maps", currently at the root of an available drive, with a more appropriate statement. Use WordPad/Edit/Replace similarly to that shown below and "Replace All".



For PC LandView, the LandView Executables need not be in c:\lv6a

While not generally recommended, it is possible to have two independent LandView directories on the same workstation or LAN. For example, both LandView East and LandView West could be available from the same computer. In this instance, it would be better for each installation to be in its own 'mapped' drive in directories identified as LandView East and LandView West.

Assume that LandView East is installed first. On completion of installation, a **c:\lv6a** directory is created and, on tracking to the mapped drive, a set of shortcut files are created in **c:\lv6a.** Rename this directory as LandView East. To complete installation, the LandView Desktop shortcut needs to be edited as below:



The procedure can now be repeated to create a similar Desktop icon, LandView West.

For these procedures to be successful, each MARPLOT application needs to be directed to its own set of map files. The VNX approach cannot be used. You must employ the CDmaps approach. **An important warning**. Do not run both applications concurrently, and, especially, close a first version of MARPLOT before opening the second. If the first version of MARPLOT is running and the second version of LandView is opened, the second LandView will track to the original MARPLOT instead of opening its own linked version.

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A final installation mode should be considered. There are occasional users of LandView who are more frequently concerned with the topological map files for their Home County (emergency planners, etc.). These may wish to access LandView from the DVD yet more frequently visit the MARPLOT map. They can **"Copy and Paste"** their County map file (and possibly the files for adjacent collar counties) to **c:\lv6a.** Such users would be well advised to create a Desktop shortcut that will start MARPLOT independently.

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Getting Started

LandView Users who are comfortable with database and/or spreadsheet applications will have little trouble navigating the buttons and menus displayed in the LandView databases. However, they would be well advised to view two LandView Help documents that provide insights into FileMaker Pro® Runtime applications. These are: The FileMaker Interfaceand Setup a Find - Searching LandView.

Users familiar with GIS (Geographic Information Systems) will find the MARPLOT mapping application to be simple and intuitive. LandView and MARPLOT, each stand alone applications, together constitute a GIS. The pathways from LandView to MARPLOT are detailed in Go to Map/Show on Map. The pathways from MARPLOT to LandView are discussed in MARPLOT Sharing Menu.

Other users are directed to the **LandView Tutorial**. The **Tutorial** button, available at the LandView Home page, provides access either to the Tutorial included as part of the LandView installation or to a possibly more recent version maintained on the LandView Web site.

Regardless of their level of experience, all users are encouraged to at least browse the tutorial which demonstrates some of the innovative features available in the LandView/MARPLOT applications.

Both the **Tutorial** and **LandView Help** files contain information on the interactions of LandView and MARPLOT. However, MARPLOT is a free-standing application and contains its own extensive Help files specific to the MARPLOT application.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Tuesday, 27-Apr-2004 10:12:55 EDT*

The FileMaker® Interface

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® 6 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 100, 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** prompt arrow.

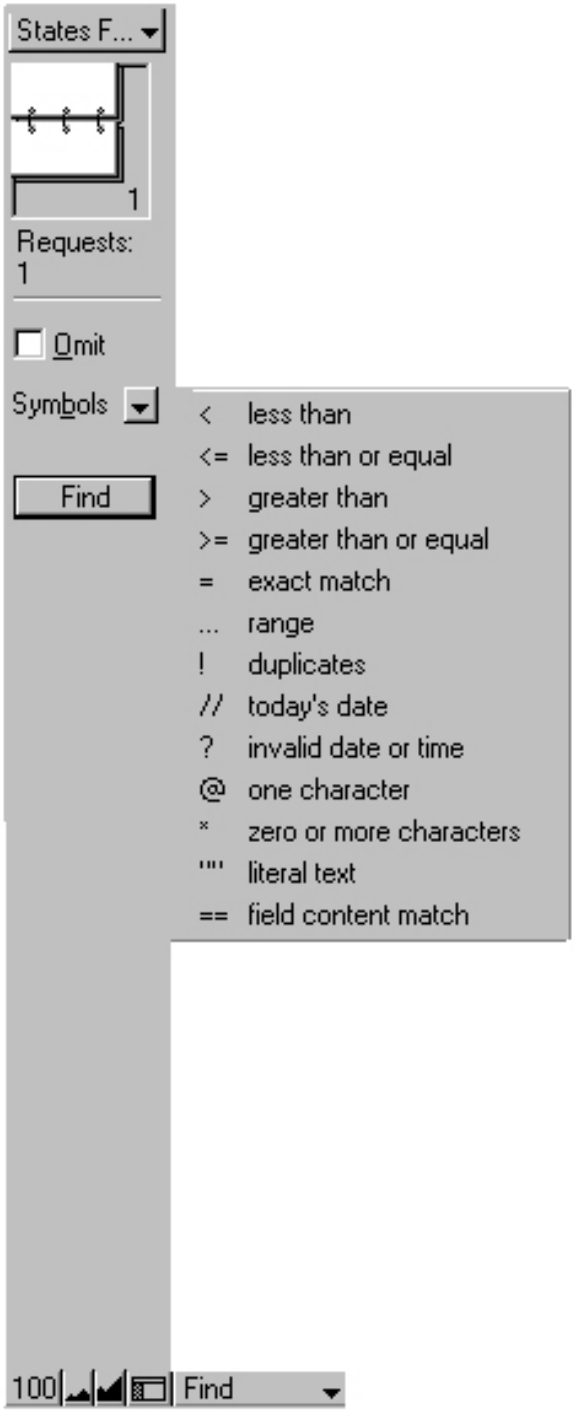
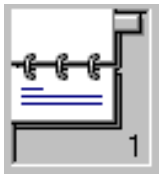


Figure 2

Mode Status Area

The Flipbook icon  lets the user flip forwards or backwards through a 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).

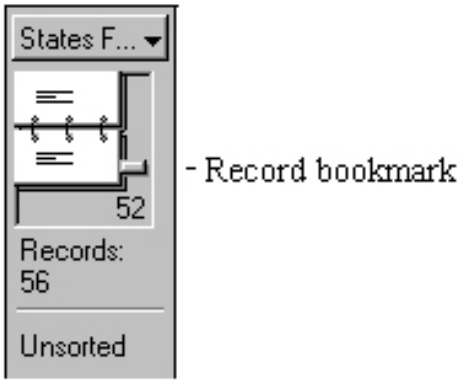


Figure 3

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. For example, in the census database records may be viewed in **Entire Demographic Profile** view and **List View**. The Entire Demographic Profile View allows you to look at the entire demographic profile and see the statistics for one geography while List View shows a list of records for a particular geography. For example if you wanted to look at the **Places** in Delaware in entire demographic profile view it would show the place that comes first alphabetically. In list view it would list all places in Delaware.

If you are interested in looking at a record in List View, there is also a button labeled View as List which can be found on various census geography screens in the census database and screens throughout the Environmental Protection Agency (EPA) and U.S. Geological Survey (USGS) databases.

The layout modes for EPA and USGS will look slightly different as they have their own set of data screens.

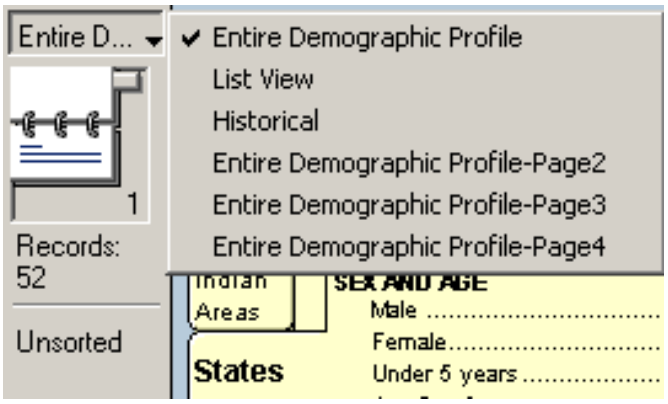


Figure 4

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 Find, under Records will be the word **Found**. This will let you know how many records were found as a result of your query.

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). Alternatively, you can place the mouse pointer on the data field that you wish to sort and then click the right mouse button. A popup menu will appear that will allow you to sort the records on that field.

The **Home**button

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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Source: U.S. Census Bureau
Geography Division
Last Revised: *Wednesday, 25-Feb-2004 11:20:40 EST*

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Setup A Find

Setup A Find

Finding specific records in the database is very easy. You first **setup** the find operation by first clicking on the **Setup A Find** button and then simply entering your desired selection criteria in one or more of the database fields. When all criteria have been entered, click on the **Find** button that appears on the gray panel on the left side of the display screen. The selection criteria entered in the fields are collectively referred to as a **Search Request** and can be combined with a Boolean **AND** when the **Find** button is clicked. For numeric fields, you can use symbols before the number, such as **< (less than), <= (less than or equal to), > (greater than), >= (greater than or equal to)**.
NOTE: Any field with a **drop-down menu** button beside it will display a list of possible values for that field when the button is clicked.

The Boolean OR

Sometimes you need to find records by combining criteria with a logical or Boolean **OR** operation. Since each set of criteria is treated as a separate Search Request, a Boolean **OR** is made by simply adding new Search Requests. To add a new Search Request, first click on the **Requests** pull-down menu at the top of the display screen, and then choose the **Add New Request** option from this menu to enter a new set of selection criteria. You may add as many new Search Requests as needed. When all of the **Search Requests** have been entered, click on the **Find** button that appears on the gray panel on the left side of the display screen to complete the find operation.

For multi-field searches, using Duplicate Request from the Requests menu is a time-saver over using Add New Request. Only the changed data needs to be edited.

Additional Operators

There are additional operators or **symbols** that may be used in setting up the find operation. These additional operators can be found by clicking on the **Symbols** button to display the complete list. To use an operator, first place your cursor in one of the fields on the display screen and then simply click on the desired operator. Once the operator is in the desired field, click on the button that appears on the gray panel on the left side of the display screen to perform the corresponding find.
NOTE: If you want to find all the records that have been **omitted** based on your search criteria, simply click in the **Omit** check box prior to clicking the **Find** button.

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Source: U.S. Census Bureau, Geography Division
Created: Sept-28-2001
Last revised: *August 05 2004*

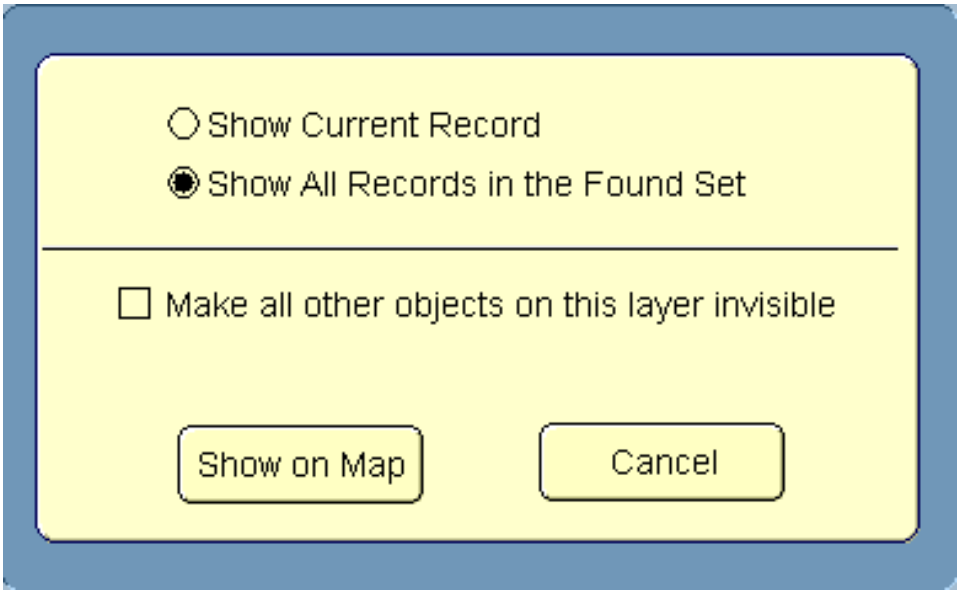
U.S. Census Bureau 10 Years on the Web

Go to Map/Show on Map

It should be borne in mind that LandView®, a database management program, and MARPLOT®, its mapping application, are independent applications that communicate with each other. Starting LandView does not automatically start MARPLOT. MARPLOT does not start until it has received a start command either from the **Go to Map**button at LandView **Home**or the **Show on Map**button available on each screen of its database displays. The resulting data records identified in a Setup a Findis referred to as the Found Set.

Once MARPLOT is running, the **Go to Map** buttons act as navigation tool to move to the current MARPLOT map display, but only if the user is at LandView Home. LandView and MARPLOT are multi-tasking. From any LandView Screen, the user can move to MARPLOT using the Start Menu at the bottom of the screen. If this MenuBar is not displayed, the keys, **[Control]-[Escape]**, will cause it to display.

The **Show on Map** button always invokes LandView/MARPLOT functionlity. If there is currently a **Found Set**, a dialogue box opens as below. There are two options. **Show Current Record** zooms in to a MARPLOT map display screen that just contains the selected record and places the map object in **Select** mode[1]. **Show All Records in the Found Set** zooms to a screen that just contains the Found Set with all objects in the Found Set in Select mode.



An aditional option, **Make all other objects on this layer invisible**, hides similar objects in MARPLOT. Thus, if the State of Virgina was the selected record, all other state boundaries would not display, but Virginia would not be in Select mode.

If LandView were in a **Show All Records** format, the dialogue box would read, **Show current record only**, with an option to **Make all other objects on this layer invisible**.

[1] Placing one or more MARPLOT objects in Select mode allows for other MARPLOT tasks related to the object(s).

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Thursday, 04-Dec-2003 14:10:53 EST*

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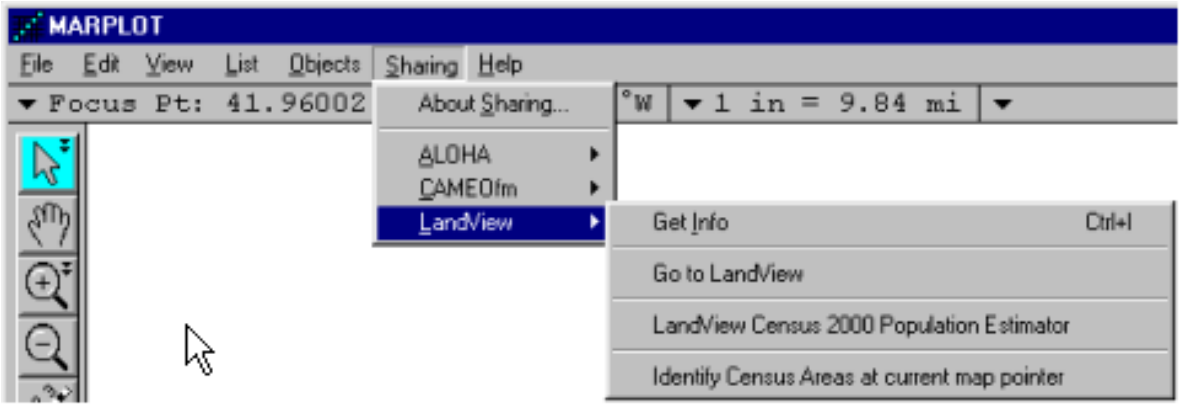
U.S. Census Bureau 10 Years on the Web

MARPLOT® Sharing Menu



Depending upon your usage of the MARPLOT mapping program, the MARPLOT Sharing Menu may or may not appear as above. MARPLOT is an independent application that provides mapping support to both the **CAMEO** and **ALOHA** applications [1] as well as LandView®. If these are not available on your computer, only the sub-menu associated with LandView will display.

As can be seen from the menu command, **Go to LandView**, Sharing provides navigation to each of MARPLOT's several related applications in a multi-tasking mode. If an application is not currently open, the command will start it. As an alternate means of moving between the applications, you may use the **Start** taskbar at the bottom of your screen. If the Start taskbar does not display, the keyboard command, **[Control]-[Escape]**, will cause it to display.

Two of the remaining commands are easily explained. LandView Census 2000 Population Estimator requires a more detailed explanation.

The LandView Census 2000 Population Estimator

The population estimator provides both an absolute estimate of population at a radius about a point, based on a capture of **Census Block Points**, and a richer demographic study of the same population, this based on a capture of Census Block Group polygons. The default location for initiating an estimate is the location of the **Focus Point** in MARPLOT. See the related Help file for further information on the Population Estimator.

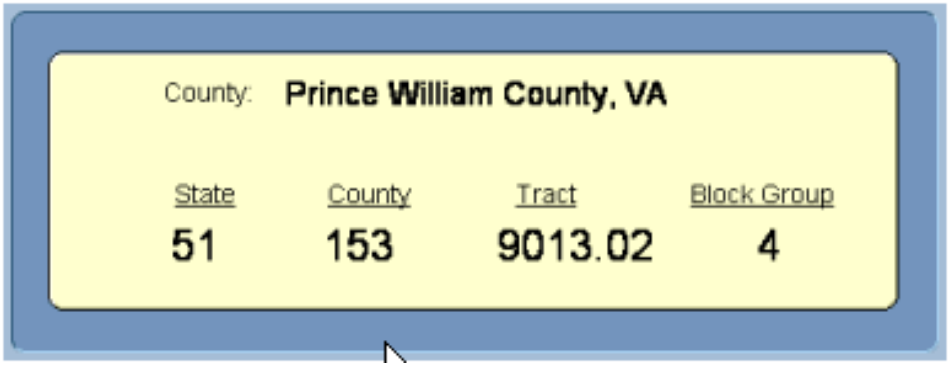
Get Information

With one or more MARPLOT map objects in **Select** mode, The **Get Info** menu item returns the user to the appropriate LandView database with records for the selected object(s) in a **Found Set** in **List View**. A Summarize button allows consolidating the numerical fields for the record set into a single summary record representing the multiple objects.

Please note that not all map objects have associated databases in LandView. Therefore if you have selected an object that has no information associated with it, LandView will let you know.

Identify Census Areas at Current Map Pointer

The **Identify census areas at current map pointer** menu item calls up the display screen seen below (for a point in Prince William County, Virginia). Displayed are the **FIPS** codes (Federal Information Processing Standard) for the containing state and county. FIPS codes are used as both map identifiers and record identifiers in LandView /MARPLOT and serve other function in State and Federal programs. The identification of the containing census tract and block group is a required item for some Federal programs and grant applications.



If appropriate Census data is not found at the map pointer location, the window will display only empty data fields. This would happen if the pointer were located outside of a state boundary.

---

[1]CAMEO and ALOHA are emergency planning and response softwares developed by U.S. EPA and NOAA.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 06-Oct-2003 13:33:16 EDT*

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U.S. Census Bureau 10 Years on the Web

LandView® and the Internet

LandView is a fully functional stand-alone application, yet its functionality is significantly enhanced by integration with the Internet at each level of operation. This Help article identifies and comments on the functionality enhancement brought to LandView by the Internet.

The LandView Home Page

The LandView application opens to its Home page. Besides providing navigation to its contained databases-Census 2000, the U.S. EPA's database of Regulated Facilities and the USGS's Geographic Names Information System, LandView Home provides pathways to its companion MARPLOT® mapping application, to two frequently used utilities and to the Internet.

The most obvious of these connections are the icons of the four federal agencies responsible for the LandView product-U.S. Environmental Protection Agency (EPA), U.S. Census Bureau, the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Geological Survey (USGS). Each icon is an Internet connection to the Home page of the named agency providing pathways to all facets of the agency's operation. However, there is more . . .

Metadata

Metadata is data about data. Most frequently, we accept data from a responsible source at face value. However, serious researchers need to document their findings-the time span over which the data is gathered, the conditions under which it was gathered, what is included, what is not included . . . This is metadata. Metadata for all agencies contributing data to LandView is maintained on at a Census Bureau Internet site and provides pathways to agency sites and to specific elements of the databases.

LandView Help Files

LandView Help files are placed on each computer as part of LandView installation. However, Help is continually under review in response to user inquiry. While a look at Help, as installed, may adequately respond to a user concern, a more recently updated Help available on the Internet may lead the user to a similarly expressed concern by others. A key feature of On-Line Help is the heading User Notes. As users' concerns are addressed and the Help is modified, User Notes identifies the concern and the Help modification.

The LandView Tutorial

Although the LandView Tutorial may not be as updated as frequently as the Help, it will be reviewed periodically and modified as necessary. The updated Tutorial will then be posted to the Web.

The Census Bureau Database

LandView 6 considerably amplifies the data available from Census 2000 as compared to LandView 5. LandView 5 contains the Census 2000 DP-1 table, data extracted from Census 2000 Summary File 1-the Census 2000 Profile of General Demographic Characteristics. LandView 6 includes not only the DP-1 tables but also the Tables DP-2 through DP-4-Social, Economic and Housing data taken from Census 2000 Summary File 3.

However, even this rich harvest of data may not satisfy all users' needs. The Web Link button available at each level of Census geography provides additonal insights. Two new links are provided-first to a broad discussion of Census 2000 and to the American FactFinder and secondly to a topic-by-topic listing of specific census concerns.

The U.S. Environmental Protection Agency's Database

Presented in the U.S. EPA's LandView database is basic information on each facility that is required to respond to EPA regulation. Here is presented minimum data-facility identifiers and identification of individual media programs under which the facility may be regulated. The Web Link button available at each individual record takes the user to EPA's EnviroFacts Warehouse-detailed records relating to a facility's reporting under each and all of the media programs under which the facility is regulated.

The Geographic Names Information System Database-the GNIS

The GNIS provides a record for individual points of geographic points of interest as recorded by the USGS. The records provide locational information and, in some case, background historical information. However, identification of an entry provides an Internet pathway to an expanded range of Internet data . . .

First, the Web Link provides information on the USGS 7.5' quad sheet containing the entitity. Following, though, are a number of additional Internet linkages providing geographic references.

> The first linkage is to TopoZone.com, an Internet site of Maps a la Carte, Inc-a USGS Digital Cartographic Business Partner and a member of the International Map Trade Association. TopoZone may amplify data available from the USGS quad sheet.
>
> A second linkage is to FIPS55 Data. FIPS, for Federal Information Processing Standards provides code identifiers for named populated places, state and county divisions and other locational entities of the United States.
>
> A Digital Raster Graphic (DRG) linkage allows saving of the mapped location as a portion of the USGS Topographic map. Saved images are in the JPEG format. Many computer graphic programs can convert JPEG formats to BMP formats. A BMP format allows using the downloaded image as a base map in MARPLOT.
>
> A Digital Orthophoto Quadrangle (DOQ) allows saving of the mapped location as an aerial

photograph. The aerial photograph can be converted to a BMP format allows using the downloaded image as a base map in MARPLOT.

A Show Feature Location linkage connects to maps maps produced from the U.S. Census Bureau's TIGER Map Server.

A Find the Watershed linkage connects to a Watershed site maintained by the U.S. EPA.

Shapefiles

Shapefiles are a public domain mapping format developed by Environmental Systems Research Institute, ESRI®. Shapefiles are an output format for ESRI mapping products and can exchange information with some commercial Geographic Information Systems (GIS). The Shape to MIE (shp2mie) utility downloaded as part of the LandView installation allows converting shapefiles to a MARPLOT import format. As such, the output of most GIS systems can be brought into MARPLOT and related to LandView/ MARPLOT topological and population information.

A search for "shape file" or "shapefiles" in an on-line search engine, such as Yahoo, will bring many hits.

Federal agencies are another source for shapefile data. A search for "maps" and/or "shapefiles" in an agency's Home Page is usually productive. The LandView Help topic, Unique Solutions, features a LandView/MARPLOT study on earthquakes based on USGS shapefile data.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Friday, 28-Nov-2003 15:02:51 EST*

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U.S. Census Bureau 10 Years on the Web

LandView® 6 Metadata

LandView 5 Metadata

U.S. Census Bureau

Census 2000 Demographic Data
These data were prepared from the Summary File (SF1) and Summary File 3 (SF3) state files. The SF1 Technical Documentation [PDF], the SF3 Technical Documentation [PDF], and the Demographic Profiles document the quality and source of the data.

Historical population and housing unit counts for states and counties
The 1970, 1980, 1990 population and housing unit counts were derived from the Census USA Counties 1998 CD-ROM. Please refer to the Guide to the USA Counties CD-ROM [PDF] for further technical information regarding the quality and source of these data.

MARPLOT® Census Demographic Layer Grouping
The state, county, and minor civil divisions layers in the Census Demographic Layer grouping of MARPLOT were created from generalized boundary files. They are available along with metadata from Cartographic Boundary Files.

The Indian Areas, Urban Areas, Congressional Districts (106th), places, census tracts, census block groups, and ZIP Code Tabulation Areas (ZCTAs) layers were created from the Census 2000 TIGER/Line® files.

The 108th TIGER/Line® file layer was created from the 108th Congressional District TIGER/Line® files.

MARPLOT Census 2000 TIGER/Line® Layers Grouping
These map layers were created from the Census 2000 TIGER/Line® files.

Environmental Protection Agency (EPA)

Please see the EPA Geospatial Index Library.

U.S. Geological Survey (USGS)

Please see the Geographic Names Information System.

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The letters PDF or symbol indicate a document is in the Portable Document Format (PDF). To view the file, you will need the Adobe® Acrobat® Readerwhich is available for **free**from the Adobe web site.

Source: U.S. Census Bureau
Geography Division
Last Revised: *Tuesday, 10-Feb-2004 17:37:35 EST*

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U.S. Census Bureau 10 Years on the Web

MARPLOT®

LandView®as a database management system - sometimes referred to as a DBMS and MARPLOT as a map viewer are two stand alone applications that communicate with each other. For one or more records 'found' in LandView, MARPLOT can display both their physical location and their location in relationship to other mapped objects such as roads, rivers or jurisdictional boundaries. Conversely, LandView will display the informational attributes associated with a found set of MARPLOT map objects. Thus, the physical location of an object becomes an important part of its informational data. This is the fundamental concept underlying a Geographic Information System, or GIS.

Pathways between the two applications are documented in the LandView Help files, Go to Map/Show on Map and MARPLOT Sharing Menus. Additionally, MARPLOT has its own set of Help screens, available from the MARPLOT MenuBar. Power users of MARPLOT may wish to access the MARPLOT Technical Documentation.

MARPLOT is a user-friendly application that has supported all previous versions of LandView and continues as the mapping application associated with LandView 6. Originally, MARPLOT was developed as part of the suite of programs associated with CAMEO®, an emergency planning and response software concerned with protecting the community from accidental chemical releases. These applications, CAMEO®, MARPLOT and the ALOHA plume modeling program, are a joint work product of the National Oceanic and Atmospheric Administration (NOAA), the Environmental Protection Agency (USEPA) and the Census Bureau.

The LandView 5 release was supported by **MARPLOT Version 3.3**. A newer release, **MARPLOT 3.3.1**, supports LandView 6 - this update addresses the manner in which LandView finds MARPLOT maps when a user selects one of several alternate LandView installation procedures. See both Network Installation of LandView and Alternate Installation Procedures.

MARPLOT supports the creation of user-entered map data. Again, the user is referred to both the MARPLOT Help files and MARPLOT Technical Documentation. Included as part of LandView installation is a MARPLOT utility, Shape to MIE (shp2mie), which provides additional support to MARPLOT. Shp2mie creates **MARPLOT Import Files** from ESRI shapefiles. Most GIS data that can be converted to a shapefile can be imported into MARPLOT.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Friday, 06-Aug-2004 10:58:46 EDT*

USCENSUSBUREAU
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U.S. Census Bureau 10 Years on the Web

The Shape File Import Utility

For those interested in bringing information from another Geographic Information System (GIS) product into LandView®, we provide a utility, **SHP2MIE**, that translates a shapefile into a MARPLOT Import Export (MIE) file. Download shp2mie.exe.

Shapefiles are a public domain data format created by the Environmental Systems Research Institute, ESRI®, and are used in a wide variety of GIS software programs to represent a set of geographic features such as streets, places, metropolitan areas, and tract boundaries. Each shapefile, *name.shp*, represents an associated set of map objects of a similar type-point, line, or area. With each shapefile is a similarly named data file, *name.dbf*, which contains information attributes linked to each map object. Shapefiles are a standard file format for transferring such information between GIS mapping software programs.

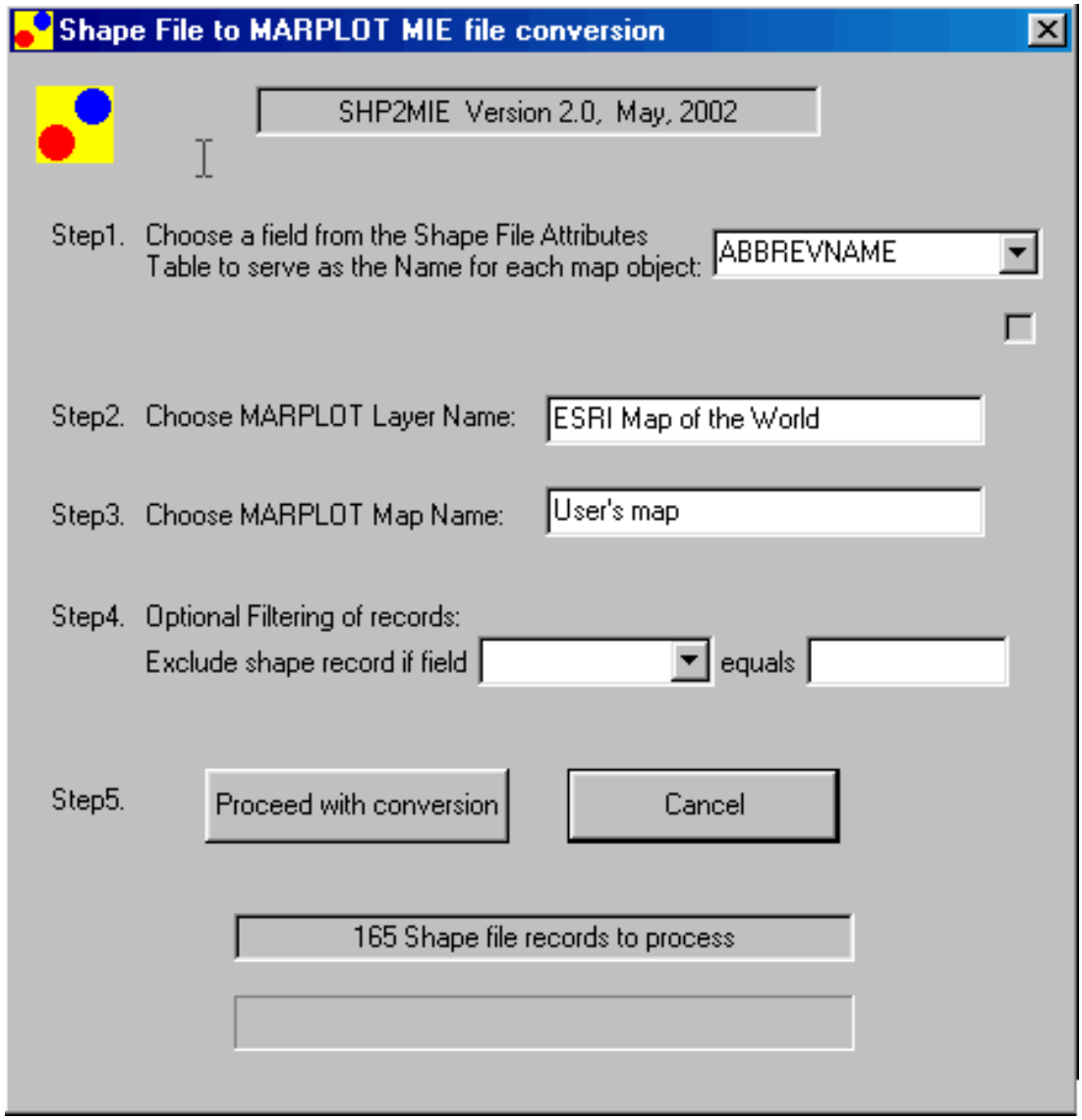
The **MARPLOT Import/Export (MIE) format** is the standard file format for importing and/or exporting MARPLOT information. An MIE file is a text file which completely describes the contained map objects in a format understood by MARPLOT. On import, each map object specified in the file is added to an identified map layer and map. If the objects in the file are from layers and/or maps that are not currently available in MARPLOT, the layers and/or maps are created. Maps created as part of the import process are stored in the same folder (directory) as the MARPLOT application itself. For more details about MARPLOT Import/Export, see **MARPLOT Help**.

The SHP2MIE program can read shapefiles that are unprojected (a *Geographic* projection, in ArcView terms) or that are projected in either UTM or Albers. Start SHP2MIE by locating and opening the *shp2mie.exe* executable file. A dialog box requests that you point to the folder and identify the shapefile you wish to translate [1]. After selecting the file, click the open button. The **Shape File to MARPLOT MIE** file conversion dialog box is shown at the end of this article.

First, choose a field from the shapefile attributes table to serve as a name for each map object. The attribute table represents field names in the file, *name.dbf*. To avoid confusion, you should try to select a field that provides a unique name for each map object. To this end, you may wish to examine the DBF file in any application that will display its contents.

Next, enter names for the MARPLOT layer that will contain the file's map objects and for its associated MARPLOT map. The default MARPLOT map name is **User's Map**. This map was automatically created when you installed LandView, and there is no need to change this default setting. If you wish to translate only selected map objects from the shapefile, you should select the controlling field using the scroll bar in the **Filtering** field and the value that will serve as a filter.

If the selected shapefile contains projected map data, you will be so advised, and it will be necessary to provide additional projection related information in the dialogue. For further information on projections, see an appropriate GIS reference.



---

[1] If the shapefile is contained on locked media, such as a CD, it is necessary to copy both the SHP and DBF files to an addressable drive. SHP2MIE, by default, creates the associated MARPLOT import file, name.mie, in the directory containing the shapefile.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 23-Feb-2004 15:56:04 EST*

USCENSUSBUREAU
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U.S. Census Bureau 10 Years on the Web

Indexing of LandView ® Databases

The LandView datasets, particularly at the National level, contain many data records, and each data file can contain many fields. Only key fields in each file are pre-indexed so as to provide for rapid searching of the databases. Indexing adds content to a LandView file, and, as it is not known which of many fields would be of greatest interest to a researcher, no attempt to index was made beyond key fields.

Locked LandView files, those with the 'Read-only' property set, cannot be indexed. The primary method for viewing and exploring LandView data is to access the data directly from the distribution CD/DVD. These files are locked and cannot be indexed. There are alternate procedures for installing LandView files on an addressable drive see Network Installation of LandView and Alternate LandView Installations, and, while it is not recommended as a normal operating procedure, such files can be unlocked and indexed.

A search of an un-indexed field in LandView, referred to as a **Find**, can be lengthy. Typically, such search would display a message, as below, as the search continues:

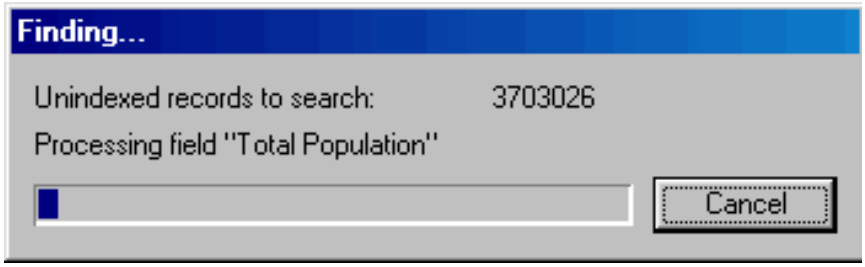

Figure 1

Each LandView database has its Index attribute set to: **Automatically turn indexing on if needed**. In the first time search of a new data field in an unlocked LandView file, the following message would appear:

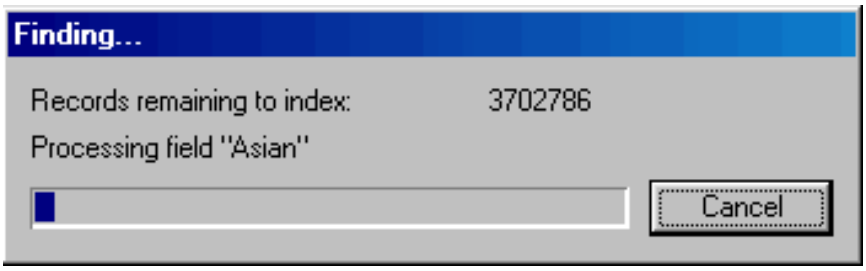

Figure 2

Subsequent searches of the same field in the same file would be almost instantaneous.

Working routinely with an unlocked LandView file can lead inadvertently to overwriting of data and the

introduction of error. As an indexing procedure, files can be unlocked, but they should be relocked upon completion of the indexing procedure.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 24-Nov-2003 08:47:57 EST*

USCENSUSBUREAU
Helping You Make Informed Decisions

U.S. Census Bureau 10 Years on the Web

Positional Accuracy of TIGER/Line® Data

The TIGER®data base was created originally to support the 1990 Census and has been updated periodically and used to support the ongoing data collection and publication work of the Census Bureau. The TIGER/Line files are the extract of the TIGER data base that is made available to the public.

During the initial creation of the Census TIGER data base in the late 1980s the principal sources of information used were the U.S. Geological Survey (USGS) 1:100,000-scale Digital Line Graphs (DLG), USGS 1:24,000-scale quadrangles, the U.S. Census Bureau's 1980 geographic base files (GBF/DIME-Files), and a variety of miscellaneous maps and aerial photographs. The DLG coverage was extensive, albeit of variable currency, and comprised most of the rural, small city, and suburban area of the TIGER data base. According to the USGS, the positional accuracy of features the DLG files is within about 200 feet of their correct position on the earth. The GBF/DIME-File coverage areas were updated through 1987 with the manual translation of features from the most recent aerial photography available to the U.S. Census Bureau.

In order to update the geographic data base from which to extract the TIGER/Line files, the Census Bureau uses various internal and external procedures to add new features (roads, boundaries, etc.) Many updates come from the geographic staff in each of the Census Bureau's 12 regional offices who work with local sources to identify new features. In recent years the Census Bureau has obtained digital files from the private sector and local officials. In the years preceding 2000 many updates came from map annotations made by enumerators preparing for the Census as they attempted to locate living quarters by traversing every street feature in their assignment area. Due to resource constraints the enumerator updates were digitized directly into the Census TIGER data base without geodetic controls or the use of aerial photography to confirm the features' locational accuracy. The Census Bureau also made other corrections and updates to the Census TIGER data base supplied by local participants in various U.S. Census Bureau programs. These local updates originated from map reviews by local government officials or their liaisons and local participants in Census Bureau programs. Maps were sent to participants for use in various census programs, and some maps were returned with update annotations and corrections. The Census Bureau generally added the updates without extensive checks. Changes made by local officials do not have geodetic control.

While it has made a reasonable and systematic attempt to gather the most recent information available about the features this file portrays, the Census Bureau cautions users that the files are no more complete than the source documents used in their compilation, the vintage of those source documents, and the translation of the information on those source documents. The Census Bureau is currently in the early stages of developing a system to significantly improve the coordinate accuracy of features in the TIGER data base and to devise a more effective approach to updating features. For more information on these plans visit the MAF/TIGER Modernizationportion of the Census Web site.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 24-Nov-2003 09:51:40 EST*

USCENSUSBUREAU
Helping You Make Informed Decisions

U.S. Census Bureau 10 Years on the Web

System Requirements

General Information About LandView®

Uninstalling LandView

LandView® 6 Minimum System Configuration

Note: *LandView 6 has certain functions such as accessing the EPA online Envirofacts database that require Internet access and the availability of an Internet Browser. If you choose to install and run this program on a computer lacking an Internet connection and browser, these functions won't be available.*

Requires Adobe Acrobat® Reader Version 4.0 or later. Available for **free** from Adobe's Web site.

The minimum system configuration required for PCs:

Hardware Requirements:

- Intel-compatible computer Pentium II 90 mHz or higher
- DVD-ROM drive (national file) /CD-ROM drive (for state custom disc)
- Hard disk drive with 20MB of free hard disk space
- Screen resolution of 1024 x 768 or higher recommended

Operating System:

- Windows 98, Me, NT 4.0 (Service Pack 6), Windows 2000, Windows XP

The minimum system configuration required for the Macintosh®:

Hardware Requirements:

- DVD-ROM drive (national file) /CD-ROM drive (for state custom disc)
- Hard disk drive with 20MB of free hard disk space
- Screen resolution of 1024 x 768 or higher recommended

Operating System:

- Mac OS version 8.6 through 9.2.2, Mac OS X 10.1

Uninstalling LandView

For those users with a PC you can uninstall the program using the **Add/Remove** function in the Control Panel. To access the Control Panel click on Start\Settings\Control Panel. Once in the Control Panel choose the **Add/Remove** icon, then procede with uninstalling as instructed by the program.

However, in order to make sure that LandView is completely uninstalled the user also needs to delete the \lv6a folder from the drive it was installed on.

Macintosh® Users
For those users with a Macintosh, you may remove the program by simply deleting the lv6a folder from the drive on which it was installed.

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Source: U.S. Census Bureau
Geography Division
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USCENSUSBUREAU
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U.S. Census Bureau 10 Years on the Web

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.

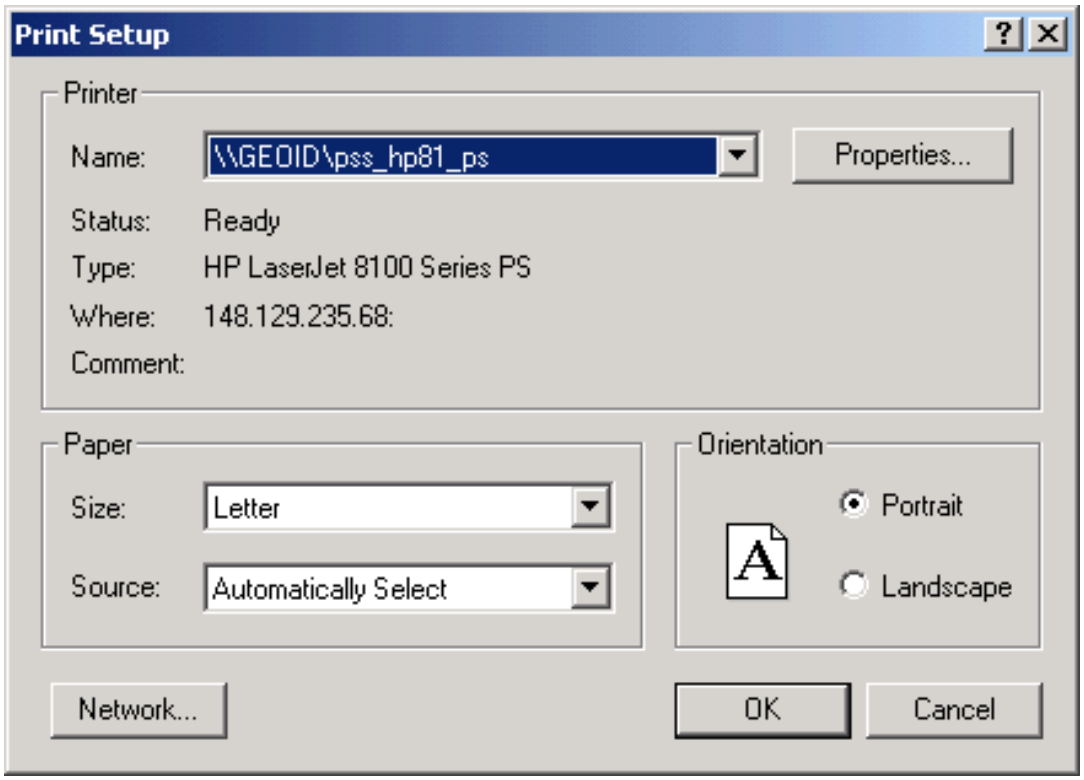

Figure 1 — Print Setup Dialog

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 The FileMaker® Interface section of this **Help**.

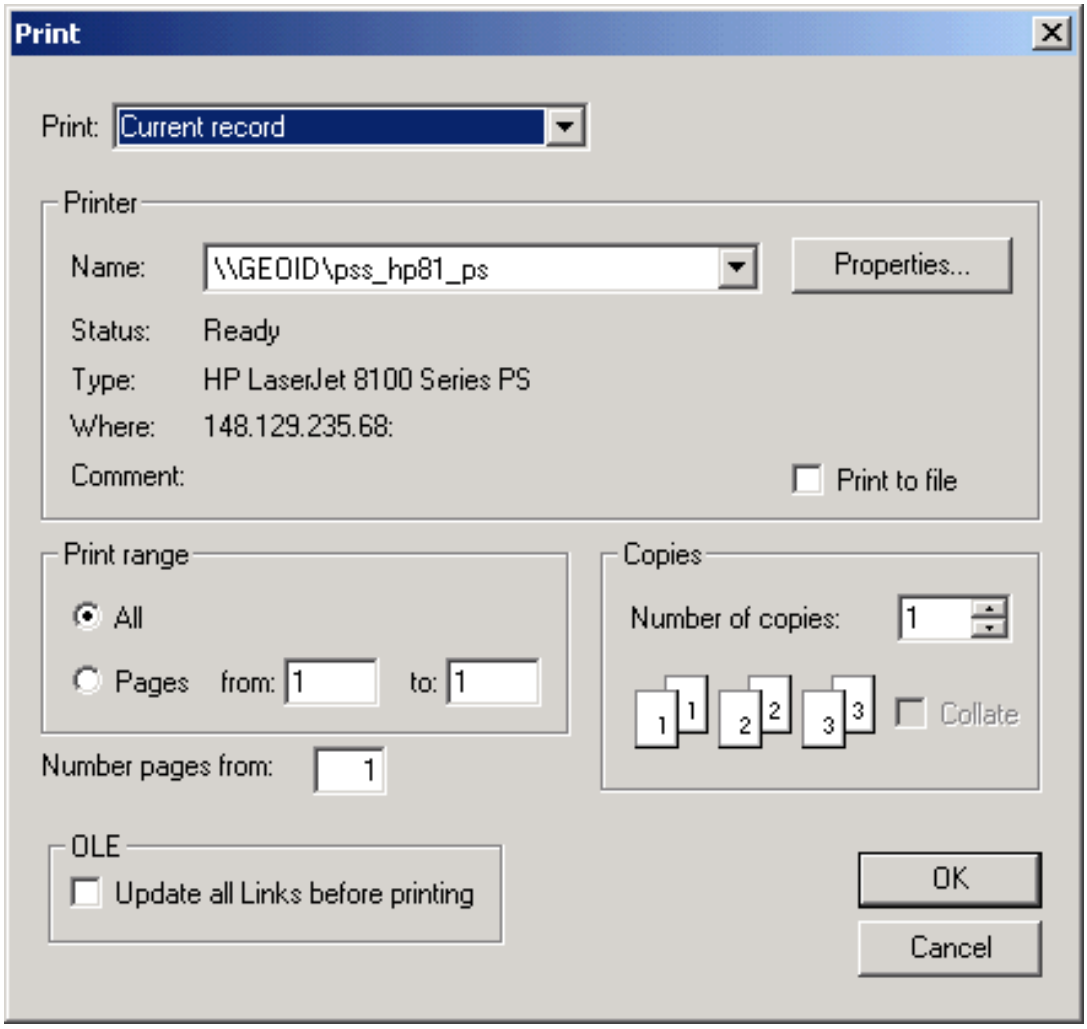

Figure 2 — Print Dialog

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Source: U.S. Census Bureau
Geography Division
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USCENSUSBUREAU
Helping You Make Informed Decisions

U.S. Census Bureau 10 Years on the Web

View as List

The **View as List**function can be found on the Census 2000 Demographic Profiles, EPA, and USGS database screens. When you first enter a database such as the EPA database, the format in which the information is displayed is in a form view.

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 Find will create a sub set of EPA records. To view the found set you can either look at each record individually in the form view or you may look at the list of records by switching to **View as List.** The **View as Form** button returns you to the forms screen.

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Source: U.S. Census Bureau
Geography Division
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USCENSUSBUREAU
Helping You Make Informed Decisions

U.S. Census Bureau 10 Years on the Web

LandView® 6
Frequently Asked Questions

1. Will LandView 6 meet my needs?
2. What kind of maps can I create with LandView 6?
3. Can LandView help me find the count of persons who live within 180 miles of my city?
4. Can LandView help me locate all the schools located within a 5 mile radius of an EPA Superfund site?
5. Can I import or export shape files from the LandView MARPLOT mapping software?
6. Is there a version of LandView 6 that runs on the Internet?
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11. Can I make duplicate copies of the LV6 DVD for my colleagues?
12. I would like to purchase a copy of LandView 6 and need to know the price and other ordering information?
13. I am a doctoral student and would like to use LandView 6 for my research but I can't afford to buy it. Can I download Landview 6 at no cost?
14. On which versions of the TIGER/Line files are the LandView products based?
15. When would I need to use the LandView 6 National DVD product?
16. When using LandView 5 or LandView 6 to update my Risk Management Plan, how do I report the Horizontal Reference Datum Code and Horizontal Accuracy Measure?

1. **Will LandView 6 meet my needs?**

   We strongly urge potential users to look over the information on the LandView main page to get a general idea of its capabilities. We plan to post a LandView 6 product brochure to this page by the end of the

second quarter of 2004.

If after reviewing these materials, you are still not sure whether LandView provides the functionality you desire, we recommend that you download the LandView 6 demonstration program and tutorial.

The LandView 6 demonstration program is a fully functional version of LandView that is limited geographically to Prince William County, VA. The tutorial has several lessons containing exercises that will introduce you to the product's features. This way you can determine first hand whether the product will meet your needs.
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2. **What kind of maps can I create with LandView 6?**

   The LandView product was designed to be used by the general public to create maps for small areas like neighborhoods or sections of a city showing selected features like roads, EPA sites, Census 2000 legal or statistical areas (census tracts, block groups) see example. It also can create basic thematic maps based on Census 2000 data see example.

   The LandView product uses the National Oceanic and Atmospheric Administration's MARPLOT® mapping engine which is also used in a system of software applications called CAMEO®. Front-line chemical emergency planners and responders use the CAMEO software to plan for and respond to chemical emergencies.

   Consequently, MARPLOT is not suitable for producing more complex maps showing large areas. Producing those types of maps require both more powerful cartographic software and cartographic expertise on the part of the user.

   Census Bureau cartographers have prepared various types of maps that can be found on our Map Products page.
   Top of Page

3. **Can LandView help me find the count of persons who live within 180 miles of my city?**

   The LandView software has an "Estimate a Population within a Radius" function that calculates the population and housing unit counts within a user specified radius from a focus point the user sets on the MARPLOT map, or from coordinates entered on the Census 2000 Population Estimator form.

   Two options are provided for producing the Census 2000 Population Estimate - one based on census block points and the other based on census block group points.

   Census tabulation blocks are the smallest geographic unit for which Census 2000 data is published (approximately 8.26 million blocks). This estimate provides the closest areal approximation of census statistical geographic units to the specified radius and would generally be used for radii smaller than 25 miles.

   The census block group points method (211,267 block groups) is used to tabulate the more detailed Census 2000 socioeconomic data shown in Demographic Profile tables 2-4 by census block group. Census block groups are used because socioeconomic data are not published at the census block level for confidentiality and sampling rate reasons. You can find a more detailed explanation of this function and how it works.
   Top of Page

4. **Can LandView help me locate all the schools located within a 5 mile radius of an EPA Superfund**

site?

LandView was designed by EPA to assist the public in assessing environmental hazards within their community as well as help the chemical industry prepare risk management plans. For this reason, EPA Envirofacts data is included along with the U. S. Geological Survey Geographic Names Information System data which provides data on schools, hospitals, religious institutions and other landmarks.

By using the MARPLOT mapping program search function an user can create a search collection of objects found within a specified radius. After building the collection of found objects (schools within 5 miles), the user has the option to mark all found objects on the map and then automatically retrieve records from the LandView database related to each marked map object.

Lesson 5 of the LandView 6 tutorial provides detailed information on how to conduct MARPLOT map searches.
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5. **Can I import or export shape files from the LandView MARPLOT mapping software?**

   The MARPLOT mapping software stores information in its own file format. Technical specifications about this format are provided in the MARPLOT Technical Documentation.

   We provide a software utility (SHP2MIE) that allows users to import shape files into the MARPLOT mapping software that are unprojected (a Geographic projection, in ArcView terms) or that are projected in either UTM (Universal Transverse Mercator) or Albers. Here are the utility and relevant instructions.

   We do not have a utility to export the MARPLOT map to shape file format.

   Chapter 4 of the MARPLOT User's Guide has specific information on how to import and export data in other formats like MARPLOT simple point format or ArcInfo Generate format.
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6. **Is there a version of LandView 6 that runs on the Internet?**

   The LandView product consists of two programs that are designed to run on Windows and Macintosh operating systems to meet the operational needs of first responders. First responders must have software that runs on their laptops in the field. For this reason, the LandView programming team designed LandView to run using DVDs for mass storage while yet providing optional Internet access to auxiliary databases.

   Because the LandView product is not copyrighted, users are free to install LandView as a client server application on their local area networks. The LandView Help provides further details on how to install LandView to a local area network.
   Top of Page

7. **I am a CAMEO user and I am also using LandView. CAMEO opens MARPLOT and I can see my LandView maps, but I don't see my LandView data records. What is the problem?**

   The CAMEO application can be run without access to the LandView application. For this purpose, a free-standing copy of the MARPLOT application is downloaded from the CAMEO Internet site. By default, this version of MARPLOT installs in a **c:\marplot** directory. On installation of LandView, a second copy of MARPLOT is created within the LandView folder **(c:\lv6a for LandView 6 and c:\lv5 for LandView 5).** There should not be two copies of the MARPLOT application on the same computer. LandView must

use the copy contained in the LandView application folder. The CAMEO application needs to be directed to the version contained in LandView, and the free-standing version of MARPLOT at **c:\marplot needs to be deleted.** Instructions for this procedure are on Page 4 of the LandView Tutorial.
Top of Page

8. **Can I run LandView 6 on my Local Area Network or install the files to run on my PC without the DVD?**

   LandView can be set up to run on a local area network as a client server application or installed on personal computer hard drive. Technical details regarding how to do this are provided in the "Alternate LandView Installation" and "Network Installation of LandView" at the LandView 6 Help Internet site.

9. **Does LandView 6 run on a Macintosh® desktop computer?**

   The LandView 6 software runs on Macintosh OS Version 9.2 or later. LandView IV and LandView 5 will also run on the Macintosh OS.
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10. **Why are there several versions of LandView in your sales program?**

    LandView IV is still offered to the public because it contains 1990 Census data and map layers of statistical and legal areas.

    Although LandView 5 has been replaced by LandView 6, we still offer it for sale because it's cheaper than LandView 6 and as well suited as LandView 6 for certain applications like matching addresses to Census geography or preparing EPA risk management plans.
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11. **Can I make duplicate copies of the LV6 DVD for my colleagues?**

    The LandView 6 and MARPLOT® software were created by agencies of the U.S. Government and are in the public domain. They can be copied, used and distributed freely without the requirement for royalty payments or further permissions.

    To accomodate the file size of the LandView 6 data sets and maps, dual layer, single sided DVDs (DVD-9 format) were used to create the East and West discs. Each disc has the capacity to store up to 8 gigabytes of files.

    DVD burners currently available to the public , use single sided, single layer DVDs (DVD-5 format) which can only store 4.3 gigabytes of data. Therefore, duplicating these DVDs is not an option.
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12. **I would like to purchase a copy of LandView 6 and need to know the price and other ordering information?**

    The price of the LandView 6 product is shown at LandView 6 "Ordering Information". To place an order refer to How To Order Census Bureau Data Products.
Top of Page

13. **I am a doctoral student and would like to use LandView 6 for my research but I can't afford to buy it. Can I download Landview 6 at no cost?**

Because the entire LandView 6 data set and maps contain over 66,000 files stored in 3,280 folders that require 12 gigs of computer storage space, we would have to divide the data into smaller county packages to create more manageable units for download. The effort required to do this exceeds currently available LandView programming resources. Furthermore, we do not believe that such a geographically limited version of LandView would be that useful for most user applications.

To meet the need for wide spread free public access to this software, we have distributed LandView through the Federal Depository Library system as well as through our State Data Center system.

From the Census Bureau's main page, select the "Related Sites" link in the dark blue column, There you will find links to both the Federal Depository Libraries and State Data Centers programs. Hopefully, you will find a conveniently located library where you can arrange to use LandView 6 for your research.
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14. **On which versions of the TIGER/Line files are the LandView products based?**

    LandView 4 is based on the 1998 TIGER/Line files, LandView 5 and 6, on the Census 2000 TIGER/Line data.
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15. **When would I need to use the LandView 6 National DVD product?**

    The National DVD product was created for those users who require access to data and maps for the entire country over a local area network (LAN) or a local hard drive.

    If you don't mind frequently exiting the LandView program to switch between the East and West DVDs or are comfortable with networking just the states on either the East or West DVD, you don't need the National DVD version. For more information on networking requirements see Network Installation of LandView
    Top of Page

16. **When using LandView 5 or LandView 6 to update my Risk Management Plan, how do I report the Horizontal Reference Datum Code and Horizontal Accuracy Measure?**

    The roads, hydrography, and railroad features in both LandView 5 and LandView 6 are based on the Census 2000 TIGER/Line files. This version of TIGER/Line is based on the North American Datum of 1983 (NAD83). For Hawaii and the Pacific Island Areas, the Census Bureau used a variety of sources for building the original digital file in the late 1980s. Neither the specific identities of each of these sources nor their datums were recorded.

    Because of the variety of sources contained in TIGER, it is not possible to provide a single number representing the horizontal accuracy measure. A fuller explanation of positional accuracy is presented in Chapter 5 of the Census 2000 TIGER/Line technical documentation [PDF] which may be downloaded.

    The EPA has developed the TRI Facility Siting Tool to allow facilities that submit Toxic Release Inventory (TRI) reports to obtain their latitude and longitude. This tool may also be used by facilities submitting Risk Management Plans (RMP). The tool asks you to enter either a zip code or a city and state. It then provides a map that you can zoom in on and pan sideways, to identify your location. Once you get to the maximum zoom-in level, it will show a satellite photo over the map, to further assist in pinpointing your exact location. The tool will then display the latitude and longitude in degrees/minutes/seconds format. You should use the DMS Calculator button in RMP*Submit to convert to decimal degrees.

The EPA strongly encourages RMP reporters to use its TRI Facility Siting Tool for reporting the coordinates of their facility.

If you use the TRI Facility Siting Tool to obtain your latitude and longitude, you should put the following values in the additional latitude/longitude fields:

i. Lat/Long Method: I2 - Interpolation-Photo
m. Source Map Scale Number: 24000
k. Horizontal accuracy measure (m): 25
l. Horizontal Reference Datum Code: 002 - North American Datum of 1983

To answer 1.5.i. "Method" for determining Lat/Long, enter "I4" which represents "Interpolation - Digital map source (TIGER): derived from a digital map, mapping software or mapping tool."

Detailed instructions about reporting the coordinates of such facilities are provided in Appendix F of the RMP*Submit 2004(TM) User's Manual which can be downloaded.

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Contact us

Source: U.S. Census Bureau
Geography Division
Last Revised: *Wednesday, 28-Jul-2004 12:32:00 EDT*

USCENSUSBUREAU
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U.S. Census Bureau 10 Years on the Web

LandView® 6
Census 2000 Population Estimator

The major difference in LandView 6 as compared to LandView 5 is the quantum leap in the kind and quality of the data available from the 2000 Decennial Census. Census 2000 data in both LandView 5 and LandView 6 is modeled upon the data tables presented in the Census 2000 Demographic Profiles.

The DP-1 tables, available in LandView 5, contained selected data items plus calculated statistics derived from the 1,040 statistical tables contained in Census 2000 Summary File 1 file (SF 1)-the datasets then available for publication. To Table DP-1, LandView 6 has added Tables DP-2 through DP-4; these are based on selected data items plus calculated statistics derived from the 813 statistical tables contained in Census 2000 Summary File 3 file (SF 3).

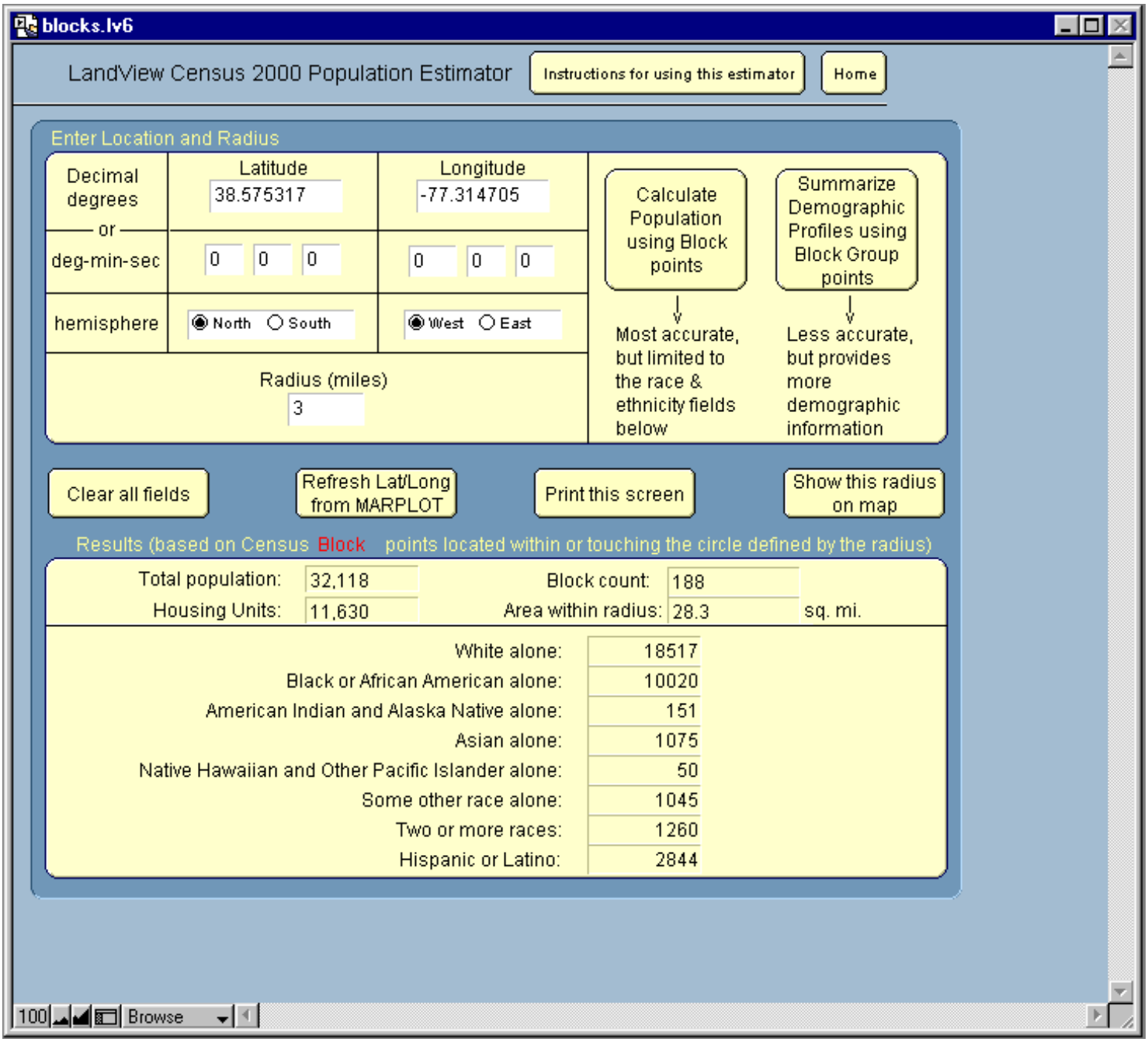
In LandView 6, the DP-1 through DP-4 tables are available at all levels of Census geography down to the Census Block Group level. A **National Summary** button, available at each dataset, allows comparison of local datasets to a National Profile representing composite data for the 50 United States and the District of Columbia.

With this expansion of LandView data comes a revision of the **Population Estimator**. In LandView 5, a search for population at a radius about a point would search out data at the Census Block level, the smallest unit of Census statistics and its most accurate. This, the Estimator still does. Accuracy comes, however, at a price-data agglomeration. At the Block level, only a limited set of data is available, that displayed in the Estimator dialogue box, shown below [1].

To share the rich demographics available in LandView 6, LandView has turned to the Census Block Group [2]. The demographic profile in the Estimator relies on the capture of the centroids of Census Block Groups within the radius of a circle. For any individual Census Block Group, say, 55% of its area lies inside the capture circle, and its data would be included. Another Group might have 49% of its area inside of the circle and it would be excluded. On sum, the capture and loss of individual Block Groups should average out, but not to the degree of precision attached to population search by Census Blocks. It is this dichotomy of data that needs to be borne in mind when interpreting Population Estimator results.

Using the Population Estimator

The Population Estimator can be opened from the **Estimate Population within a Radius** [3] button on the LandView 6 Home page. Normally, the population search is tracking the location of the **Focus Point** in MARPLOT, and the MARPLOT application should be running before using the Population Estimator. (Other Help files and the LandView Tutorial discuss the interactions of the LandView and MARPLOT applications.) In MARPLOT, once the Focus Point has been set to the desired search point, the Population Estimator is available from the MARPLOT MenuBar, at **Sharing/LandView/LandView Census 2000 Population Estimator**. Either pathway opens the Estimator shown below:



In this example, the MARPLOT Focus Point has been set to a location in eastern Virginia. Entered in the **Radius (miles)** field is a search radius of three miles. The button at **Calculate Population using Block points** has already been invoked , and we see, that within the capture radius, there is a population of 32,118 persons. The limited dataset available at the Census Block level is shown in the dialogue.

To explore a demographic profile at the same map location, use the **Summarize Demographic Profiles using Block Group points** button. After calculations, the DP-1 format data screen, shown below, is seen.

When using the **Summarize Demographic Profiles Using Block Group points** function on either the East or West DVD, users need to pay attention to whether their radius extends beyond the state boundaries of the states contained on the DVD. A simple way to determine this is to use the **Show this radius on map** function.

If a portion of the circle defined by the radius is located in a state not contained on the DVD, the results will exclude the demographic and housing characteristics for that portion of the circle. In such situations, we recommend that the user change the threshold for the block group method (which is shown on the Population Estimator Help Screen) to a value smaller than the radius. Doing this will produce a complete demographic profile since it will then be calculated from a national file of tract internal points contained on both the East and West DVDs.

Using the radio buttons in the upper-right corner, we can move from the DP-1 table through tables DP-2 to DP-4. We can print each of these tables. We can compare them to the National Profile or to a profile of the containing City, County or State. More detailed instructions on using the Estimator are available at the **Instructions for using this estimator** button.

Print Close

LandView 6 - Census 2000 Profile of General Demographic Characteristics DP-1 (100%)

Demographic (DP-1)
Social (DP-2)
Economic (DP-3)
Housing (DP-4)

Summary of Census Block Groups # records summarized: 16

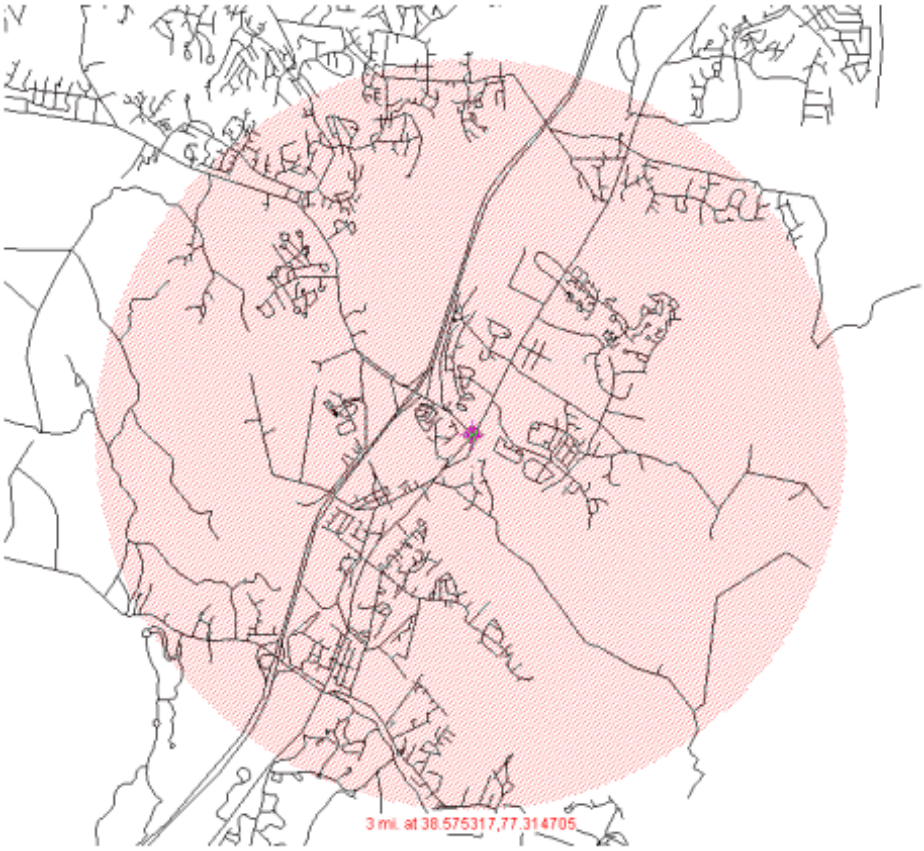
Total population 35,665 Total Housing Units 12,872 Persons per sq. mi: 869.6

Population estimate for radius: 3 miles (38.575317, -77.314705)

SEX AND AGE	Number	PCT
Male	17,455	48.9
Female	18,210	51.1
Under 5 years	3,429	9.6
Age 5 to 9 years	3,355	9.4
Age 10 to 14 years	3,068	8.6
Age 15 to 19 years	2,546	7.1
Age 20 to 24 years	2,303	6.5
Age 25 to 34 years	5,923	16.6
Age 35 to 44 years	6,947	19.5
Age 45 to 54 years	4,517	12.7
Age 55 to 59 years	1,347	3.8
Age 60 to 64 years	826	2.3
Age 65 to 74 years	898	2.5
Age 75 to 84 years	419	1.2
Age 85 years and over	87	0.2
Median age	(X)	(X)
Age 18 years and over	24,140	67.7
Male	11,591	32.5
Female	12,549	35.2
Age 21 years and over	22,837	64.0
Age 62 years and over	1,845	5.2
Age 65 years and over	1,404	3.9
Male	578	1.6
Female	826	2.3
RACE		
[illegible]	34,326	96.2

HISPANIC OR LATINO AND RACE	Number	PCT
Hispanic or Latino (of any race)	3,001	8.4
Mexican *	(X)	(X)
Puerto Rican *	(X)	(X)
Cuban *	(X)	(X)
Other Hispanic or Latino *	(X)	(X)
Not Hispanic or Latino	32,664	91.6
White alone	19,741	55.4
RELATIONSHIP		
In households	35,639	99.9
Householder	12,285	34.4
Spouse	6,842	19.2
Child	12,549	35.2
Own child under 18 years	10,494	29.4
Other relatives	2,014	5.6
Under 18 years	807	2.3
Nonrelatives	1,949	5.5
Unmarried partner *	(X)	(X)
In group quarters	26	0.1
Institutionalized population	0	0.0
Noninstitutionalized population	26	0.1
HOUSEHOLDS BY TYPE		
Total households	12,285	100
Family households (families)	9,235	75.2
With own children under 18 yrs	5,653	46.0
Married couple family	6,842	55.7

An additional feature of the Estimator is the **Show this radius on map** button. Using the button, we return to MARPLOT with the search radius displayed as below. However, unless we place it into a context, we learn little. The MARPLOT map screen has been reset to show the network of roads in and around the capture circle.



A final feature in the Population Estimator that bears mentioning is the fact that a population search can be conducted at very large radii. As a radius becomes larger, though, the number of Block points to be searched multiple as the square. At some point the data search can become time consuming. To minimize search time, at a pre-set radius, the search moves from examining Census Block points to examining Census Tract points. The default radius for this is 25 miles [4]. Within the **Instructions for using this estimator** button discussed above, lies an addressable field that allows this default search radius to be changed to meet a user's needs.

Searches for Population at a radius around a point are programmed utilities within LandView. Searches for population residing within a defined map area, say a National Park, require some additional effort on the part of the user. Methods for such searches are explored in an article in Unique Solutions.

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[1] There are 8.2 million census tabulation blocks for the geographic areas shown in LandView. 2.7 million blocks are excluded because they contain zero population and zero housing units.

[2] There are 211,267 block groups for the 50 states, District of Columbia and Puerto Rico. On the average, each block group contains about 39 blocks.

[3] The LandView program's algorithm for determining which block internal points fall within the radius takes the curvature of the earth into account. The MARPLOT mapping engine in mapping the radius does not. Consequently for larger radii, users might note differences in the block point counts between MARPLOT and the Population Estimator.

[4] An alternate population search that is frequently of interest is Finding the Population Within an Irregular Polygon. An example of such a search is given in Lesson 5 of the LandView 6 Tutorial.

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What's New in LandView® 6?

The prime differences between LandView 5 and 6 are:

1. Expansion of Census 2000 data to include the entire Demographic Profile (Tables (DP1-DP4)). We have also added a button that includes the Demographic Profile for the entire United States.

2. Replacement of the 106th Congressional data with data for the 108th Congress. In addition, a new map layer will show the 108th Congressional Districts. (The 106th Congressional District map layer will still be included in the MARPLOT® map for reference.)

3. Creation of Demographic Profile data for urban areas and urban clusters.

4. Expansion of the Population Estimator to work with the Demographic Profile data at the block group level.

5. Updated versions of the U.S. Geological Survey's (USGS) Geographic Names Information System (GNIS) and the Environmental Protection Agency's (EPA) Envirofacts data warehouse.

6. The identification of U. S. Counties that meet the definition of Coastal Counties as identified by the Strategic Environmental Assessments Division of the National Oceanic and Atmospheric Administration (NOAA).

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Tuesday, 24-Feb-2004 09:25:28 EST*

U.S. Census Bureau 10 Years on the Web

Census Databases

Interested in Metadata about LandView Census 2000 components?

The following Census Bureau data are presented in LandView®6:

1. Census 2000 demographic data.
2. Historical population and housing unit counts for states and counties.
3. MARPLOT® Census demographic layer grouping- represents the generalized and detailed boundary files used to display Census 2000 statistical and legal entities.
4. MARPLOT Census 2000 TIGER/Line® layers grouping- Census 2000 TIGER/Line data used to display roads, railroads, shoreline, water and other features.

Census 2000 Population and Housing Data

The Census 2000 data in LandView 6 are based on the data tables presented in the Census 2000 Demographic Profiles. Statistical table DP-1 contains selected data items plus calculated statistics derived from the 1,040 statistical tables contained in Census 2000 Summary File 1 file (SF 1). Statistical tables DP-2 through DP-4 contains selected data items plus calculated statistics derived from the 813 statistical tables contained in Census 2000 Summary File 3 file (SF 3).

Data are presented for the 50 states, the District of Columbia and Puerto Rico. The data presentation for all geographic levels except census blocks are based on the Census 2000 Demographic Profiles. About the Profile [PDF] provides an explanation of the data table content and derived measures.

The LandView product provides demographic profiles (excepting census blocks) for additional geographic levels not presented in the Census 2000 Demographic Profile product (i.e. census tracts, census block groups and ZCTAs). The census block statistics were created from selected data items contained in the Census 2000 Summary File 1 (SF1).

The SF1 files include statistical data on the following population and housing items based on a limited set of questions asked of every person and housing unit in the United States. These items are: age, race, sex, Hispanic or Latino origin, household relationship, and household and family characteristics. Housing items include occupancy status and tenure (whether the unit is owner- or renter-occupied).

Summary File 3 (SF 3) contains the sample data, which is the information compiled from the questions asked of a sample of all people and housing units. Population items include basic population totals; urban and rural; households and families; marital status; grandparents as caregivers; language and ability to speak English; ancestry; place of birth, citizenship status, and year of entry; migration; place of work; journey to work (commuting); school enrollment and educational attainment; veteran status; disability;

employment status; industry, occupation, and class of worker; income; and poverty status. Housing items include basic housing totals; urban and rural; number of rooms; number of bedrooms; year moved into unit; household size and occupants per room; units in structure; year structure built; heating fuel; telephone service; plumbing and kitchen facilities; vehicles available; value of home; monthly rent; and shelter costs.

For more information about these files go to Your Gateway to Census 2000.

Historical Population and Housing Unit Counts for States and Counties

The 1970, 1980, 1990 population and housing unit counts were derived from the Census USA Counties 1998 CD-ROM. These data are available only for the 50 states and the District of Columbia. Please refer to the Guide to the USA Counties CD-ROM[PDF] for more technical information regarding the quality and source of these data.

Please note that the 1970-1990 population figures are revised. The 1970-1980 housing units are revised; the 1990 housing unit counts are not. The following briefly explains how the population figures are revised. The April 1 census population is a count of the number of persons residing in an area (resident population) as reported in the census of population, or as subsequently revised through the annual population estimates . Revisions to an area's census population count may occur as the result of (1) post-census corrections of political boundaries, geographic misallocations, or documented under enumerations or over enumerations, and (2) geographic boundary updates made after the census, resulting from annexations, deannexations, new incorporations, governmental mergers, and so forth. The closing date to include these two forms of revisions for 1990 in this set of estimates was December 1996.

The counties and equivalent areas shown are defined as of January 1, 1992. Because the county boundaries and Census 2000 data shown in LandView 5 are defined as of January 1, 2000, counties that were defined after January 1, 1992 will not have historical data. Consequently, historical data will not be shown for the Skagway-Hoonah-Angoon Census Area (02232) and Yakutat City and Borough (02282). A supplemental source of information on county boundary changes can be found at the Changes to Counties and County Equivalent Entities: 1970-PresentWeb site.

We are presenting these data to give LandView users a sense of population growth for these areas. However, some dramatic population changes in states such as Alaska and Virginia may be attributed to geographic boundary updates between censuses involving annexations, deannexations, new incorporations, governmental mergers and so forth. Users should refer to the footnotes in the USA Counties 1998 CD-ROM for further details.

Additional historical census information may be obtained from the Population of Counties by Decennial Census: 1900 to 1990Web site or the Population DivisionWeb site.

MARPLOT® Census Demographic Layer Grouping

This layer grouping displays the following legal and statistical entities:

1. urbanized areas/urban clusters,

2. states,
3. state portions of Indian Areas,
4. state portions of ZIP Code Tabulation Areas (ZCTAs),
5. 106th and 108th Congressional Districts,
6. places,
7. consolidated cities,
8. counties,
9. minor civil divisions (MCDs in 20 states only),
10. census tracts, census block groups, and selected census block points.

Special Note Regarding Urbanized Areas and Urban Clusters

The MARPLOT "Urban Areas" layers shows detailed boundaries of urbanized areas and urban clusters as defined in the Federal Register / Vol. 67, No. 84 / Wednesday, May 1, 2002 / Notice. The May 1 boundaries will agree with the Census 2000 SF3 urban/rural tabulations and do not reflect subsequent corrections to the May 1, 2002 Notice.

For further information regarding the corrections and to obtain corrected boundary files see the Census 2000 Urban and Rural Classificationsite.

Special Note Regarding Minor Civil Divisions

The U.S. Census Bureau recognizes MCDs in 28 states. LandView, however, provides data for 20 states and Puerto Rico. The states are: Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin.

Special Note Regarding Census Block Points

To conserve disc space and speed the display of the census block points layer, census block points containing zero population and zero housing units are excluded from the census blocks database and the associated map layer. Consequently, only two thirds of the census block points (i.e. 5,471,376 out of 8,262,363) are shown.

Understanding Generalized and Detailed Boundaries

Both generalized and detailed boundary files were used to create the individual layers presented in the Census Demographic Layer grouping of MARPLOT®.

The boundary files used in the Indian Areas, (American Indian/Hawaiian Home Land), Urban Areas, Congressional Districts (106th and 108th), places, consolidated cities, census tracts, census block groups, and ZIP Code®Tabulation Areas (ZCTAs) layers were neither generalized nor clipped to the shoreline. Consequently, they provide the greatest coordinate resolution describing shapes with the same resolution as the TIGER file and do extend into large bodies of water.

The boundary files used in the state, county, and minor civil divisions layers are generalized which means that the number of lines making up the perimeter of those polygons are reduced, and the polygon shapes are simplified. Generalized files were used for these geographic layers because these files were clipped against the same generalized representation of the United States coastline, and they retain coincidence for boundaries shared between these layers (e.g. counties nest within state). Another benefit of the generalization process is that it reduces the size of the map files and speeds their display.

In comparing two layers sharing a common boundary where one is generalized and the other is detailed, there will be discrepancies. The layer that is not generalized depicts the actual boundary as stored in the TIGER/Line files. For example, the census tract boundaries are not generalized and they nest within county. Consequently, they depict the actual county boundaries in those situations where the census tract boundary coincides with the county boundary.

The generalized files are available along with further technical details and metadata from the Geography Division Cartographic Boundary Filesite. The detailed files are not available to the public. Since these files are derived from Census 2000 TIGER/Line, see the discussion below regarding Census 2000 TIGER/Line technical characteristics.

Consolidated Cities and Places

We present maps and data for consolidated cities and places in separate layers.

For Census 2000, there are seven consolidated cities:

Milford city, CT
Athens-Clarke County, GA
Augusta-Richmond County, GA
Columbus city, GA
Indianapolis city, IN
Butte-Silver Bow, MT
Nashville-Davidson, TN

A consolidated city is a consolidated government for which the functions of an incorporated place and its county or minor civil division (MCD) have merged. The legal aspects of this action may result in both the primary incorporated place and the county or MCD continuing to exist as legal entities, even though the county or MCD performs few or no governmental functions and has few or no elected officials. Where this occurs, and where one or more other incorporated places in the county or MCD continue to function as separate governments, even though they have been included in the consolidated government, the primary incorporated place is referred to as an consolidated city.

The data for the consolidated city includes the data for all places that are part of and within the consolidated city. The "consolidated city (balance)" entries are shown in the places layer and show data for the portion of the consolidated government minus the separately incorporated places within the consolidated city. Note that for data presentation purposes these "balance" entities are treated as statistically equivalent to a place; they have no legal basis or function.

For further information regarding Census 2000 geographic terms and concepts please see Appendix A. Census 2000 Geographic Terms and Concepts [PDF]. The relationship between various legal and statistical entities is shown in the LandView 6 Geographic Hierarchy diagram.

MARPLOT Census 2000 TIGER/Line® Layers Grouping

The Census 2000 TIGER/Line files were processed to create the individual layers (i.e. roads, railroads, shoreline, water and other features) as shown in the Census 2000 TIGER/Line group layer of MARPLOT. 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. The TIGER data base was developed at the Census Bureau to support the mapping and related geographic activities required by the decennial census and sample survey programs. For further details see the Census 2000 TIGER/Line technical documentation[PDF].

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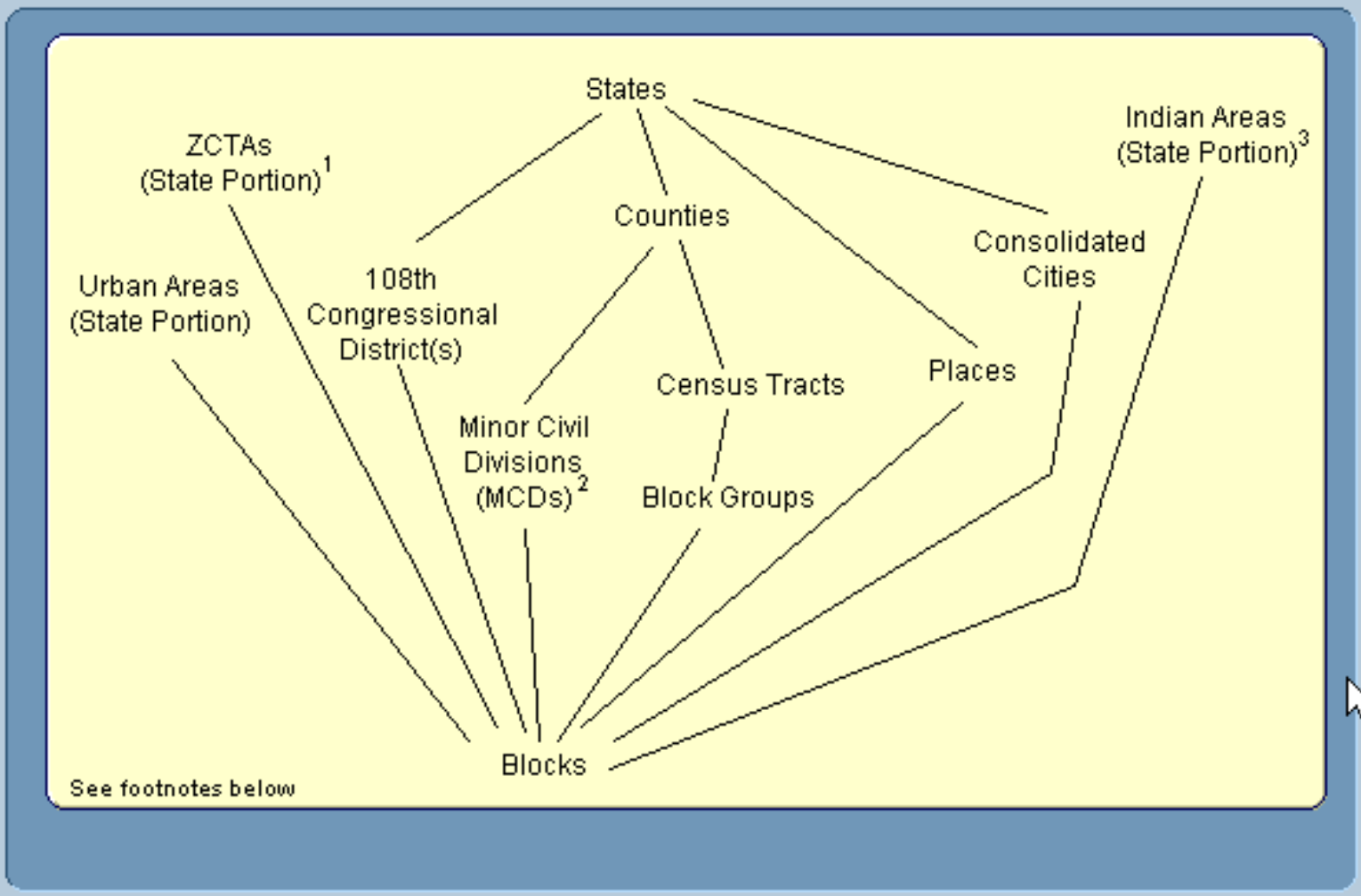
Hierarchical Relationship of Census Geographic Entities in LandView 6



1 ZCTA™: ZIP Code® Tabulation Area

2 The U.S. Census Bureau recognizes MCDs in 28 states. LandView provides data for 20 states and Puerto Rico. The states for which MCD data are provided are: Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin.

3 Indian Areas: American Indian Area/Alaska Native Area/Hawaiian home land

U.S. Census Bureau 10 Years on the Web

The EPA Database

Interested in Metadata?

The Environmental Protection Agency's (EPA) database in LandView ®6 contains some of the data available from the Envirofacts Warehouse. The Envirofacts Warehousewas created so that EPA data could be easily accessible to the public. LandView 6 contains extracts from the following Envirofacts Warehouse databases: AIRS/AFS (air emmision facilities), RCRAInfo (hazardous waste handlers), CERCLIS (Superfund sites), TRI (Toxic Release Inventory), and PCS- Permit Compliance System (water discharge permits).

The data was extracted from Envirofacts in July, 2003.

Any facility or site with an entry in the Locational Reference Table LRT_BEST_COORDINATE, and is in one of the five system areas indicated above, is included in the LandView database.

For questions on EPA data please see the Envirofacts Web site.

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U.S. Census Bureau 10 Years on the Web

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 the official federally recognized 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® 6 as well as metadata can be found on the National Atlas site.

Note: Only those GNIS records with actual latitude/longitude coordinates have been included in LandView 6. Those records without spatial coordinates (less than 3 percent of the total GNIS database) can still be found on the GNIS Web site.

Individual Feature Layers				
Airports	Cemeteries	Churches	Hospitals	Populated Places
Schools				

Land Features				
Arch	Bench	Flat	Levee	Slope
Area	Bend	Gap	Pillar	Summit
Bar	Cape	Island	Plain	Valley

Basin	Cliff	Isthmus	Range	Woods
Beach	Crater	Lava	Ridge	

Man-Made Features				
Building	Dam	Locale	Mine	Oilfield
Tower	Well			

Miscellaneous Features				
Civil	Forest	Military (historical only)	Other	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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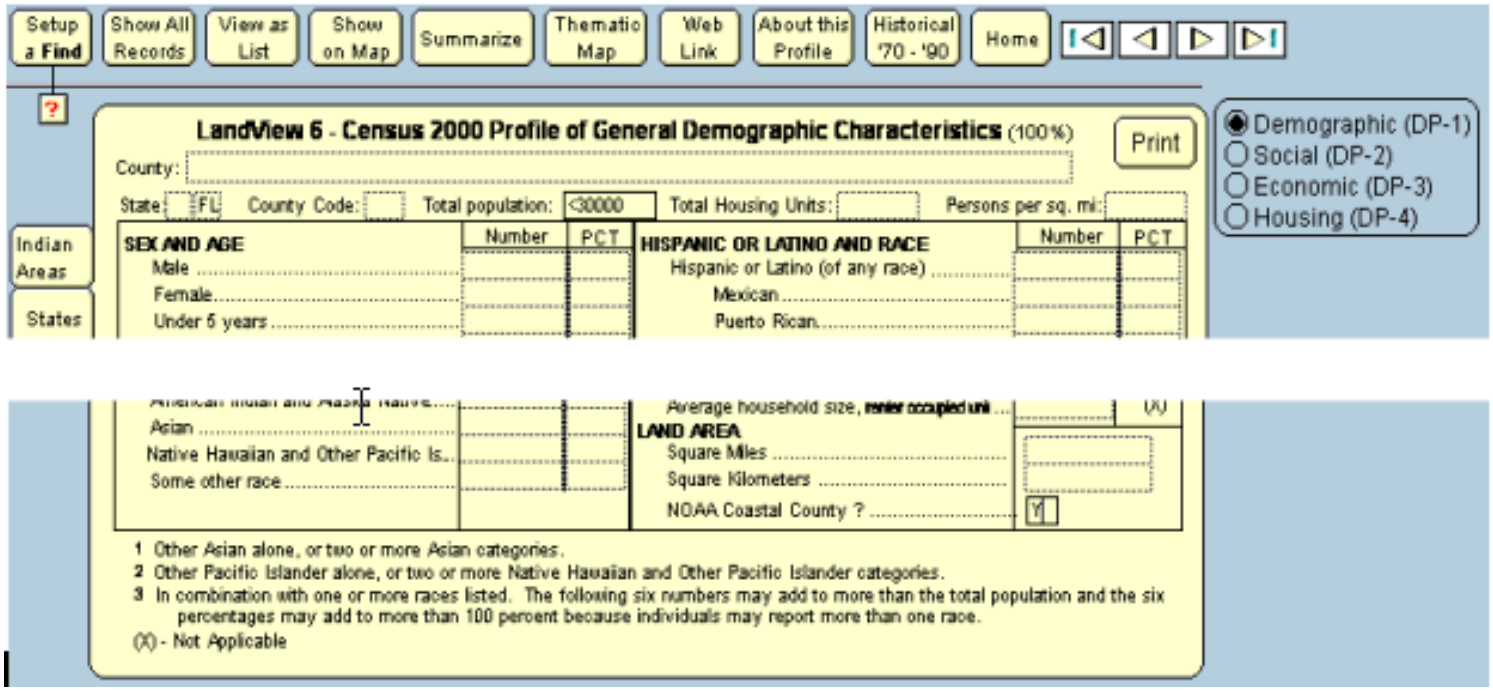
U.S. Census Bureau 10 Years on the Web

Coastal Counties

New to LandView®6 is the identification of U. S. Counties that meet the definition of Coastal Counties as identified by the Strategic Environmental Assessments Division of NOAA, the National Oceanic and Atmospheric Administration for the Bureau of Census Statistical Abstract Series. The attached NOAA's List of Coastal Counties[PDF] document background on the list, definitions of what constitutes a Coastal County and a list of all U.S. Counties.

As the listing and identification serves several technical purposes, users may find it useful to understand how the listing is maintained in LandView and how a search for specific counties should be conducted. Counties are a sub-geography for State in the LandView Census dataset. In the lower-right corner of each County Form View, as a listing under Land Area is data field for NOAA Coastal Counties. This is a Yes/No field, and any search to include or exclude would require the appropriate Y/N entry.

A typical '**Setup a Find**' is shown below. The search enters the two character identifier for the State of Florida, a Total population field entry identifying a search for counties having less than a 30,000 person population, and the identifier for the search to include only counties classified as 'Coastal'. The Found Set can display in MARPLOT®, be exported or otherwise processed in LandView/MARPLOT.



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NOAA's List of Coastal Counties
for the Bureau of the Census
Statistical Abstract Series

Introduction

The attached list contains all U.S. counties defined as ***coastal*** by the Strategic Environmental Assessments Division of the National Oceanic and Atmospheric Administration (NOAA). These are counties that meet one of the following criteria: 1) at least 15 percent of a county's total land area is located within the Nation's coastal watershed; or 2) a portion of or an entire county accounts for at least 15 percent of a coastal cataloging unit. Any U.S. county that meets these criteria is classified as coastal. This is the list of coastal counties that NOAA recommends for the Bureau of the Census' *Statistical Abstract* publication series.

There are 672 coastal counties including the District of Columbia in the United States (285 in the Atlantic, 142 in the Gulf of Mexico, 87 in the Pacific, and 158 in the Great Lakes). In 1990, these counties accounted for almost 54 percent of the Nation's population and 25 percent of the land area. If Alaska is excluded, the proportion of the U.S. land area classified as coastal decreases to 17 percent.

How was this List Developed?

This list was developed using a two-step process. The first step identified those counties that had at least 15 percent of their land area in the coastal watershed. The second step identified those counties that accounted for at least 15 percent of a coastal cataloging unit. This was done only for counties that bisected the coastal watershed, but had less that 15 percent of their total land area in the coastal watershed.

The intent of the second step was to identify those counties that, although not having at least 15 percent of their total area within the coastal watershed, still have a large land area within a coastal watershed. For example, the portion within the coastal watershed for several bisected counties is larger than the total size of many coastal counties that are entirely within the coastal watershed. This allowed for these counties to be included in the NOAA set of coastal counties. The process used to identify these counties is outlined below:

Step 1. Coastal Counties that have 15% of more of their Total Land Area in the Coastal Watershed (666 counties).

1) Counties that bisected or were entirely within the coastal watershed were identified.
2) The land area was calculated for each county.
3) The coastal watershed land area was calculated for each bisected county.
4) The percentage of a county's total land area within the coastal watershed was calculated. This figure was determined by dividing the county's coastal watershed land area by its total land area. If a county's land area fell entirely within the

coastal watershed, the value was 100 percent. If the coastal watershed covered only part of the county, the value was less than 100 percent.

5) All counties were checked against hard-copy maps (showing counties and coastal watersheds) to determine if they were entirely within, or bisected by, the coastal watershed boundary.
6) Any county that had at least 15 percent of its land area in the coastal watershed was identified as being coastal.

Step 2. Coastal Counties that Comprise at Least 15% of Coastal Cataloging Unit's Land Area (6 counties).

1) Counties that bisected the coastal watershed and had less than 15 percent of their land area in the coastal watershed were identified.
2) The coastal cataloging units that were identified.
3) The amount of land area in each coastal cataloging unit was calculated (although most coastal cataloging units are located entirely within the coastal watershed, only the area of the cataloging unit within the coastal watershed was determined).
4) The amount of land area where the counties and cataloging units overlapped was calculated.
5) The proportion of a cataloging unit's land area within this polygon was calculated.
6) If any portion of a county accounted for at least 15 percent of a coastal cataloging unit, the county was identified as being coastal.

Development of Land Area Estimates

All county boundary files were derived from the U.S. Geological Survey's (USGS)1;2,000,000 DLG-3 data series. All watershed boundaries were derived from the USGS 1:500,000 hydrologic map series. After combining these two geographies, area calculations from the ARC/INFO Geographic Information System were used to derive the county, coastal watershed, and cataloging unit land area figures.

Because of the difference in scales between the two map series, the percent of county land within the coastal watershed or a coastal cataloging unit is less accurate than using the same scale for both. For example, in some cases the county boundary is the same as the coastal watershed boundary, but, because of the difference between two scales, they do not show a perfect match. However, the estimates are considered to be acceptable for the purposes of developing this list of coastal counties.

What is a Coastal Watershed or a Coastal Cataloging Unit?

The **coastal watershed** is composed of all lands within Estuarine Drainage Areas (EDAs) or Coastal Drainage Areas (CDAs) in NOAA's Coastal Assessment Framework. EDAs and CDAs are individual coastal watersheds that border the coast of the contiguous United States, not including Alaska or Hawaii. No portion of the U.S. coastline in excluded.

An EDA is defined as that part of an estuary's entire watershed that empties directly into the estuary and, for each river in the estuary's watershed, includes the downstream-most USGS cataloging unit in which the head of tide is found. CDAs are defined as that component of an entire watershed that meets these three criteria: 1) it is not part of any one of the 102 EDAs; 2)it drains directly into an ocean, an estuary, or the Great Lakes; and 3) it contains the downstream-most cataloging unit in which the head of tide is found (in the Great Lakes, tide refers to meteorologically created tides).

A **coastal cataloging unit** is a drainage basin that falls entirely within or straddles an EDA or CDA. Typically, most EDAs or CDAs are composed of several complete cataloging units (drainage basins).

Why use the 15 Percent Rule?

The **15-percent rule** was selected as an appropriate level for capturing counties with a significant impact on coastal and ocean resources. According to this rule, a county is coastal if: 1) at least 15 percent of its total land area is within the coastal watershed; or 2) a portion of or its entire land area accounts for at least 15 percent of a coastal cataloging unit. For example, counties with at least one-third to one-quarter of their land area in the coastal watershed obviously have a large impact on coastal resources. However, counties that only have a small percentage of lands within the coastal watershed have a much smaller impact. Indeed, their impact may be inconsequential. Consequently, the 15-percent rule separates these two groups of counties.

Exceptions to the General Rule

There are a few exceptions to these rules. Cook and Lake Counties in Illinois, as examples, do not meet the 15 percent rule for a coastal watershed or a coastal cataloging unit. They do, however, border directly on Lake Michigan, so NOAA has included them in a coastal county set.

NOAA also does not include Alaska or Hawaii in its Coastal Assessment Framework. However, all counties (boroughs and census areas in Alaska) that directly border the coastline in these states are included here. As a result, all of Hawaii's counties, and 22 of Alaska's 25 areas, are found in NOAA's final set of coastal counties.

NOAA also identified the approximate inland boundary of Alaska's coastal watershed in Alaska. This boundary was used to determine the status of interior boroughs/census area. The three interior boroughs/census areas that were excluded fell outside of the coastal watershed.

Regions

The Atlantic region includes counties from Maine to Florida located within, or bisected by, the portion of the coastal watershed that drains into the Atlantic Ocean. This means that 25 of the 28 coastal counties in Georgia, and 21 of the 61 coastal counties in Florida, are included in the Atlantic region. The Gulf of Mexico region extends from Florida to Texas. The Pacific region includes California, Oregon,

Washington, Alaska, and Hawaii. The Great Lakes region includes counties in all states bordering the Great Lakes. One of Pennsylvania's 13 coastal , and 21 of New York's 39 coastal counties, are included in this region

Several of Florida's coastal counties occur in both the Atlantic and Gulf of Mexico portions of the coastal watershed. Each county has been classified according to the region in which the greatest proportion of its coastal watershed land area lives. For example, 60 percent of a county's land area may drain into the Gulf of Mexico, with the remaining 40 percent draining into the Atlantic. This county would, therefore, be classified as being in the Gulf of Mexico Region.

Questions about the following list or related definitions should be directed to: Peter C. Wiley
peter.wiley@noaa.gov

STATE	FIPS	FIPSNAME
AK	02013	Aleutians East, AK
AK	02016	Aleutians West, AK
AK	02020	Anchorage, AK
AK	02050	Bethel, AK
AK	02060	Bristol Bay, AK
AK	02070	Dillingham, AK
AK	02100	Haines, AK
AK	02110	Juneau, AK
AK	02122	Kenai Peninsula, AK
AK	02130	Ketchikan Gateway, AK
AK	02150	Kodiak Island, AK
AK	02164	Lake and Peninsula, AK
AK	02170	Matanuska-Susitna, AK
AK	02180	Nome, AK
AK	02185	North Slope, AK
AK	02188	Northwest Arctic, AK
AK	02201	Prince of Wales-Outer Ketch
AK	02220	Sitka, AK
AK	02232	Skagway-Hoonah-Angoon, AK
AK	02261	Valdez-Cordova, AK
AK	02270	Wade Hampton, AK
AK	02280	Wrangell-Petersburg, AK
AK	02282	Yakutat, AK
AL	01003	Baldwin, AL
AL	01025	Clarke, AL
AL	01039	Covington, AL
AL	01053	Escambia, AL
AL	01061	Geneva, AL
AL	01097	Mobile, AL
AL	01099	Monroe, AL

AL	01129	Washington, AL
CA	06001	Alameda, CA
CA	06013	Contra Costa, CA
CA	06015	Del Norte, CA
CA	06023	Humboldt, CA
CA	06037	Los Angeles, CA
CA	06041	Marin, CA
CA	06045	Mendocino, CA
CA	06053	Monterey, CA
CA	06055	Napa, CA
CA	06059	Orange, CA
CA	06065	Riverside, CA
CA	06067	Sacramento, CA
CA	06069	San Benito, CA
CA	06071	San Bernardino
CA	06073	San Diego, CA
CA	06075	San Francisco, CA
CA	06077	San Joaquin, CA
CA	06079	San Luis Obispo, CA
CA	06081	San Mateo, CA
CA	06083	Santa Barbara, CA
CA	06085	Santa Clara, CA
CA	06087	Santa Cruz, CA
CA	06093	Siskiyou, CA
CA	06095	Solano, CA
CA	06097	Sonoma, CA
CA	06101	Sutter, CA
CA	06105	Trinity, CA
CA	06111	Ventura, CA
CA	06113	Yolo, CA
CT	09001	Fairfield, CT
CT	09003	Hartford, CT
CT	09005	Litchfield, CT
CT	09007	Middlesex, CT
CT	09009	New Haven, CT
CT	09011	New London, CT
CT	09013	Tolland, CT
CT	09015	Windham, CT
DC	11001	District of Columbia
DE	10001	Kent, DE
DE	10003	New Castle, DE
DE	10005	Sussex, DE
FL	12005	Bay, FL
FL	12013	Calhoun, FL
FL	12015	Charlotte, FL
FL	12017	Citrus, FL
FL	12021	Collier, FL
FL	12027	De Soto, FL

FL	12029	Dixie, FL
FL	12033	Escambia, FL
FL	12037	Franklin, FL
FL	12039	Gadsden, FL
FL	12041	Gilchrist, FL
FL	12043	Glades, FL
FL	12045	Gulf, FL
FL	12049	Hardee, FL
FL	12053	Hernando, FL
FL	12057	Hillsborough, FL
FL	12059	Holmes, FL
FL	12063	Jackson, FL
FL	12065	Jefferson, FL
FL	12067	Lafayette, FL
FL	12071	Lee, FL
FL	12073	Leon, FL
FL	12075	Levy, FL
FL	12077	Liberty, FL
FL	12079	Madison, FL
FL	12081	Manatee, FL
FL	12083	Marion, FL
FL	12087	Monroe, FL
FL	12091	Okaloosa, FL
FL	12101	Pasco, FL
FL	12103	Pinellas, FL
FL	12105	Polk, FL
FL	12113	Santa Rosa, FL
FL	12115	Sarasota, FL
FL	12119	Sumter, FL
FL	12121	Suwannee, FL
FL	12123	Taylor, FL
FL	12129	Wakulla, FL
FL	12131	Walton, FL
FL	12133	Washington, FL
FL (EC)	12003	Baker, FL
FL (EC)	12009	Brevard, FL
FL (EC)	12011	Broward, FL
FL (EC)	12019	Clay, FL
FL (EC)	12086	Miami-Dade, FL
FL (EC)	12031	Duval, FL
FL (EC)	12035	Flagler, FL
FL (EC)	12051	Hendry, FL
FL (EC)	12061	Indian River, FL
FL (EC)	12069	Lake, FL
FL (EC)	12085	Martin, FL
FL (EC)	12089	Nassau, FL
FL (EC)	12093	Okeechobee, FL
FL (EC)	12095	Orange, FL

FL (EC)	12097	Osceola, FL
FL (EC)	12099	Palm Beach, FL
FL (EC)	12107	Putnam, FL
FL (EC)	12109	St. Johns, FL
FL (EC)	12111	St. Lucie, FL
FL (EC)	12117	Seminole, FL
FL (EC)	12127	Volusia, FL
GA	13001	Appling, GA
GA	13003	Atkinson, GA
GA	13005	Bacon, GA
GA	13025	Brantley, GA
GA	13029	Bryan, GA
GA	13031	Bulloch, GA
GA	13039	Camden, GA
GA	13049	Charlton, GA
GA	13051	Chatham, GA
GA	13069	Coffee, GA
GA	13103	Effingham, GA
GA	13127	Glynn, GA
GA	13155	Irwin, GA
GA	13161	Jeff Davis, GA
GA	13165	Jenkins, GA
GA	13179	Liberty, GA
GA	13183	Long, GA
GA	13191	McIntosh, GA
GA	13209	Montgomery, GA
GA	13229	Pierce, GA
GA	13251	Screven, GA
GA	13267	Tattnall, GA
GA	13279	Toombs, GA
GA	13299	Ware, GA
GA	13305	Wayne, GA
GA (GOM)	13087	Decatur, GA
GA (GOM)	13131	Grady, GA
GA (GOM)	13275	Thomas, GA
HI	15001	Hawaii, HI
HI	15003	Honolulu, HI
HI	15005	Kalawao, HI
HI	15007	Kauai, HI
HI	15009	Maui, HI
IL	17031	Cook, IL
IL	17097	Lake, IL
IN	18039	Elkhart, IN
IN	18085	Kosciusko, IN
IN	18087	Lagrange, IN
IN	18089	Lake, IN
IN	18091	La Porte, IN
IN	18113	Noble, IN

IN	18127	Porter, IN
IN	18141	St. Joseph, IN
IN	18151	Steuben, IN
LA	22001	Acadia, LA
LA	22005	Ascension, LA
LA	22007	Assumption, LA
LA	22009	Avoyelles, LA
LA	22011	Beauregard, LA
LA	22019	Calcasieu, LA
LA	22023	Cameron, LA
LA	22033	East Baton Rouge, LA
LA	22037	East Feliciana, LA
LA	22039	Evangeline, LA
LA	22045	Iberia, LA
LA	22047	Iberville, LA
LA	22051	Jefferson, LA
LA	22053	Jefferson Davis, LA
LA	22055	Lafayette, LA
LA	22057	Lafourche, LA
LA	22063	Livingston, LA
LA	22071	Orleans, LA
LA	22075	Plaquemines, LA
LA	22077	Pointe Coupee, LA
LA	22079	Rapides, LA
LA	22085	Sabine, LA
LA	22087	St. Bernard, LA
LA	22089	St. Charles, LA
LA	22091	St. Helena, LA
LA	22093	St. James, LA
LA	22095	St. John the Baptist, LA
LA	22097	St. Landry, LA
LA	22099	St. Martin, LA
LA	22101	St. Mary, LA
LA	22103	St. Tammany, LA
LA	22105	Tangipahoa, LA
LA	22109	Terrebonne, LA
LA	22113	Vermilion, LA
LA	22115	Vernon, LA
LA	22117	Washington, LA
LA	22121	West Baton Rouge, LA
LA	22125	West Feliciana, LA
MA	25001	Barnstable, MA
MA	25003	Berkshire, MA
MA	25005	Bristol, MA
MA	25007	Dukes, MA
MA	25009	Essex, MA
MA	25013	Hampden, MA
MA	25017	Middlesex, MA

MA	25019	Nantucket, MA
MA	25021	Norfolk, MA
MA	25023	Plymouth, MA
MA	25025	Suffolk, MA
MA	25027	Worcester, MA
MD	24003	Anne Arundel, MD
MD	24005	Baltimore, MD
MD	24009	Calvert, MD
MD	24011	Caroline, MD
MD	24013	Carroll, MD
MD	24015	Cecil, MD
MD	24017	Charles, MD
MD	24019	Dorchester, MD
MD	24025	Harford, MD
MD	24027	Howard, MD
MD	24029	Kent, MD
MD	24031	Montgomery, MD
MD	24033	Prince George's, MD
MD	24035	Queen Anne's, MD
MD	24037	St. Mary's, MD
MD	24039	Somerset, MD
MD	24041	Talbot, MD
MD	24045	Wicomico, MD
MD	24047	Worcester, MD
MD	24510	Baltimore city, MD
ME	23001	Androscoggin, ME
ME	23005	Cumberland, ME
ME	23007	Franklin, ME
ME	23009	Hancock, ME
ME	23011	Kennebec, ME
ME	23013	Knox, ME
ME	23015	Lincoln, ME
ME	23017	Oxford, ME
ME	23019	Penobscot, ME
ME	23023	Sagadahoc, ME
ME	23025	Somerset, ME
ME	23027	Waldo, ME
ME	23029	Washington, ME
ME	23031	York, ME
MI	26001	Alcona, MI
MI	26003	Alger, MI
MI	26005	Allegan, MI
MI	26007	Alpena, MI
MI	26009	Antrim, MI
MI	26011	Arenac, MI
MI	26013	Baraga, MI
MI	26015	Barry, MI
MI	26017	Bay, MI

MI	26019	Benzie, MI
MI	26021	Berrien, MI
MI	26023	Branch, MI
MI	26025	Calhoun, MI
MI	26027	Cass, MI
MI	26029	Charlevoix, MI
MI	26031	Cheboygan, MI
MI	26033	Chippewa, MI
MI	26035	Clare, MI
MI	26039	Crawford, MI
MI	26041	Delta, MI
MI	26043	Dickinson, MI
MI	26045	Eaton, MI
MI	26047	Emmet, MI
MI	26053	Gogebic, MI
MI	26055	Grand Traverse, MI
MI	26059	Hillsdale, MI
MI	26061	Houghton, MI
MI	26063	Huron, MI
MI	26067	Ionia, MI
MI	26069	Iosco, MI
MI	26075	Jackson, MI
MI	26077	Kalamazoo, MI
MI	26079	Kalkaska, MI
MI	26081	Kent, MI
MI	26083	Keweenaw, MI
MI	26085	Lake, MI
MI	26087	Lapeer, MI
MI	26089	Leelanau, MI
MI	26091	Lenawee, MI
MI	26093	Livingston, MI
MI	26095	Luce, MI
MI	26097	Mackinac, MI
MI	26099	Macomb, MI
MI	26101	Manistee, MI
MI	26103	Marquette, MI
MI	26105	Mason, MI
MI	26107	Mecosta, MI
MI	26109	Menominee, MI
MI	26113	Missaukee, MI
MI	26115	Monroe, MI
MI	26117	Montcalm, MI
MI	26119	Montmorency, MI
MI	26121	Muskegon, MI
MI	26123	Newaygo, MI
MI	26125	Oakland, MI
MI	26127	Oceana, MI
MI	26129	Ogemaw, MI

MI	26131	Ontonagon, MI
MI	26133	Osceola, MI
MI	26135	Oscoda, MI
MI	26137	Otsego, MI
MI	26139	Ottawa, MI
MI	26141	Presque Isle, MI
MI	26143	Roscommon, MI
MI	26145	Saginaw, MI
MI	26147	St. Clair, MI
MI	26149	St. Joseph, MI
MI	26151	Sanilac, MI
MI	26153	Schoolcraft, MI
MI	26157	Tuscola, MI
MI	26159	Van Buren, MI
MI	26161	Washtenaw, MI
MI	26163	Wayne, MI
MI	26165	Wexford, MI
MN	27017	Carlton, MN
MN	27031	Cook, MN
MN	27075	Lake, MN
MN	27137	St. Louis, MN
MS	28005	Amite, MS
MS	28039	George, MS
MS	28045	Hancock, MS
MS	28047	Harrison, MS
MS	28059	Jackson, MS
MS	28073	Lamar, MS
MS	28091	Marion, MS
MS	28109	Pearl River, MS
MS	28113	Pike, MS
MS	28131	Stone, MS
MS	28147	Walthall, MS
MS	28157	Wilkinson, MS
NC	37007	Anson, NC
NC	37013	Beaufort, NC
NC	37015	Bertie, NC
NC	37017	Bladen, NC
NC	37019	Brunswick, NC
NC	37029	Camden, NC
NC	37031	Carteret, NC
NC	37041	Chowan, NC
NC	37047	Columbus, NC
NC	37049	Craven, NC
NC	37051	Cumberland, NC
NC	37053	Currituck, NC
NC	37055	Dare, NC
NC	37061	Duplin, NC
NC	37065	Edgecombe, NC

NC	37073	Gates, NC
NC	37083	Halifax, NC
NC	37091	Hertford, NC
NC	37095	Hyde, NC
NC	37103	Jones, NC
NC	37107	Lenoir, NC
NC	37117	Martin, NC
NC	37129	New Hanover, NC
NC	37131	Northampton, NC
NC	37133	Onslow, NC
NC	37137	Pamlico, NC
NC	37139	Pasquotank, NC
NC	37141	Pender, NC
NC	37143	Perquimans, NC
NC	37147	Pitt, NC
NC	37153	Richmond, NC
NC	37163	Sampson, NC
NC	37165	Scotland, NC
NC	37177	Tyrrell, NC
NC	37187	Washington, NC
NC	37191	Wayne, NC
NC	37195	Wilson, NC
NH	33001	Belknap, NH
NH	33003	Carroll, NH
NH	33011	Hillsborough, NH
NH	33013	Merrimack, NH
NH	33015	Rockingham, NH
NH	33017	Strafford, NH
NJ	34001	Atlantic, NJ
NJ	34003	Bergen, NJ
NJ	34005	Burlington, NJ
NJ	34007	Camden, NJ
NJ	34009	Cape May, NJ
NJ	34011	Cumberland, NJ
NJ	34013	Essex, NJ
NJ	34015	Gloucester, NJ
NJ	34017	Hudson, NJ
NJ	34019	Hunterdon, NJ
NJ	34021	Mercer, NJ
NJ	34023	Middlesex, NJ
NJ	34025	Monmouth, NJ
NJ	34027	Morris, NJ
NJ	34029	Ocean, NJ
NJ	34031	Passaic, NJ
NJ	34033	Salem, NJ
NJ	34035	Somerset, NJ
NJ	34037	Sussex, NJ
NJ	34039	Union, NJ

NY	36001	Albany, NY
NY	36005	Bronx, NY
NY	36021	Columbia, NY
NY	36027	Dutchess, NY
NY	36039	Greene, NY
NY	36047	Kings, NY
NY	36059	Nassau, NY
NY	36061	New York, NY
NY	36071	Orange, NY
NY	36079	Putnam, NY
NY	36081	Queens, NY
NY	36083	Rensselaer, NY
NY	36085	Richmond, NY
NY	36087	Rockland, NY
NY	36093	Schenectady, NY
NY	36103	Suffolk, NY
NY	36111	Ulster, NY
NY	36119	Westchester, NY
NY (GL)	36009	Cattaraugus, NY
NY (GL)	36011	Cayuga, NY
NY (GL)	36013	Chautauqua, NY
NY (GL)	36019	Clinton, NY
NY (GL)	36029	Erie, NY
NY (GL)	36033	Franklin, NY
NY (GL)	36037	Genesee, NY
NY (GL)	36041	Hamilton, NY
NY (GL)	36043	Herkimer, NY
NY (GL)	36045	Jefferson, NY
NY (GL)	36049	Lewis, NY
NY (GL)	36051	Livingston, NY
NY (GL)	36055	Monroe, NY
NY (GL)	36063	Niagara, NY
NY (GL)	36067	Onondaga, NY
NY (GL)	36069	Ontario, NY
NY (GL)	36073	Orleans, NY
NY (GL)	36075	Oswego, NY
NY (GL)	36089	St. Lawrence, NY
NY (GL)	36117	Wayne, NY
NY (GL)	36121	Wyoming, NY
OH	39005	Ashland, OH
OH	39007	Ashtabula, OH
OH	39033	Crawford, OH
OH	39035	Cuyahoga, OH
OH	39039	Defiance, OH
OH	39043	Erie, OH
OH	39051	Fulton, OH
OH	39055	Geauga, OH
OH	39063	Hancock, OH

OH	39069	Henry, OH
OH	39077	Huron, OH
OH	39085	Lake, OH
OH	39093	Lorain, OH
OH	39095	Lucas, OH
OH	39101	Marion, OH
OH	39103	Medina, OH
OH	39123	Ottawa, OH
OH	39133	Portage, OH
OH	39143	Sandusky, OH
OH	39147	Seneca, OH
OH	39153	Summit, OH
OH	39155	Trumbull, OH
OH	39173	Wood, OH
OH	39175	Wyandot, OH
OR	41003	Benton, OR
OR	41005	Clackamas, OR
OR	41007	Clatsop, OR
OR	41009	Columbia, OR
OR	41011	Coos, OR
OR	41015	Curry, OR
OR	41019	Douglas, OR
OR	41033	Josephine, OR
OR	41039	Lane, OR
OR	41041	Lincoln, OR
OR	41051	Multnomah, OR
OR	41057	Tillamook, OR
PA	42001	Adams, PA
PA	42011	Berks, PA
PA	42017	Bucks, PA
PA	42029	Chester, PA
PA	42045	Delaware, PA
PA	42071	Lancaster, PA
PA	42075	Lebanon, PA
PA	42077	Lehigh, PA
PA	42091	Montgomery, PA
PA	42101	Philadelphia, PA
PA	42107	Schuylkill, PA
PA	42133	York, PA
PA (GL)	42049	Erie, PA
RI	44001	Bristol, RI
RI	44003	Kent, RI
RI	44005	Newport, RI
RI	44007	Providence, RI
RI	44009	Washington, RI
SC	45005	Allendale, SC
SC	45013	Beaufort, SC
SC	45015	Berkeley, SC

SC	45019	Charleston, SC
SC	45025	Chesterfield, SC
SC	45027	Clarendon, SC
SC	45029	Colleton, SC
SC	45031	Darlington, SC
SC	45033	Dillon, SC
SC	45035	Dorchester, SC
SC	45041	Florence, SC
SC	45043	Georgetown, SC
SC	45049	Hampton, SC
SC	45051	Horry, SC
SC	45053	Jasper, SC
SC	45055	Kershaw, SC
SC	45057	Lancaster, SC
SC	45061	Lee, SC
SC	45067	Marion, SC
SC	45069	Marlboro, SC
SC	45085	Sumter, SC
SC	45089	Williamsburg, SC
TX	48007	Aransas, TX
TX	48015	Austin, TX
TX	48025	Bee, TX
TX	48039	Brazoria, TX
TX	48047	Brooks, TX
TX	48057	Calhoun, TX
TX	48061	Cameron, TX
TX	48071	Chambers, TX
TX	48089	Colorado, TX
TX	48123	De Witt, TX
TX	48131	Duval, TX
TX	48149	Fayette, TX
TX	48157	Fort Bend, TX
TX	48167	Galveston, TX
TX	48175	Goliad, TX
TX	48201	Harris, TX
TX	48215	Hidalgo, TX
TX	48239	Jackson, TX
TX	48241	Jasper, TX
TX	48245	Jefferson, TX
TX	48247	Jim Hogg, TX
TX	48249	Jim Wells, TX
TX	48261	Kenedy, TX
TX	48273	Kleberg, TX
TX	48285	Lavaca, TX
TX	48291	Liberty, TX
TX	48297	Live Oak, TX
TX	48321	Matagorda, TX
TX	48351	Newton, TX

TX	48355	Nueces, TX
TX	48361	Orange, TX
TX	48391	Refugio, TX
TX	48409	San Patricio, TX
TX	48427	Starr, TX
TX	48457	Tyler, TX
TX	48469	Victoria, TX
TX	48473	Waller, TX
TX	48477	Washington, TX
TX	48479	Webb, TX
TX	48481	Wharton, TX
TX	48489	Willacy, TX
VA	51001	Accomack, VA
VA	51007	Amelia, VA
VA	51011	Appomattox, VA
VA	51013	Arlington, VA
VA	51029	Buckingham, VA
VA	51033	Caroline, VA
VA	51036	Charles City, VA
VA	51041	Chesterfield, VA
VA	51049	Cumberland, VA
VA	51053	Dinwiddie, VA
VA	51057	Essex, VA
VA	51059	Fairfax, VA
VA	51061	Fauquier, VA
VA	51065	Fluvanna, VA
VA	51073	Gloucester, VA
VA	51075	Goochland, VA
VA	51085	Hanover, VA
VA	51087	Henrico, VA
VA	51093	Isle of Wight, VA
VA	51095	James City, VA
VA	51097	King and Queen, VA
VA	51099	King George, VA
VA	51101	King William, VA
VA	51103	Lancaster, VA
VA	51109	Louisa, VA
VA	51115	Mathews, VA
VA	51119	Middlesex, VA
VA	51127	New Kent, VA
VA	51131	Northampton, VA
VA	51133	Northumberland, VA
VA	51135	Nottoway, VA
VA	51137	Orange, VA
VA	51145	Powhatan, VA
VA	51147	Prince Edward, VA
VA	51149	Prince George, VA
VA	51153	Prince William, VA

VA	51159	Richmond, VA
VA	51177	Spotsylvania, VA
VA	51179	Stafford, VA
VA	51181	Surry, VA
VA	51193	Westmoreland, VA
VA	51199	York, VA
VA	51510	Alexandria, VA
VA	51550	Chesapeake, VA
VA	51570	Colonial Heights, VA
VA	51600	Fairfax, VA
VA	51610	Falls Church, VA
VA	51630	Fredericksburg, VA
VA	51650	Hampton, VA
VA	51670	Hopewell, VA
VA	51683	Manassas, VA
VA	51685	Manassas Park, VA
VA	51700	Newport News, VA
VA	51710	Norfolk, VA
VA	51730	Petersburg, VA
VA	51735	Poquoson, VA
VA	51740	Portsmouth, VA
VA	51760	Richmond, VA
VA	51800	Suffolk, VA
VA	51810	Virginia Beach, VA
VA	51830	Williamsburg, VA
WA	53009	Clallam, WA
WA	53011	Clark, WA
WA	53015	Cowlitz, WA
WA	53027	Grays Harbor, WA
WA	53029	Island, WA
WA	53031	Jefferson, WA
WA	53033	King, WA
WA	53035	Kitsap, WA
WA	53041	Lewis, WA
WA	53045	Mason, WA
WA	53049	Pacific, WA
WA	53053	Pierce, WA
WA	53055	San Juan, WA
WA	53057	Skagit, WA
WA	53059	Skamania, WA
WA	53061	Snohomish, WA
WA	53067	Thurston, WA
WA	53069	Wahkiakum, WA
WA	53073	Whatcom, WA
WI	55003	Ashland, WI
WI	55007	Bayfield, WI
WI	55009	Brown, WI
WI	55015	Calumet, WI

WI	55029	Door, WI
WI	55031	Douglas, WI
WI	55037	Florence, WI
WI	55039	Fond du Lac, WI
WI	55041	Forest, WI
WI	55051	Iron, WI
WI	55059	Kenosha, WI
WI	55061	Kewaunee, WI
WI	55071	Manitowoc, WI
WI	55075	Marinette, WI
WI	55078	Menominee, WI
WI	55079	Milwaukee, WI
WI	55083	Oconto, WI
WI	55087	Outagamie, WI
WI	55089	Ozaukee, WI
WI	55101	Racine, WI
WI	55115	Shawano, WI
WI	55117	Sheboygan, WI
WI	55131	Washington, WI

U.S. Census Bureau 10 Years on the Web

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 Find, then only those records found will be copied.

For example you may have performed a **Find** on how many tracts in New Castle County, Delaware have less then 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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Source: U.S. Census Bureau
Geography Division
Last Revised: *Wednesday, 03-Sep-2003 15:30:06 EDT*

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Find an Address

What is a ZIP Code® Tabulation Area (ZCTA™)?

ZCTAsare a new statistical entity developed by the U.S. Census Bureau for tabulating summary statistics from Census 2000. ZCTAs are generalized area representations of U.S. Postal Service (USPS) ZIP Code®service areas. They represent either USPS five- or three-digit ZIP Code areas. The term ZCTA was originated to differentiate between true USPS ZIP Codes and these approximations.

How to Use the Address Finder

This feature is designed to quickly map a specified street within a county containing a ZIP Code Tabulation Area (ZCTA).

After entering the street name and ZIP Code, the Address Finder creates a list of matching street names for the county or counties containing the ZCTA and presents them in the MARPLOT® Search Collection window. Select the street and click on either the **Addresses** or **Intersection** button to identify the appropriate street segment to be mapped. Then click either the **Show on Map** or **Show on Map & Zoom** to position your map focus point. For more details on using the Search Collection window features click the Help button.

Using **Find an Address** in LandView® opens the MARPLOT mapping application and displays the results of a MARPLOT **Search**, the **Search Collection**, with a listing of all street names meeting the search criteria. The users must select and highlight the most appropriate listing. For example, the same street in the ZIP code could encompass two small towns and unicorporated county area. The **Address** button displays a listing of block faces along the street and the address range along each block face. The appropriate block face must be selected. Using the **Show on Map & Zoom** button returns the user to the MARPLOT display screen with the Focus Point on the selected street segment.

Not all block faces in TIGER/Line display address ranges. In the event that an appropriate address range cannot be found, the **Intersections** button willdisplay all roads intersecting with the named street. If the user has sufficient knowledge, the nearest street intersection adjacent to the address can be identified.

Note that the Search Collection window will be blank if no streets within the county are found. Also, you need to close the Search Collection window before returning to LandView to look for another street.

ZIP Codes are a geographic identifier under the control of the Postal Service. ZIP Codes can be modified and new ones can be added. In the event that an address search returns zero results, the mapped location of the address may still be found using the MARPLOT Menu Bar command **List/Search** . . . . The methodology is explained in the MARPLOT **Tutorial**. The Tutorial also discusses the methodology to

precisely locate the address relative to the block face.

If you need to identify the state, county, and census tract associated with the map focus point, select **Segment Settings** from the MARPLOT **Objects** menu to determine which side of the street contains your address. Then position the map focus point on that side and select **Identify census areas at current map pointer** under LandView in the **MARPLOT Sharing menu**.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 29-Sep-2003 10:00:47 EDT*

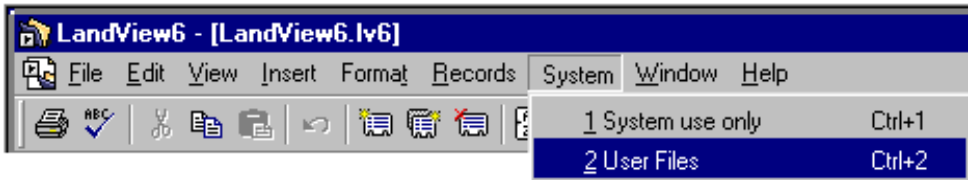
USCENSUSBUREAU
Helping You Make Informed Decisions

U.S. Census Bureau 10 Years on the Web

Converting Latitude / Longitude data to Map Points

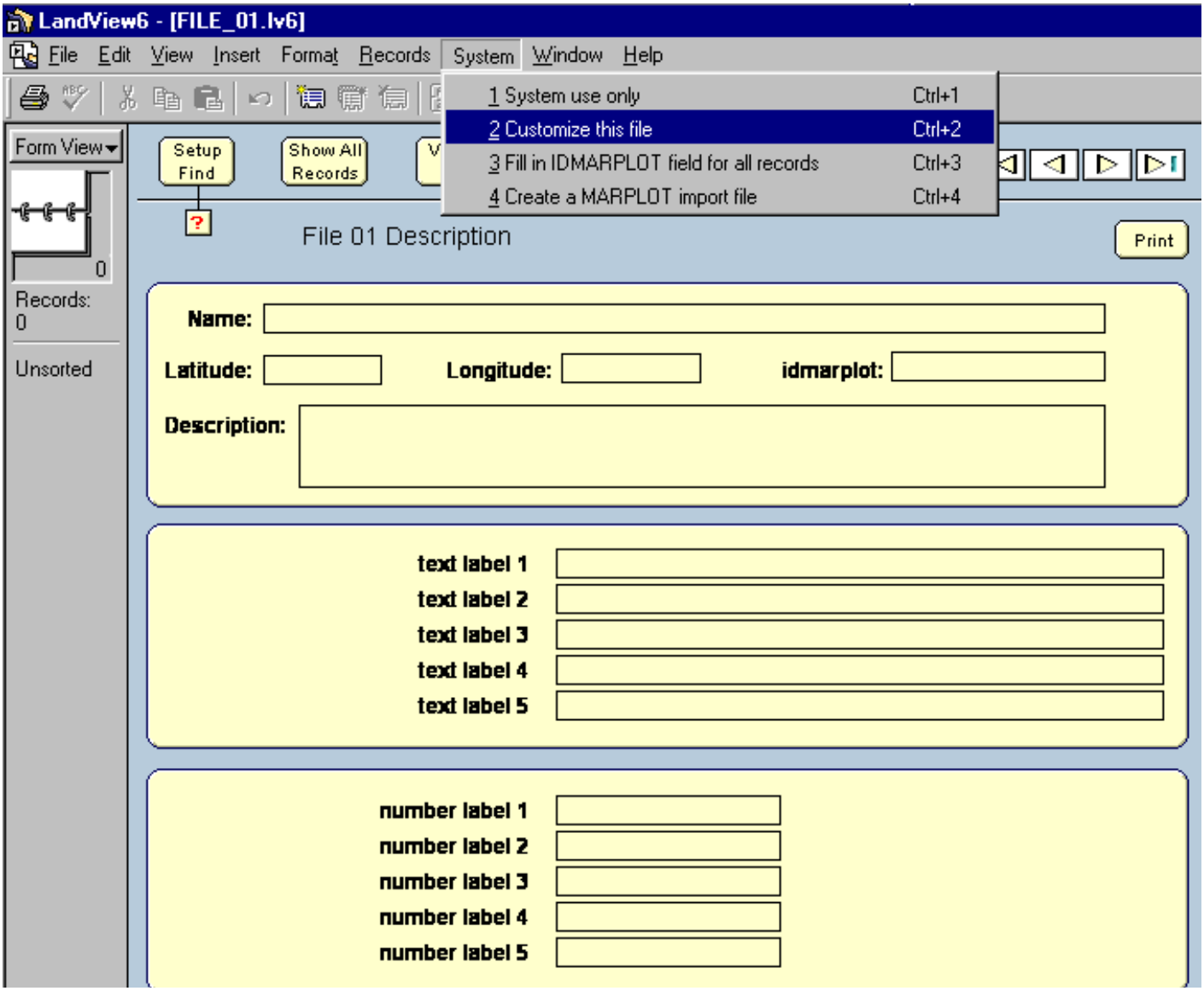
Assume that a database is available to the user containing the latitude and longitude of sample points together with other descriptive information related to the points. This abbreviated file, *sample.dbf*, contains the following fields: Point_Name, Data1, Data2, latitude and longitude.

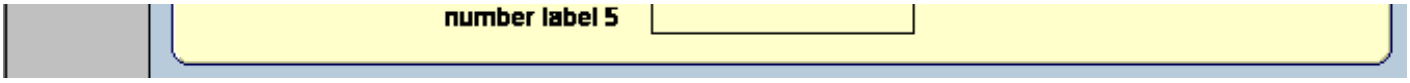
1. The LandView®System MenuBar is used to access User Files



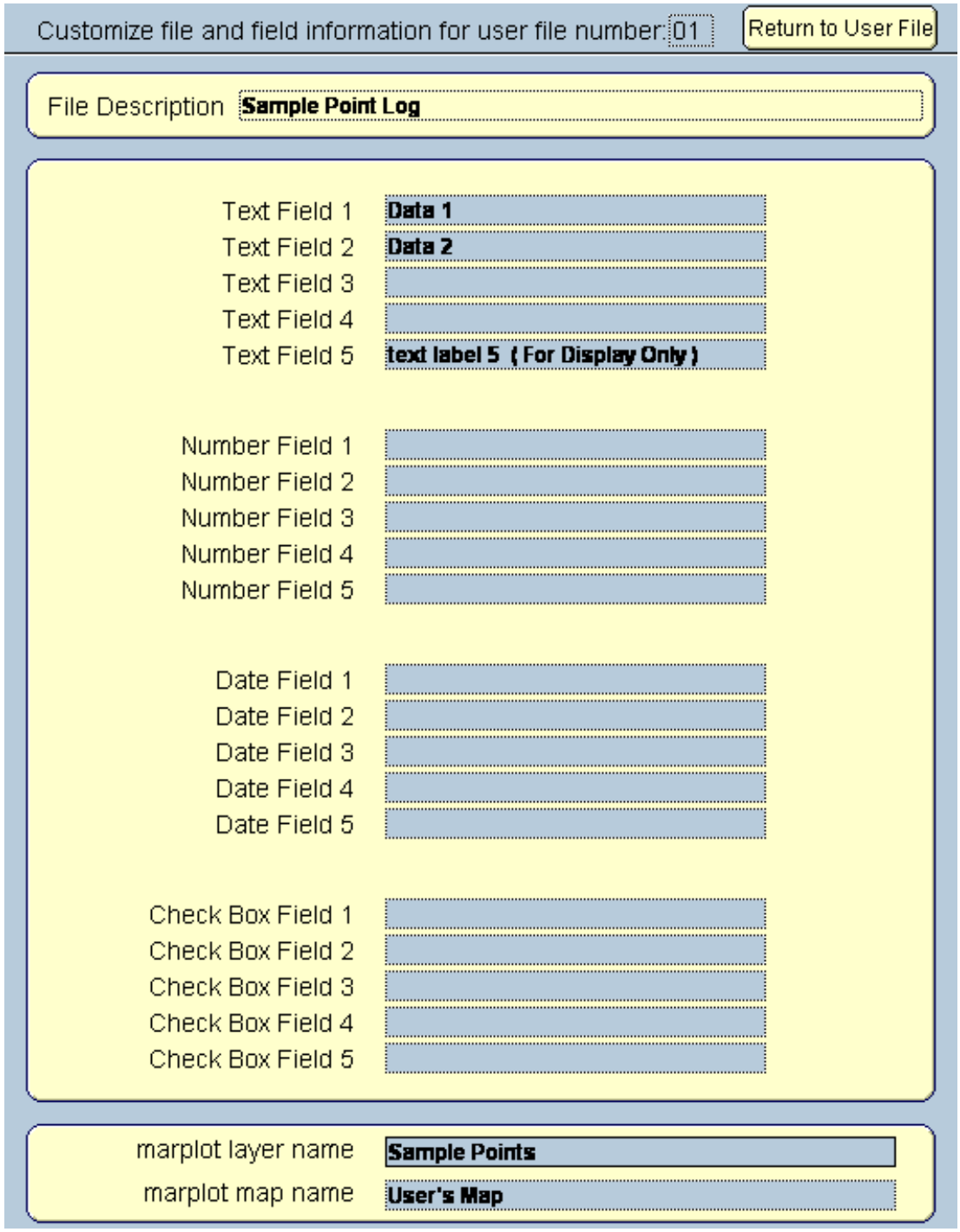
2. A generic User file, *file_01.lv6*, is selected for modification and is **Opened**.

3. The System MenuBar is again accessed, and the option, '**2 Customize this File**', is selected.

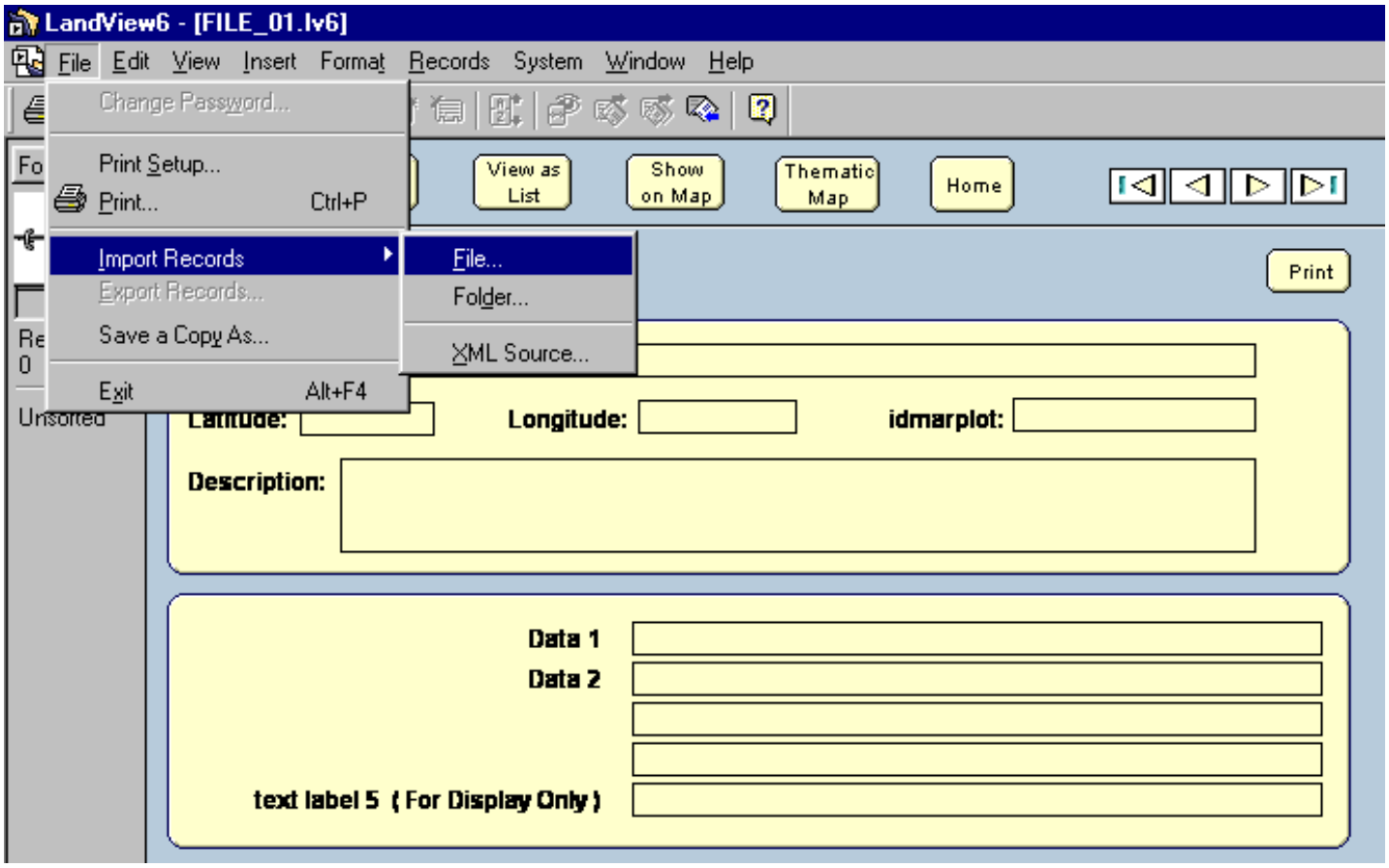




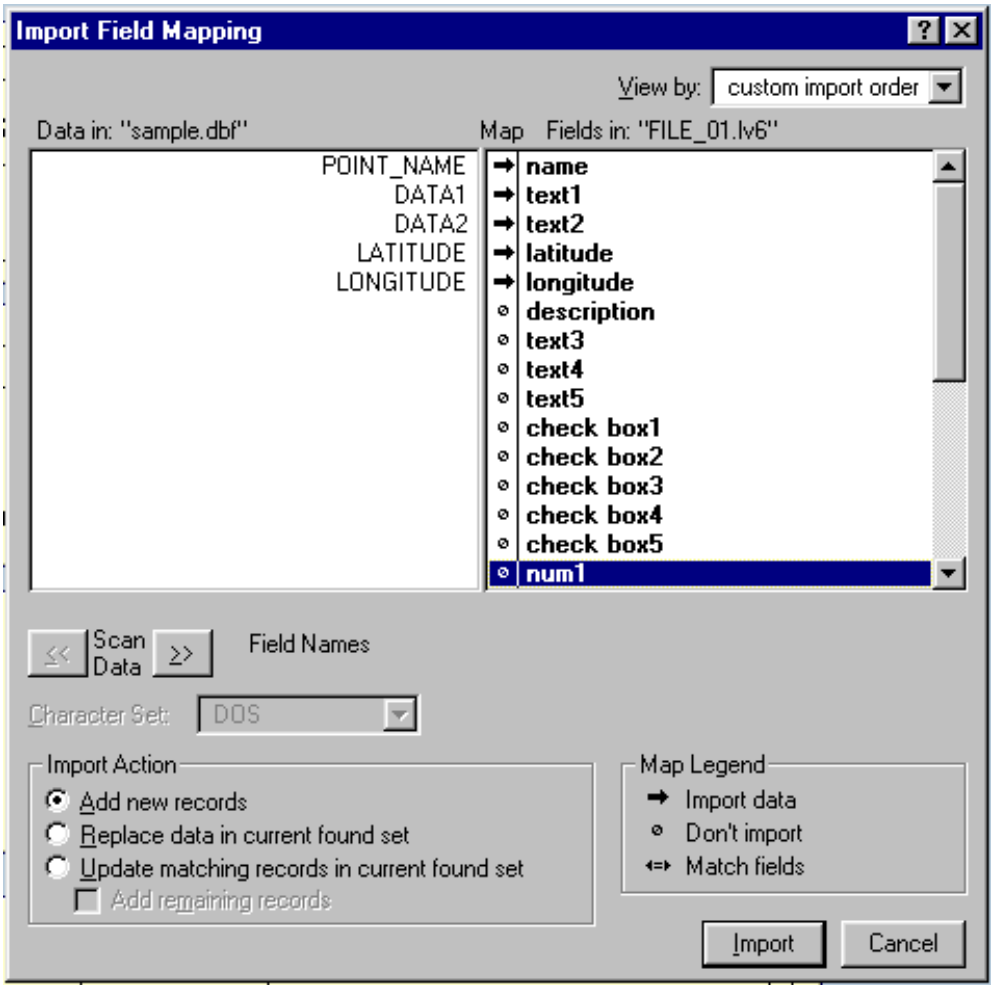
4. A new Window opens, permitting customizing of the selected file. In this case, the generic text, File Description 01, was replaced with Sample Point Log, Text Labels 1 and 2 were replaced with Data 1 and Data 2, and the Layer Name that will be used to contain the MARPLOT® map data was changed to Sample Points. As an added step, the unused field descriptions were deleted so as to hide unused fields. (One was left for display purposes only.)



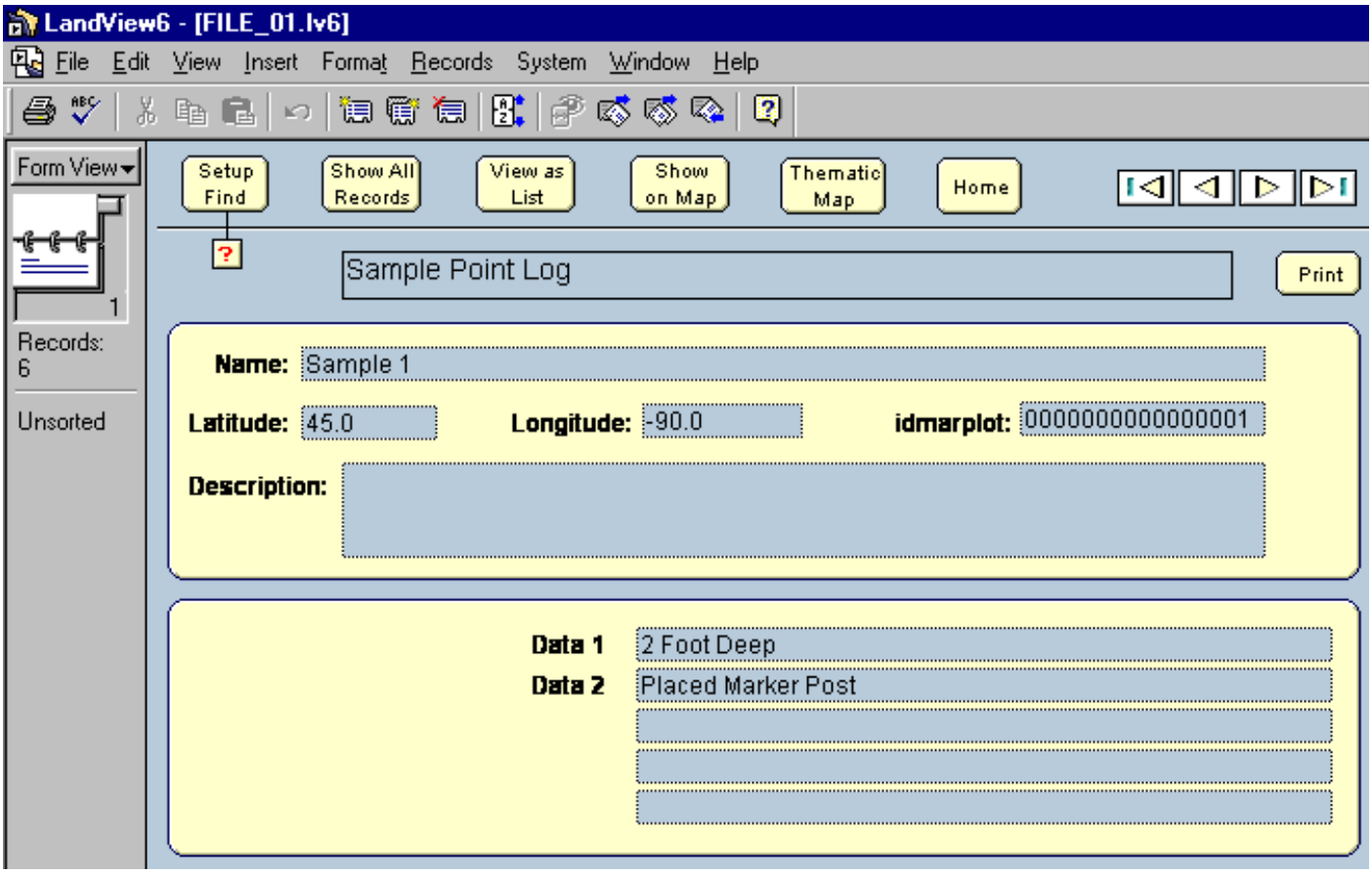
5. On using the **Return to User File** button, the newly customized **Form View** is ready for data import.



6. LandView's **File/Import Records** . . . opens a dialogue box where **generic** field names in File_01.lv6 can be dragged to match fields in the file to be imported. Arrows, which can be toggled **On** and **Off**, allow selection of fields to be matched or ignored so as to utilize available generic fields.



7. Once data has been imported, a sequential set of IDMARPLOT identifiers needs to be assigned. A Systems MenuBar item, **3 Fill in IDMARPLOT field for all records**, simplifies this task.



8. The necessary conditions are now established for use of the remaining MenuBar option, **4 Create a MARPLOT Import File**. This option requires all of the following: latitude and longitude values, assigned IDMARPLOT values, an assigned Layer name and an assigned Map name. By default, the import file, *lv6export.txt*, is place in the LV6 directory.

9. In MARPLOT, **File/Import** . . . is invoked. With *c:\lv6export.txt* selected as a Text file, MARPLOT creates a new map layer containing the imported point objects. Two way communication is established. The MARPLOT Sharing Menu will access the informational attributes records in LandView. From a data record in LandView, **Show on Map** displays the mapped point in MARPLOT.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Friday, 05-Dec-2003 16:53:30 EST*

USCENSUSBUREAU
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Importing Spatial Data into LandView

Edward J. McFaul
U.S. Geological Survey

The LandView DVD product contains 36 different layers of spatial data derived from databases at the Census Bureau, EPA, and USGS. However, users often have a need to add their own spatial data layers to be used in conjunction with those already provided. The LandView software allows the user to add up to five new spatial data layers with no programming or additional software required. The source of these new layers can be something as simple as a three-column spreadsheet, where each row represents a map point and contains a latitude, longitude, and a name. For more involved spatial data types such as lines (e.g., roads) or polygons (e.g., county boundaries), LandView includes a utility program for converting spatial data in the form of Shapefiles into a format that can be imported into LandView's mapping module called MARPLOT (developed by NOAA)

Sources of Spatial Data

There are many sources of spatial data on the Web, including the Spatial Data Clearinghouse provided by the federal Geographic Data Committee (www.fgdc.gov). Another excellent source of a wide variety of spatial data is the National Atlas Website, developed and maintained by the USGS (www.nationalatlas.gov). This site provides a convenient means of examining the metadata associated with each spatial data layer and, if desired, downloading those data in several different formats.

Importing "Point Data" to LandView

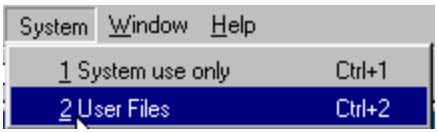
The simplest type of spatial data is point data. A layer of this type consists of a series of points, each defined by a latitude, longitude and a name. For the purposes of this tutorial, we will use a map layer from the USGS National Atlas called the ***Significant and Historic Earthquakes.*** We will use this easily downloaded data and step through the process of importing it into LandView to form a new data layer and a corresponding data file, both of which can be search and manipulated.

Begin by downloading the ***Significant and Historic Earthquakes*** map layer in Shapefile format. This will result in a file named "quksigx020.tar.gz" on your hard disk. Using one of the standard compression utilities (e.g., WinZip, PKZip, etc.), uncompress this file into an intermediate file named "quksigx020.tar." Using the utility software once again, uncompress this intermediate file into the four final files for this map layer, three of which ("quksigx020.dbf," "quksigx020.shp," and "quksigx020.shx.") comprise the Shapefile format. A fourth file, "quksigx020.txt," will also be created that contains the metadata for this layer.

The LandView User Files

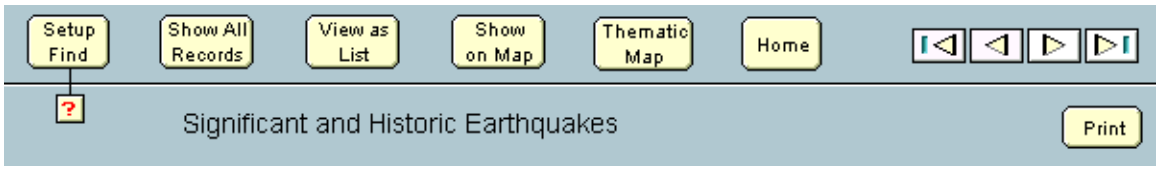
The LandView software provides five separate "generic" data files for importing new spatial data records. Once imported, the display of the records in any of these files can be customized to reflect field names that are appropriate for the imported data. The software also allows the user to create map layers from these files and automatically links the objects in these map layers to their corresponding records in the data files. These new map layers can be displayed and manipulated, just as with the 36 other data layers that come "prepackaged" with LandView.

To access the user files, startup LandView and click on the "System" menu and then select the "User Files" option, as follows:



You will be presented with a window displaying the five LandView User Files ("File_01.lv5," "File_02.lv5,"…"File_05.lv5") with an "Open" button adjacent to each one. Before opening a user file, click on the "Help" button to display several help screens that summarize functions that will be performed in this tutorial. After browsing these help screens, click on the "Return to User Files" button.

To display the data layout for "File_01.lv5," click on the "Open" button to the right of this file. This will display the generic data layout for "File_01.lv5" that we will soon customize to reflect the actual data that we will be importing, in this case occurrences of significant and historic earthquakes. To begin the customization, click on the LandView "System" menu and then select the second option named "Customize this file." This will bring up a display screen where the file and field information for "File_01.lv5" can be changed. Change the value in the top field labeled "File Description" from its default value of "File_01.lv5 Description" to the value "Significant and Historic Earthquakes." Now click on the "Return to User File" button in the top right corner to see the effect of this change. Notice that the title at the top of the data layout for "File_01.lv5" now reads "Significant and Historic Earthquakes" as shown below. We will customize other parts of this data layout a bit later.



Metadata

It would be useful at this point to examine the metadata file ("quksigx020.txt") that provides "data about the data" that we are going to use in our exercise. Not only is a wealth of background information provided (e.g., this database reflects historic earthquakes in the U.S., Canada and Mexico), but the metadata also contains detailed information about the specific data fields within the database. For example, in the "Entity and Attribute Information" section of the metadata, we can see that the STATE and LOCATION fields are "text" fields, while the other fields such as latitude, longitude, depth, etc., are all numeric. Note that the field named "YEAR" is actually a date field and might warrant a little different treatment than the other numeric fields. As you can see, metadata is extremely useful in understanding what a database is all about and how the specific information in that database can be utilized.

Examining the Data

Before we actually import the data records that we have downloaded and uncompressed, we must first determine exactly what fields from these data records are of interest to us. We are limited by the record structure of the LandView generic data files to 24 data fields per record. The metadata can be of great help here in helping select the fields to actually import into the generic file ("File_01.lv5").

In addition to using the metadata, we can take a detailed look at the data records before actually importing them. We do this by using the import function provided by the LandView software. This functionality allows us to open the file we wish to import and then allows us to "step through" the incoming data field names as well as the actual data records themselves.

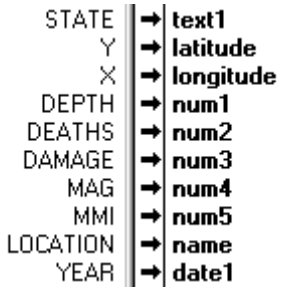
Since it is part of a Shapefile format, the data file to be imported is a dBase file structure and is named "quksigx020.dbf." To examine the fields that constitute the records in this file, click on the LandView "File" menu at the top left of your screen and then select the "Import Records" option. Navigate using the "Open File" window to the dBase file ("quksigx020.dbf.") and open it. This will then open another window labeled "Import Field Mapping" with the various field labels from the dBase file in the left pane and the generic field names from the LandView "File_01.lv5" in the right pane.

Selecting the Data

When your cursor is in the right pane, a special icon appears, allowing you to drag any field name in that pane up or down. By moving these fields up and down, they can be setup to accept the data that will be subsequently imported into "File_01.lv5." To see some of the actual data that will imported, use the "Scan Data" buttons located below the left pane. For example, clicking once on the right-hand "Scan Data" button will simulate (but not actually perform) the importing of the first record. Doing this reveals that the "X" and "Y" fields are actually the latitude and longitude fields, respectively, from the earthquake record. Therefore, we want to use the special icon and align the "longitude" field with "X" field and the "latitude" field with "Y" field. Once these fields are aligned, click in the center column to change the "dot" to an "arrow" indicating that the import is enabled for these fields. Finally, align the "LOCATION" field from the incoming dBase file with the "name" field of "File_01.lv5." We have now aligned the three fields required by the import operation, as follows:

Once the required "latitude," "longitude," and "name" fields have been aligned with their appropriate imported data fields, we can look to see what other fields might be of interest. Although these additional fields are optional, they often add important informational content to the records ultimately imported into "File_01.lv5." For example, it would probably be useful to include the "STATE" field so as to be able to search for all of the earthquakes in a given state. Likewise, the "DEPTH," "DEATHS," "DAMAGE," "MAG," "MMI," and "YEAR" fields would most likely prove useful. Thus, we should align these additional fields with appropriate fields in "File_01.lv5" depending on the types of data (text, numeric, or date).

We must now align these additional fields with their appropriate fields in "File_01.lv5." The particular order is not critical, but you should make careful note of the exact assignments, as we will need this information in a later step. For the purposes of this example, the following assignments will be made:

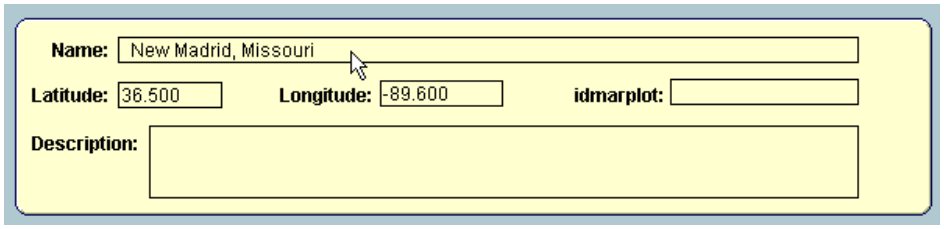


Importing the Data

It is now time to actually import the data. Before doing so, check to see that there are noted only ten "import arrows" turned on, corresponding to the ten fields noted above. If this is the case, click on the "Import" button at the lower right of the window to begin the actual data import operation. After a few seconds, you should see a count of 1,286 records imported into "File_01.lv5," indicated by the number displayed directly below the "Rolodex" icon on the upper left panel. You can click on the upper and lower portions of this icon to step forwards and backwards through the newly imported records. (Holding down the "Ctrl" key and using the up and down arrows will perform the same navigation).

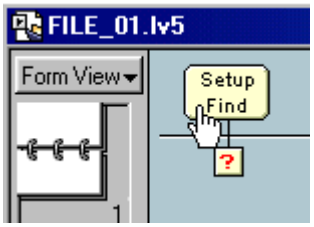
Verifying the Data

As discussed earlier, there are three fields in every record ("latitude," "longitude," and "name") that *must* have values in them in order to be able to create a corresponding map layer. We just imported 1,286 records, and, at first glance, all appears well, as indicated by the fields near the top of the "File_01.lv5" data layout that look like the following:

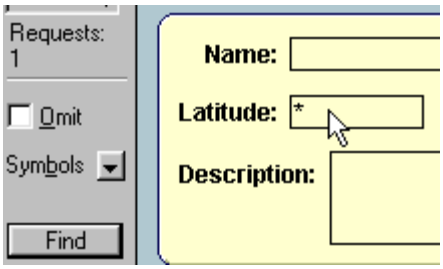


Clicking on the lower half of the Rolodex icon a few times advances through the first several records and every record seems to have a valid "latitude," "longitude," and "name" field. However, we must ensure that there are no blank entries in any of these three critical fields anywhere in the file. We could step through the entire file, one record at a time, visually checking these fields, but there is an easier way. Remember that we now have created a fully searchable database file ("File_01.lv5") into which we just imported 1,286 records. The underlying software for this database is FileMaker Pro, which has a quite flexible set of search and display functions. We will use one of these functions, the "Find," to locate any blank entries in our three critical fields.

Let's first examine the "latitude" field. To do this, click on the "Setup Find" button at the top of the data layout, as in the following:



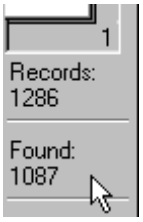
The small, red "question mark" button provides several help screens for setting up a "Find" operation, which you may examine if you'd like. Setting up a "Find" will blank all of the fields on data layout and allow us to select a field to examine. Place your cursor in the field next to the label "Latitude:" and then enter an asterisk (*) in that field so that it appears as follows:



When an asterisk (*) is used in a “Find” operation, the software searches this field in every record in the file for any non-blank values, and then displays the number of records that meet the search criteria. Click on the “Find” button on the gray panel on the left to initiate this search and then notice the resulting count of “Found” records beneath the Rolodex icon. It should appear as follows:

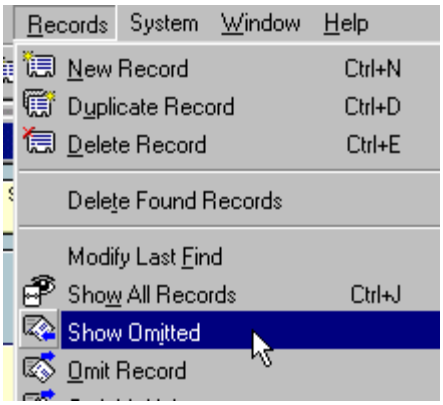
The fact that every one of the 1,286 records was found to have a non-blank “latitude” value means that this field is fine and ready for subsequent processing.

Now, using the same procedure, verify that the “longitude” filed contains no blanks. After searching for asterisks in this field, the count of found records should be identical to that found when searching the “latitude” field. Finally, use the same procedure and search the “name” field for blanks and you should get the following result:

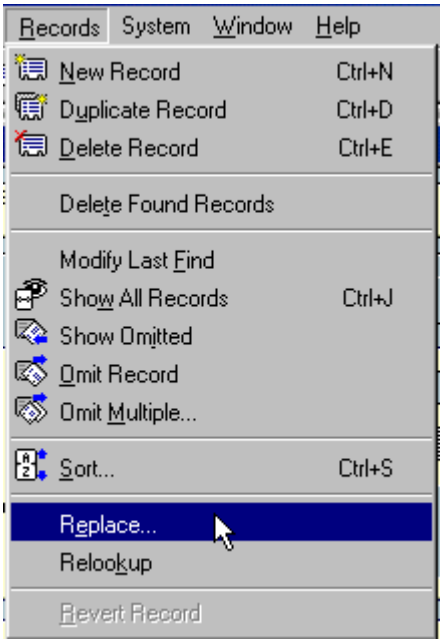


Notice that we only found 1,087 records with non-blank values, meaning there are 199 records with blanks in their “name” field. This will not do, as the map layer that we will be ultimately creating requires a name for every point or object placed in that layer. Thus, we must put some non-blank value in these records. Fortunately, the software provides a convenient way to do this.

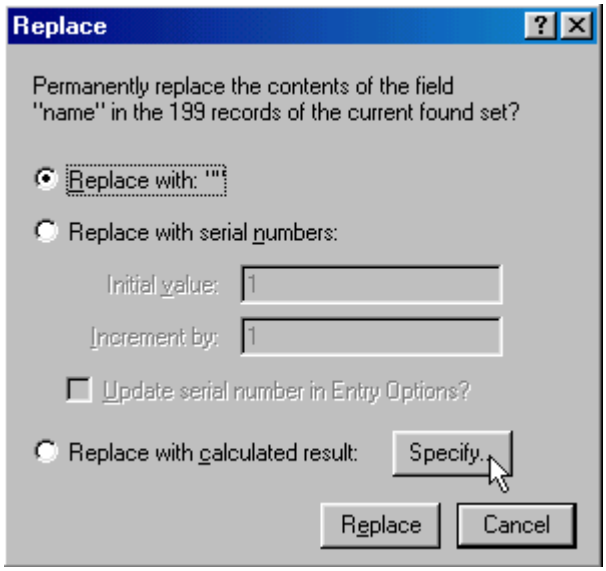
First, we must show the records that contain blank “name” fields. This is done by selecting the “Records” menu followed by the “Show Omitted” option, as follows:



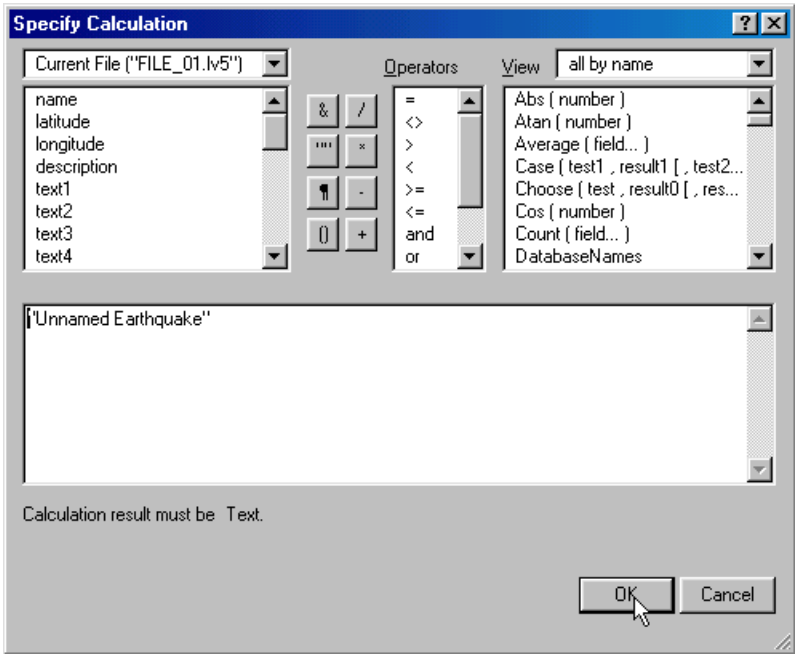
This will then show the 199 records containing the blank "name" fields. To correct this situation, we first click in the "name" field (which currently is blank) and then once again click on the "Records" menu, but this time select the "Replace" option, as follows:



Selecting this option will bring up the "Replace" dialog window where the actual value to be replaced in the 199 records will be entered. Notice that the first radio button in this dialog window is selected, indicating that the field in question ("name") will be replaced with something that will be specified inside of a pair of quotes. To actually specify that "something," click on the "Specify" button, as in the following:



This will bring up the “Specify Calculation” dialog window. In the lower white entry box in this window, first type a double quote mark (“) followed by the text “Unnamed Earthquake” and then another double quote mark (“). The window should look like the following just before you click the “OK” button:



After clicking the OK button, the “Replace” dialog window will again appear, at which point a final click on the “Replace” button will tell the software to place the character string “Unnamed Earthquake” in the “name” field of the 199 records currently in the “Found” set. Do this and then step through a few records by use of the Rolodex icon to ensure that that they all now have non-blank values in their “name” fields. Finally, click on the “Show All Records” at the top of the data layout, as in the following:

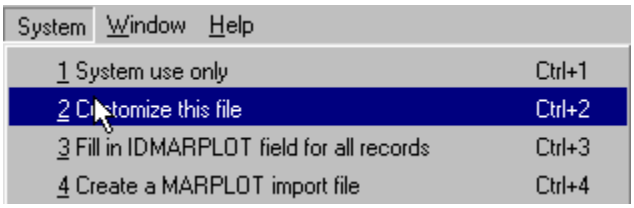
This will once again bring all 1,286 records back into play, including the 199 that we just modified. All records now have a non-blank value in their "name" fields.

Customizing the Data Layout

Notice that there are three groups of "generic" fields in "File_01.lv5" representing text, numeric, and date fields, respectively. There is also a fourth group labeled "check box" for accommodating imported data that is represented by a binary or "yes/no" value. For the moment, we will ignore these "check box" fields.

Once the records have been imported into the default data layout for "File_01.lv5," it is time to adjust the default field names ("text label 1," "number label 1," etc.) to reflect the type of data that has actually been imported. For example, "text label 1" should be labeled "State" since this is the type of data it now contains.

To accomplish this, click on the LandView "System" menu and then select the "Customize this file" option, as shown below. This will bring up a display screen where the file and field information for "File_01.lv5" can be changed.



Begin by changing the value in the top filed labeled "File Description" from its default value of "File_01.lv5 Description" to the value "Significant and Historic Earthquakes." Now click on the "Return to User File" button in the top right corner to see the effect of this change, as follows:

Repeat this process, changing each of the appropriate field names so that the results look as shown below. Note that no changes are made to any of the "check box labels," as none of these fields will be used in the import process.

Text Field 1	State
Text Field 2	text label 2
Text Field 3	text label 3
Text Field 4	text label 4
Text Field 5	text label 5
Number Field 1	Depth of Quake
Number Field 2	Deaths from Quake
Number Field 3	Damage from Quake
Number Field 4	Magnitude of Quake
Number Field 5	Modified Mercalli Intensity
Date Field 1	Year
Date Field 2	date label 2
Date Field 3	date label 3
Date Field 4	date label 4
Date Field 5	date label 5
Check Box Field 1	check box label 1
Check Box Field 2	check box label 2
Check Box Field 3	check box label 3
Check Box Field 4	check box label 4
Check Box Field 5	check box label 5

There are two more fields that need to be examined. The first is the “marplot layer name” which reflects the name of the data layer that we are about to create. Change this field to “Earthquakes” and this will be the layer name for all of the earthquake locations we will soon import into MARPLOT.

The second field is the “marplot map name” which defines the folder (named “\USERMAP” on your hard disk) where the map layer information will be saved after it has been imported into MARPLOT. Leave this second field alone, as this is a good place to have MARPLOT save its map information. Now, the fields should look as follows:

marplot layer name	Earthquakes
marplot map name	User's Map

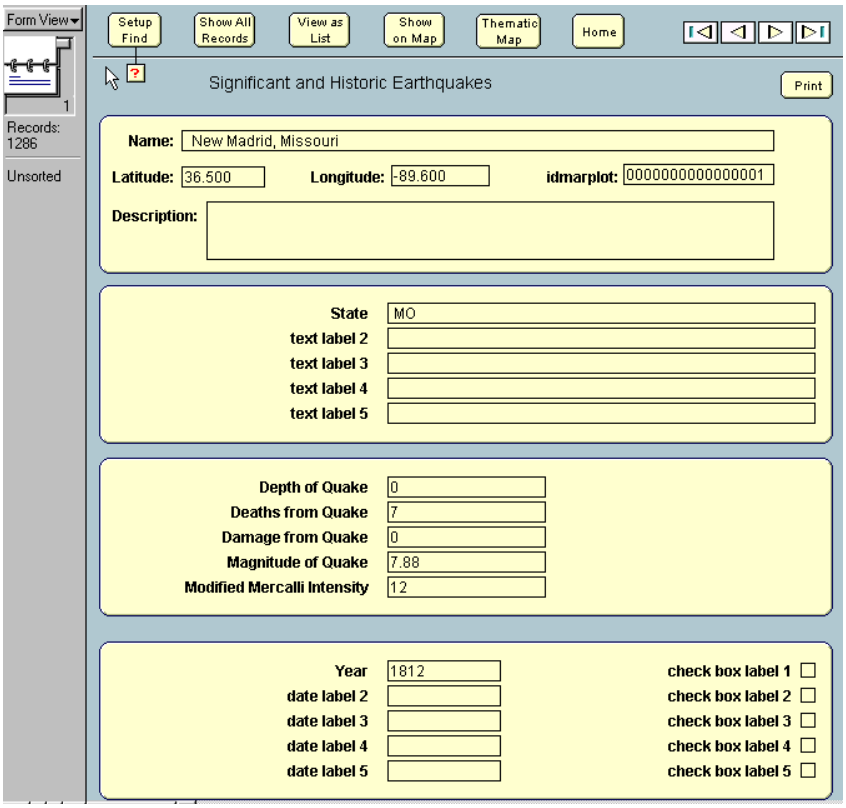
We have now finished all of the field labels for the “File_01.lv5” data layout. Click on the “Return to User File” button at the top right of the screen to see how they look. All of the fields that we have selected to import should now have appropriate field labels.

Populating the MARPLOT link field

LandView consists of two basic processing modules--the database module (developed by EPA) and the mapping module (developed by NOAA). The database module manages the records associated with objects on a map layer, while the mapping module (MARPLOT) actually plots the objects from the map layer. The link field between these two modules is named “idmarplot” and consists of a unique, 16-character alphanumeric field. This link field provides the means by which users can readily switch between the database and mapping modules of LandView. But before this can occur, this link field first must be populated with a unique value for every record in the file. Fortunately, this can be accomplished

very easily by simply clicking on the “System” menu and then choosing the “Fill in IDMARPLOT field for all records” option, as shown below:

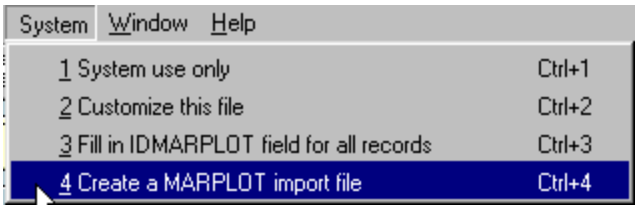
A few seconds after selecting this option you will notice that the “idmarplot” field has been populated with a unique value for every one of the 1,286 records in “File_01.lv5.” At this point, the data layout for “File_01.lv5” should appear as follows:



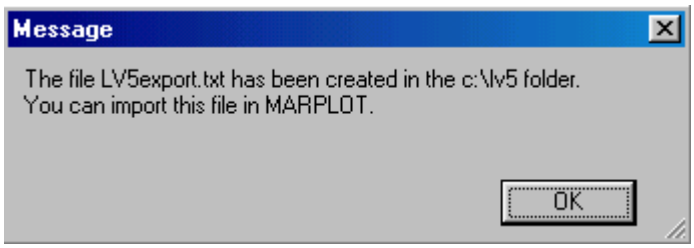
Notice that after populating the MARPLOT link field, the Rolodex icon on the left panel is pointing to the last record in the database (number 1,286) and the data values for this record of an earthquake in New Madrid, Missouri are displayed on the customized data layout.

Creating the MARPLOT import file

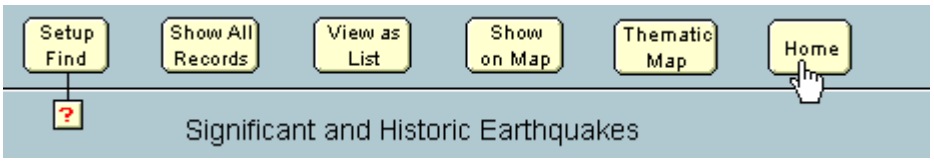
The final step in the process of importing our data representing the significant and historic earthquakes is to create the corresponding map layer for these points. To do this, first click on the “System” menu and then choose the “Create a MARPLOT import file” option, as shown below:



After this option is chosen, the software will use the information specified in the previous steps and create a file named "LV5export.txt" in the lv5 folder, as evidenced by the following message:

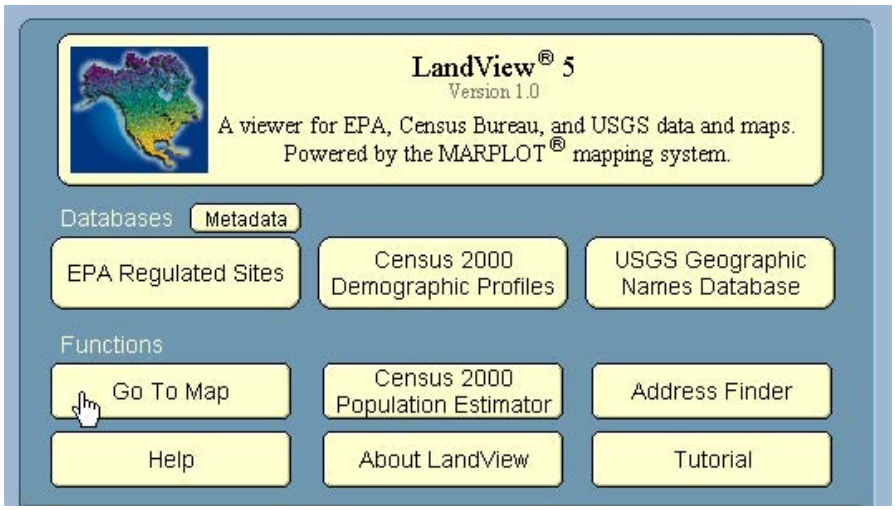


This file must now be imported into MARPLOT to actually create the map layer and store the resulting map information in the folder named "\USERMAP" on the hard disk (MARPLOT compresses this map information into several very compact binary files). To perform this import, the MARPLOT software must be invoked. The easiest way to do this is to first click the "Home" button at the top of the data layout, as follows:

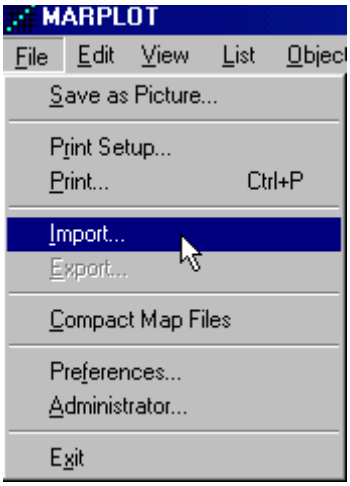


Now click the "Home" button at the top of the "LandView User Files" screen, as follows:

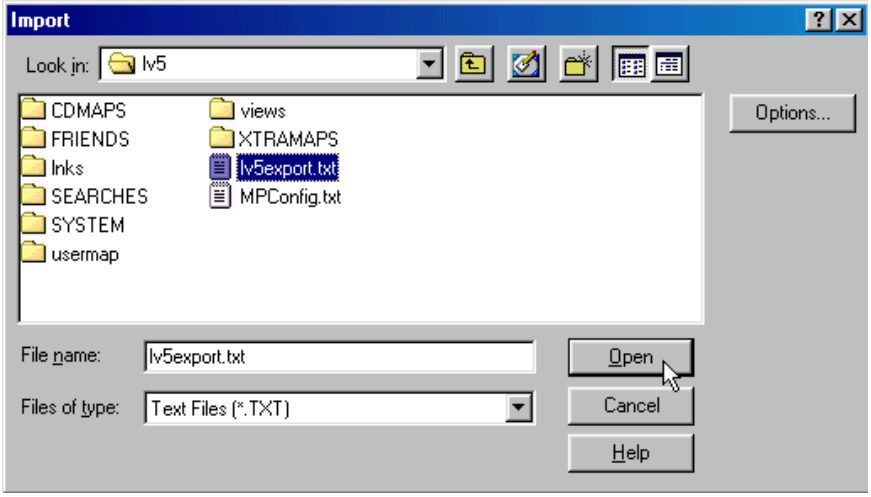
This will return to the LandView 5 "Home" screen where the MARPLOT software can be started by simply clicking on the "Go To Map" button, as in the following:



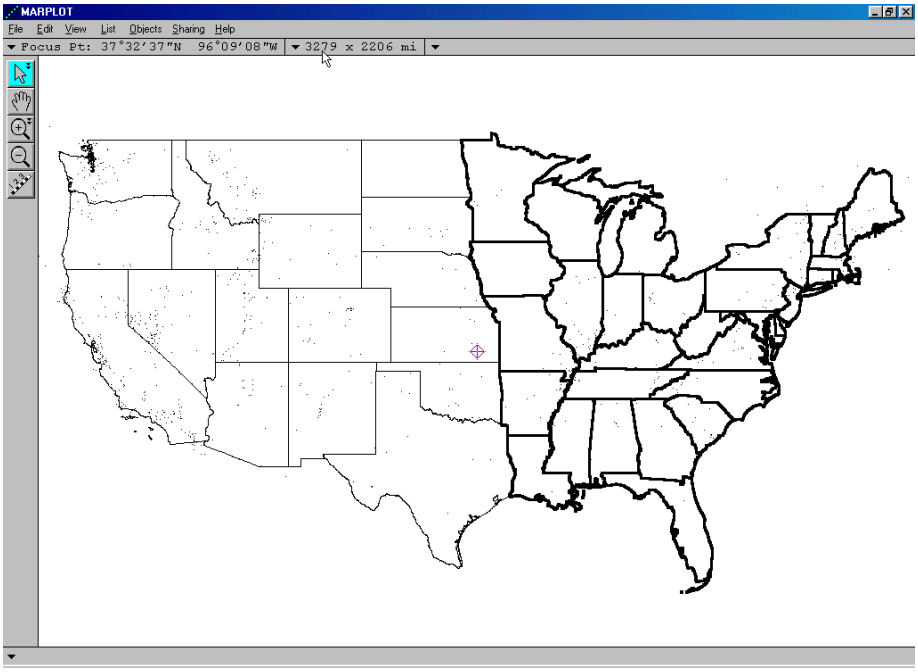
MARPLOT initially displays a map of the U.S., with the state outlines in bold depending on which DVD-ROM disc (East or West) is currently in your drive (this tutorial assumes you are using the East disc). To import the map layer file that we created earlier, simply click on the MARPLOT "File" menu and then select the "Import" option, as in the following:



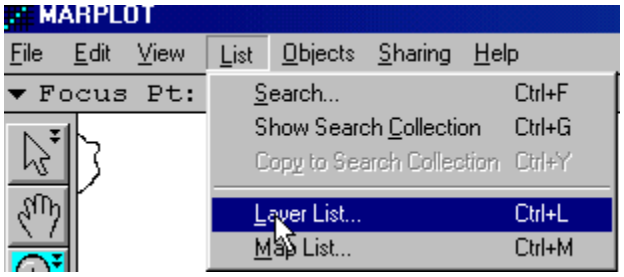
This will bring up the MARPLOT "Import" dialog window. First, select "Text Files (*.TXT)" files from the "Files of type" drop down menu and then navigate to the file named "LV5export.txt" that we just created in the lv5 folder. Select this file and then "Open" it as in the following:



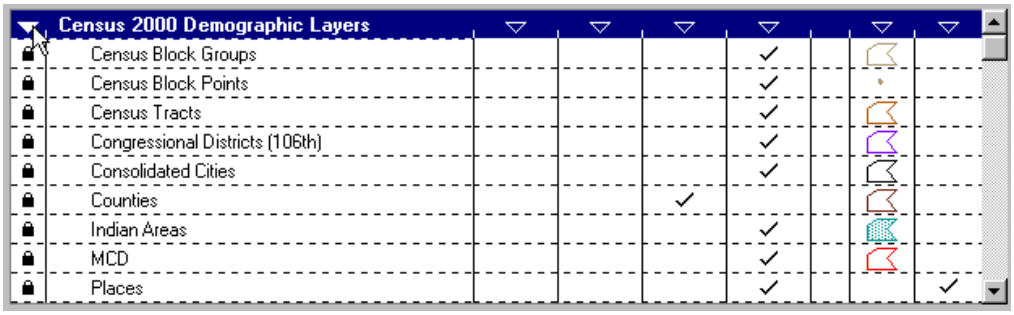
MARPLOT will then proceed to import this file and create a corresponding map layer consisting of 1,286 points, one for every record or earthquake contained in "File_01.lv5." The initial map will look like the following:



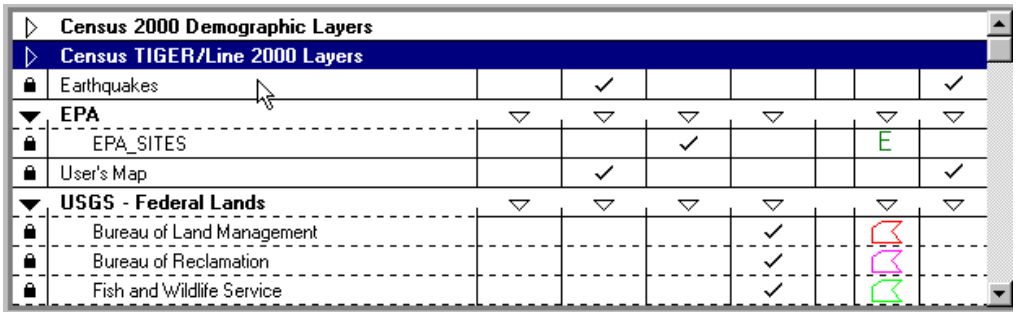
MARPLOT has now imported the imported the file of earthquake locations, created the corresponding map layer, and finally has displayed those locations as small, almost imperceptible points on our map. Let's adjust the map layer and make it easier to see these points. First, click on the MARPLOT "List" menu and then select the "layer List" option, as in the following:



This will bring up the MARPLOT "Layer List" window where all of the various map layer that come with LandView can be seen. The initial view lists all of the "Census 2000 Demographic Layers," one of which (Counties) has a check on the "Range" column. To see other layers, first "collapse" the Demographic Layers by clicking on the down-pointing triangle, as in the following:

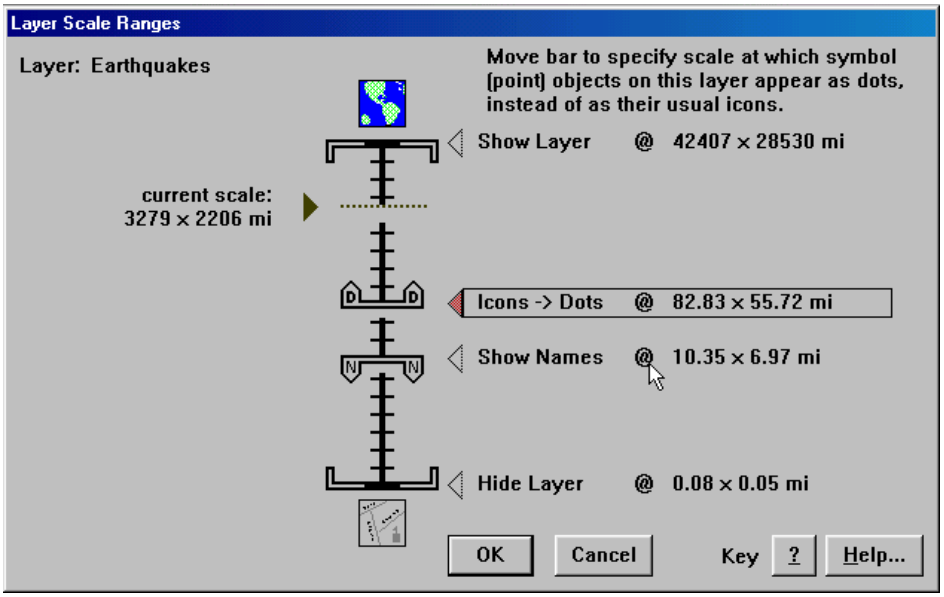


Once these layers are hidden, do the same thing to the "Census TIGER/Line 2000 Layers" and the layer list should then appear like the following:

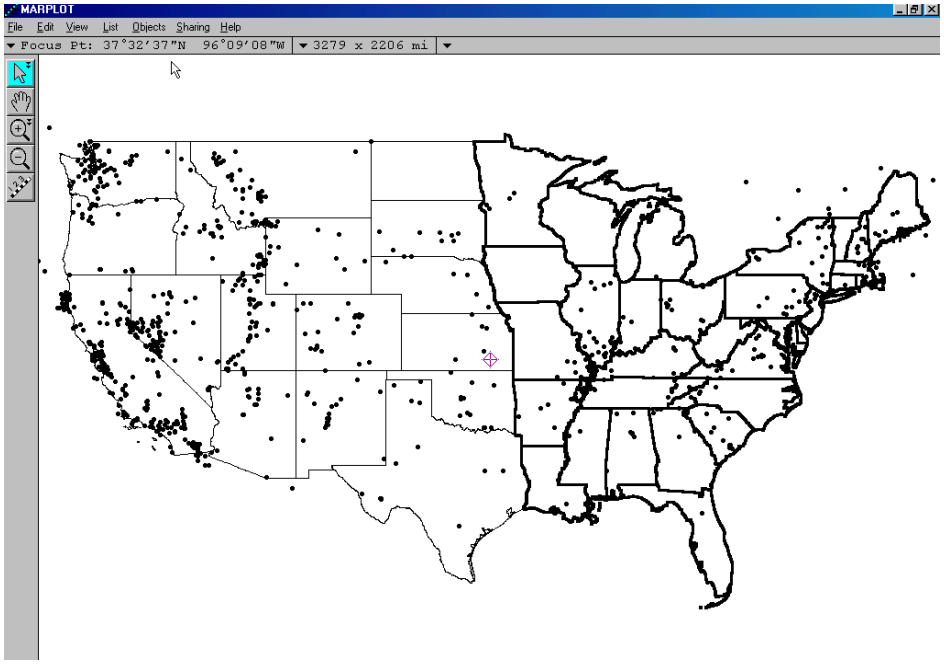


Notice the layer named "Earthquakes" directly below the "Census TIGER/Line 2000 Layers" that we just collapsed. Click on the "Earthquakes" layer and notice in the lower left of the window that we do indeed have 1,286 objects in our map layer.

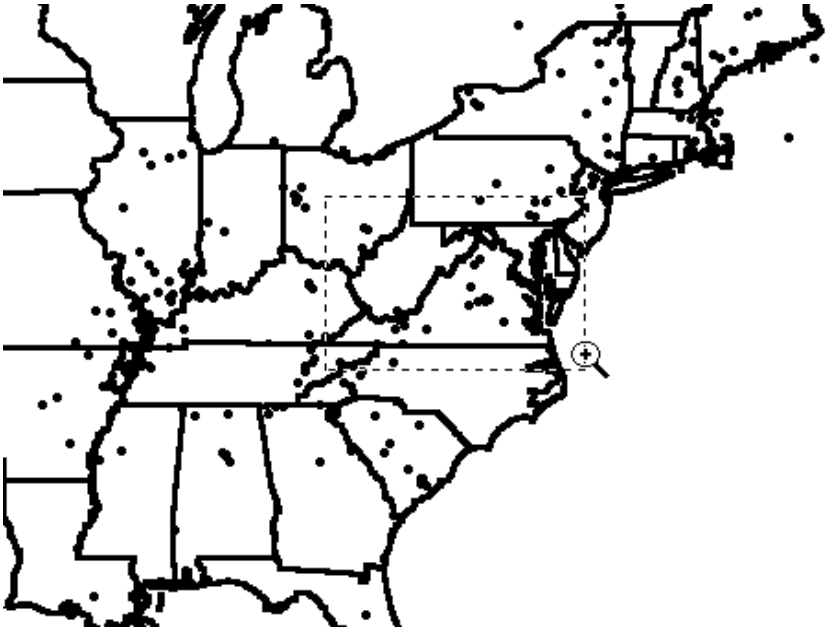
Now that the Earthquakes layer is highlighted, click on the button labeled "Scale ranges" in the bottom center of the window. This will bring up the "Layer Scale Ranges" dialog window that allows precise control over when a particular map layer. For example, clicking on the bar labeled "Icons -> Dots" allows one to specify the exact scale at which the objects on the layer will switch from larger icons to smaller dots. As it currently appears (see below), whenever the scale is zoomed out anywhere beyond 82.83 x 55.72 miles, the objects will appear as dots.



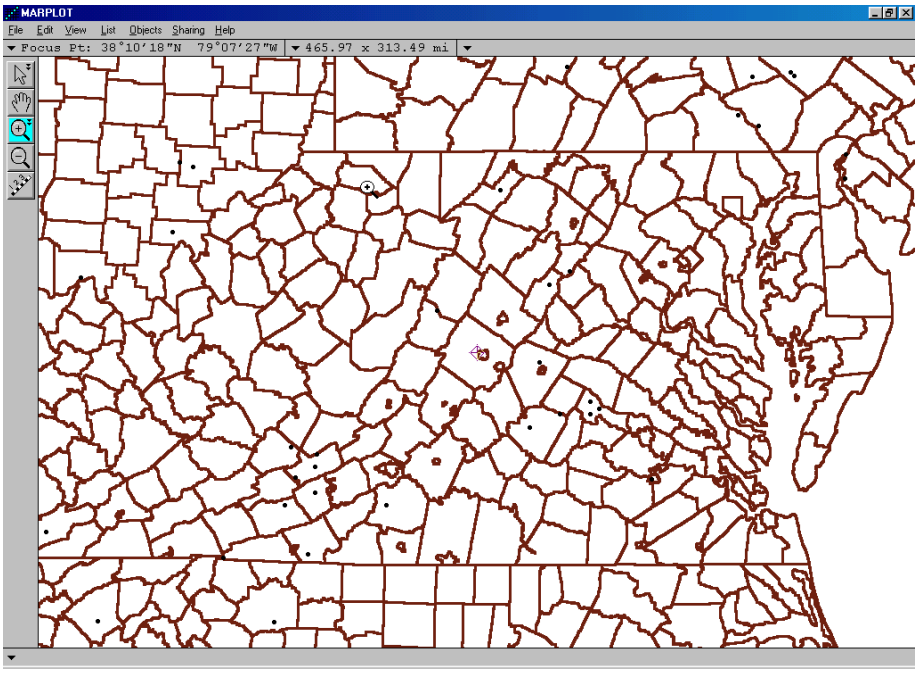
To see the larger icons, simply drag this bar upwards until it is beyond the "current scale" of the map, shown on the left size of the window. Once this bar has been placed anywhere above this "current scale," clicking the "OK" button and then another "OK" button on the "Later List" window will produce the following map with more visible icons:



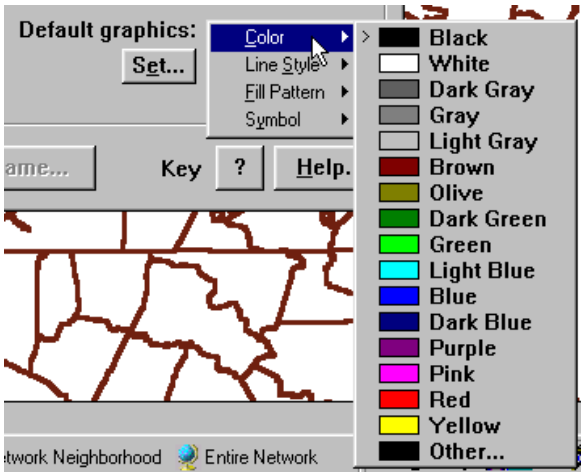
Let's focus our attention on the points or earthquake locations within state of Virginia. Click on MARPLOT's the "Zoom In" tool (shown at left) and drag a rectangle around Virginia, as in the following:



This will "zoom in" on the map and create something like the following:

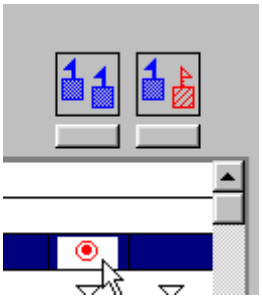


At this point, we can use a few more of the tools in MARPLOT to make those earthquake locations even more distinct. To do this, again click on the MARPLOT "List" menu and then select the "layer List" option, as before. Now click on the "Set…" button below the "Default graphics:" label on the lower right. From the popup list, select the "Color" option and then choose red as the color for the objects, as follows:

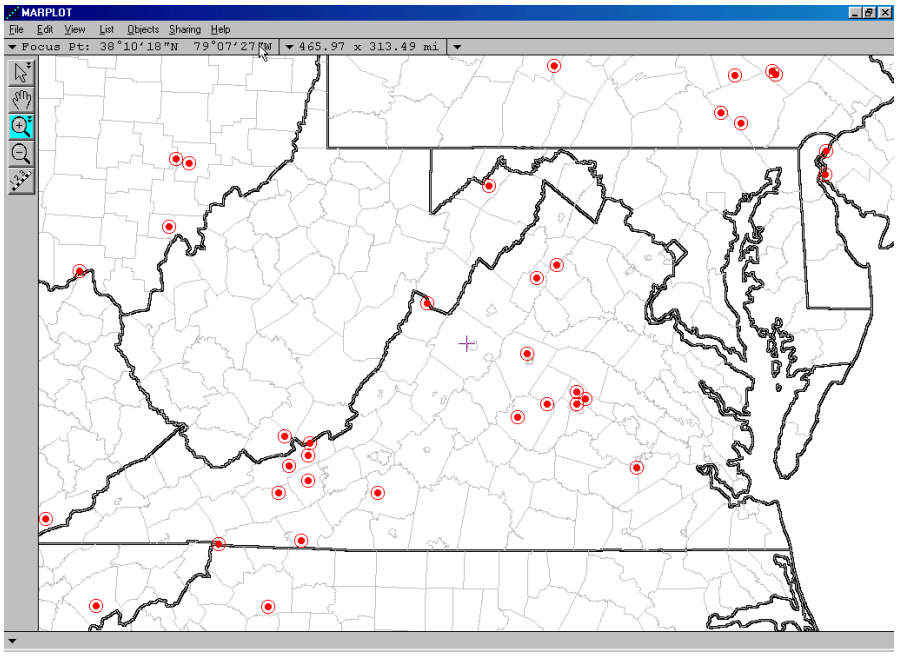


Click the "Set…" button again and this time select the "Symbol" option that looks like a solid dot with a circle located in the upper right section of the symbol list, as follows:

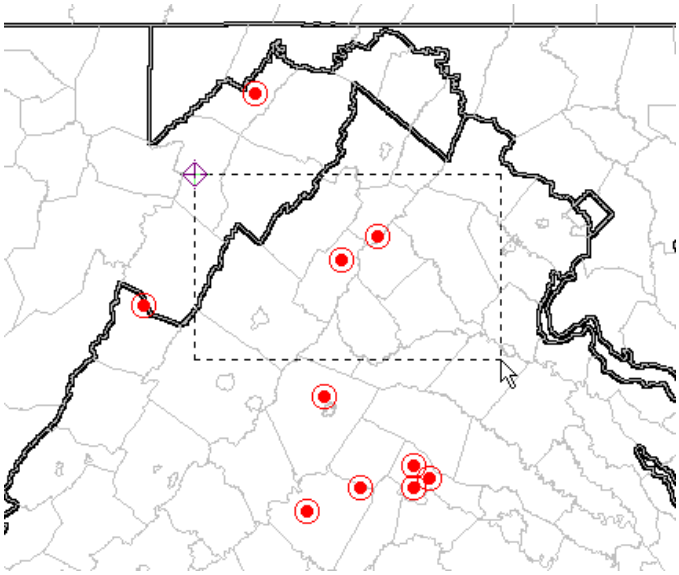
Finally, to actually make these changes take effect, we must click in the column under the two blue flags which tells MARPLOT to use the graphical settings that we have just changed in the pop-up box, as follows:



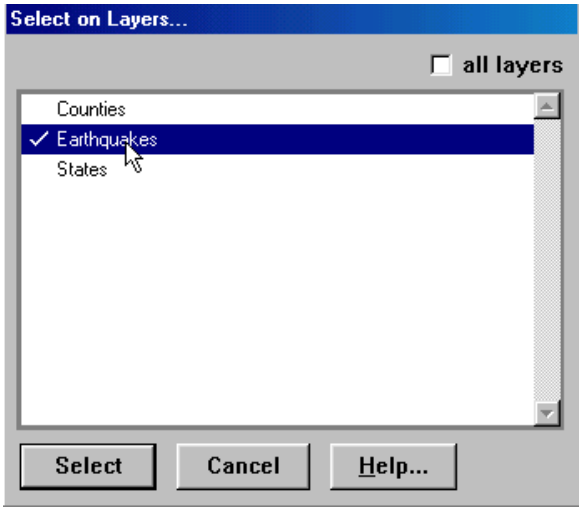
Before closing the “Layer List” window, click on the right-pointing triangle next to the collapsed “Census 2000 Demographic Layers” and then highlight the “Counties” layer. In a manner similar to before, set the “Default graphics” on the “Counties” layer so that the “color” is light gray and the “Line Style” is a very thin line. Finally, click on the “OK” button at the bottom left and the following map should appear:



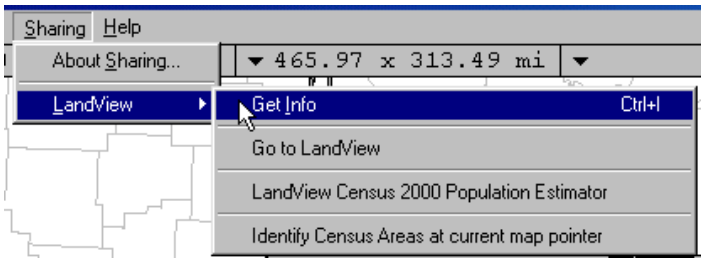
The points on the map represent earthquakes and can be individually examined by clicking on them with the object pointer (shown at left) located at the top of the far left gray panel. When an object is selected, its “name” is displayed at the lower left of the map display window. If you wish to examine the actual data record associated with a given point or points, simply use the same object pointer, but this time drag a rectangle around the points of interest. For example, if we wanted to examine the two points in the northern part of Virginia, we would drag a rectangle around them, as follows:



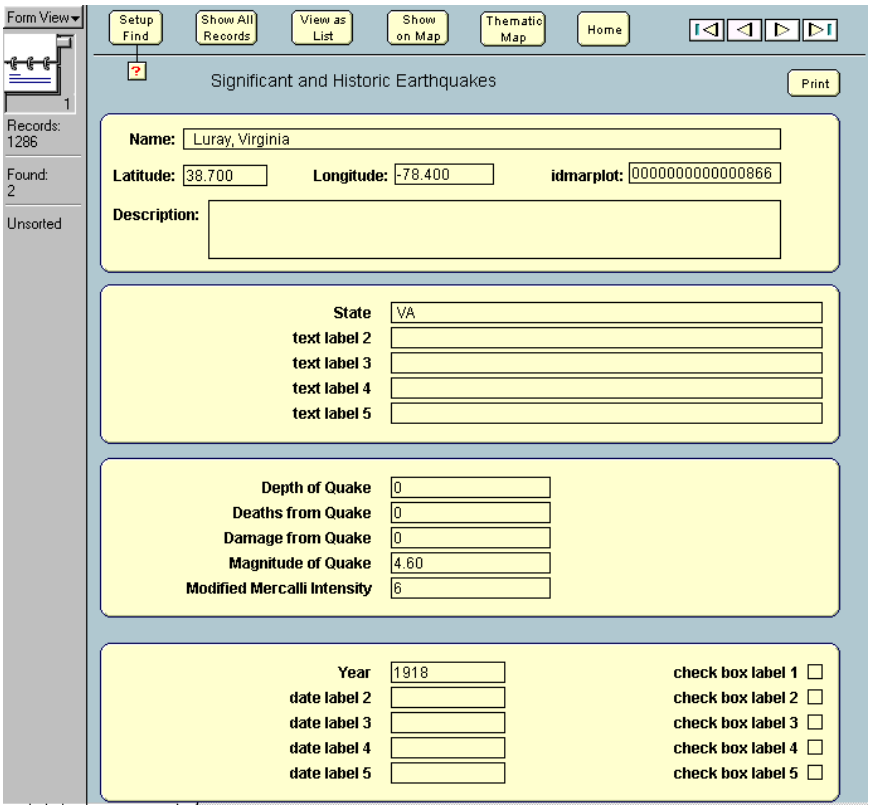
Then, MARPLOT displays a “Select on Layers” window where the “Earthquakes” layer would be first highlighted and then selected by clicking on the “Select” button at the bottom left, as follows:



Once this was done, the two selected points would each be surrounded by four red squares, which is MARPLOT’s method of indicating selected objects. Then, to actually select the two database records corresponding to these two map objects, you would first click the MARPLOT “Sharing” menu followed by selecting the “LandView” and “Get Info” combination, as in the following:

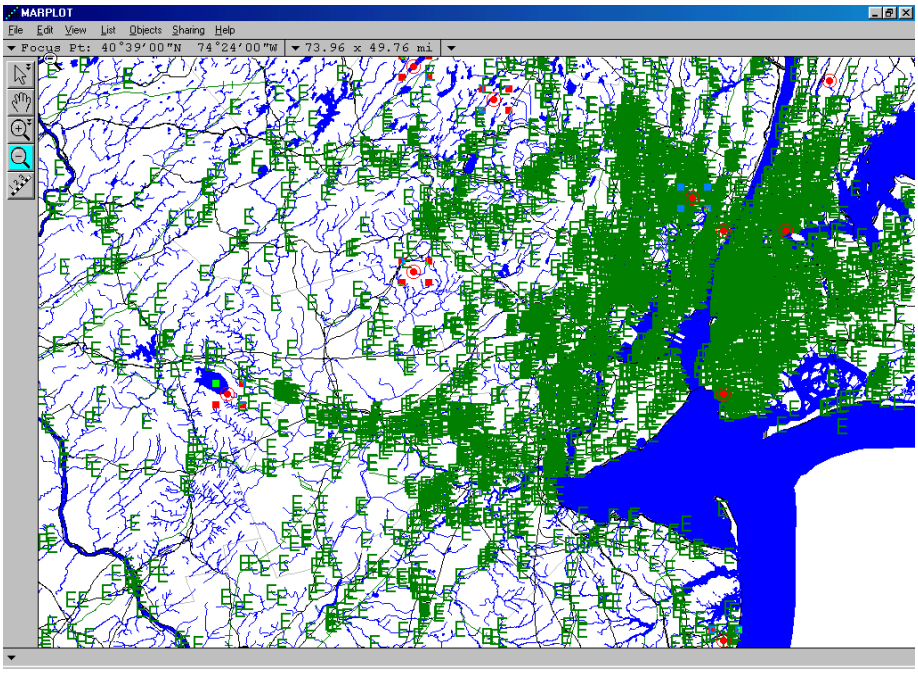


MARPLOT now passes control to the database module and within seconds, the records corresponding to the two selected points are displayed and look like the following:

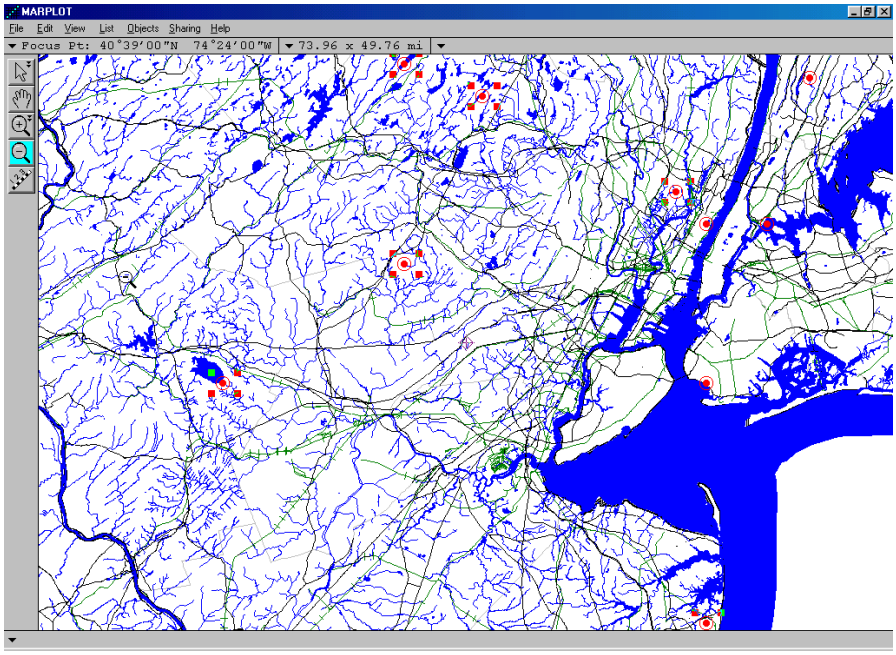


We can see from the display of the first record that this earthquake occurred in 1918 with a magnitude of 4.6. This ability of linking between the map objects and the corresponding data records is very powerful. It also is bi-directional in that we could just as easily perform a search of the database records and then plot the results. For example, if we wanted to plot all of the earthquakes that have ever occurred in the state of New Jersey, you would first click the “Setup Find” button, enter the value of “NJ” in the first field of the data groups, and then click on the “Find” button. After doing this, you would discover that New Jersey has had six recorded earthquakes over the years, one in 1783 as large as 5.3 on the Richter scale! The “View as List” button would display these records in a tabular form.

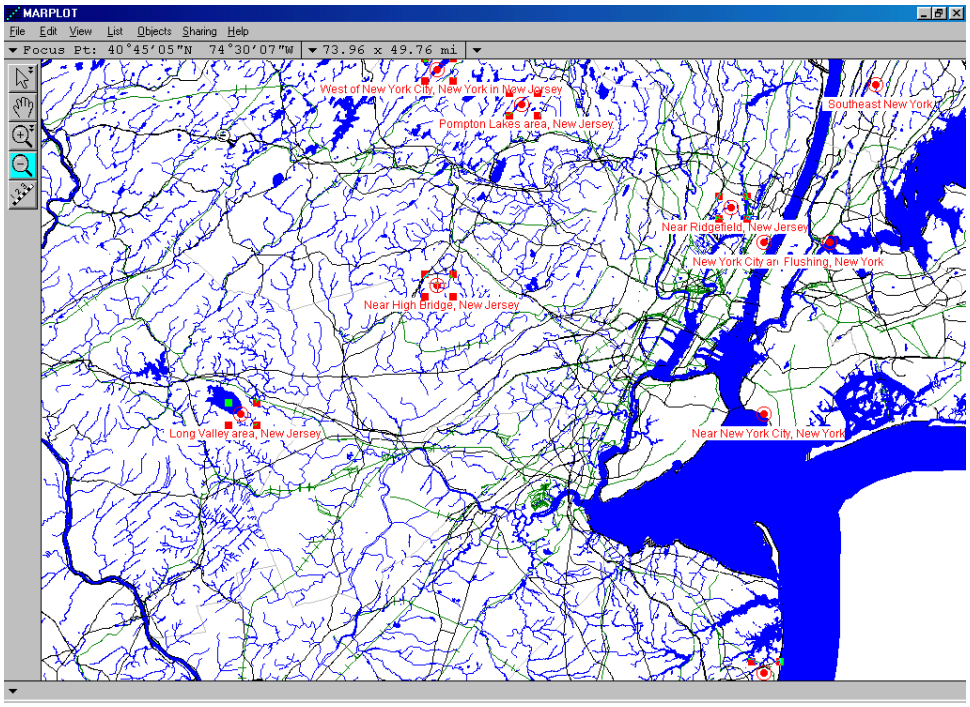
To plot these six points on our map, simply click on the “Show in Map” button and, accepting the parameters on the “Show on Map” dialog screen, the following display will appear, automatically scaled to display all six of the data points of interest:



The map, however, appears a bit cluttered because of all the EPA sites that have come on because of the map scale. To make this map a bit easier to understand, go into MARPLOT's Layer List and "hide" the EPA layer of map objects. After doing this, the map becomes much easier to read and locate the earthquake points, as follows:



Also notice that because we are zoomed somewhat far in, several other map layers have come on, including bodies of water and railroads. One last adjustment might be useful, and that is to turn on the names of the displayed earthquake locations. To do this, return once more to MARPLOT's Layer List, locate the "Earthquakes" map layer, and then click o=in the "Show + Names" column to produce the following map:



You have now successfully imported a layer of point data into LandView. You have created a table containing the data records and have created a corresponding map layer containing objects for every record in the database. You have then manipulated these map objects and retrieved their corresponding data records. Congratulations!

U.S. Census Bureau 10 Years on the Web

Summarize

The **Summarize**button is located on every Census geography screen for the DP1-4 tables. This function is especially useful when a Findhas been performed. It's purpose is to sum numeric fields to produce totals for a selected subset of records. It is also activated when several objects are selected from the MARPLOT®, map, and choose **Sharing - LandView - Get Info**. The following are several examples of how the "Summarize" function can be used:

Suppose you performed a **Find** on the number of counties that have less then 5,000 persons. You may then click on the **Summarize** button to get the total number of persons, by age, sex and race etc. 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 census tracts that you are interested in MARPLOT. Then from the **Sharing** menu, select **LandView - Get Info**, this will take you back to the LandView Demographic Profile screen with the census tract database in use. The left-hand column will show the total number of census tract records in the database, and the number of records found (selected). Clicking on the **Summarize** button will result in one summary record for the selected census tracts.

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Geography Division
Last Revised: *Monday, 29-Sep-2003 08:20:05 EDT*

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U.S. Census Bureau 10 Years on the Web

Predefined Census Data Queries

Users should note that after selecting a particular state in the state tab and then clicking on another geographic level tab (Indian areas, places, counties, etc.), the LandView®program will automatically create a collection of records for that geographic level within that state. For example, clicking on the "Tracts" tab after selecting Oklahoma will create a collection of all census tracts within the state.

The resulting collection is identified in the Status Area as a Found Set. This navigational method emulates the 'Setup a Find' process at any level of Census geography that would require entering appropriate State and/or County identifiers.

Because not all states have Indian Areas, consolidated cities, or minor civil divisions, a explanatory message will appear whenever the query finds no records in that geographic level.

Similarly, LandView will automatically create a collection of MCDs, census tracts and block groups if these tabs are selected after a county has been selected.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Wednesday, 26-Nov-2003 10:32:46 EST*

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U.S. Census Bureau 10 Years on the Web

Thematic Mapping

The Thematic Mapping function allows the user to choose a data set and display it on a map using one of four color schemes and a solid or patterned fill. For example, you can display Age or Race data for counties in a range of colors.

When you first enter the **Census 2000 Demographic Profiles** database in LandView®, choose the geographic entity at which you would like to see the data displayed by clicking on the appropriate tab i.e. Counties or Census Tracts etc. In order to look at data for counties in Maryland for example, click on the **Counties** tab and then click the Setup A Find button. Once the Find screen appears, enter the state abbreviation in the field box labeled **State** and click on the **Find** button to the left of the screen.

With the expansion of data available in LandView 6, an appropriate data field can be selected from any of the four DP tables. In the appropriate DP table for Maryland Counties, place the cursor in either the **number** or the **percent** field box next to a data item of interest. 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 click in the **number** field box. Once you have highlighted the appropriate field box you can then click on the **Thematic Map** button. If you do not select a data item, the following message will pop up-**You must first click on a numeric field before performing this procedure**.

Once at the Thematic Map screen, a set of four number ranges should appear. (In some instances 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 it may take the system a little time to process a large number of records.)

If you wish to change the quartile values, clicking on a number under **To** or **From** will highlight the number ranges and allow you to enter your own ranges. Click **Recalculate Record Count** when you are done. This will allow the system to redistribute the records. If you want to change the title, then simply click on that area of the screen and a text box will be displayed so that a change can be made.

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

To cancel the thematic map, go back to LandView and click the **Cancel** button in the thematic map window. This will bring you back to the Census database. If you go back into MARPLOT after canceling the map in LandView, MARPLOT will return to its normal way of displaying objects.

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Source: U.S. Census Bureau
Geography Division
Last Revised: *Monday, 29-Sep-2003 15:36:20 EDT*

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Thematic Mapping of Multiple Variables

LandView's **Thematic Mapping** utility is designed to examine the spread of values within a single numerical data field in LandView Census. However, a LandView **Found Set** can also be based on two or more data variables, and this Found Set can be a thematic display in MARPLOT. An example of this is given in the LandView Tutorial. Pertinent excerpts from the tutorial are included below. This article extends the procedure to creating a complete thematic mapping of all Census Block Groups within a geography—the State of Virginia.

> *A concern of a number of federal agencies is Environmental Justice—a concept that people living in disadvantaged communities may not have the necessary political and social resources to resist unsolicited intrusions into their neighborhood. While definitions of Environmental Justice vary, two elements are common—minority status and poverty. Either can be a criterion, but both together identify the more disadvantaged communities. Assume that you want to identify such areas within your Home State. We will use Census Block Groups as identifying neighborhoods. We will define Minority Status as "Table DP-1—Race, One Race, White" being less than 50% of the population. We will define Poverty as "Table DP-3—Poverty Status in 1999, Families" being greater than 20%. Let us proceed to identify such areas within your Home State.*

Since our definition of neighborhood is the Census Block Group, the 'Setup a **Find**' must start at the **Block Group** tab. Note that when looking at a State dataset, each State is represented by both a name and a Code. This Code is known as a FIPS Code, for Federal Information Process Standard. In your search at the Census Block Group level, you cannot use your State Name; you must use its Code. So, you will need to remember it.

Open the **Block Group** tab, and 'Setup a **Find**'[1]. In the State field at the top of table DP-1 enter your State's FIPS Code. In the table, find the "**One Race—White**" data field and move over to the Percent column. Enter "less than 50%", but this must be entered so that the computer will understand; your actual entry is "<50.00". (Note that the Symbols button to your left will open a palette of choices that you will find useful.) Now, open table DP-3 from the button box. Locate "**Poverty Status in 1999—Families**". In the Percent column, enter "greater than 20%" as ">20.00". Now, click the **Find** button and LandView will commence its search.[2]

You can now explore a third step in explicating the data—displaying the Found Set on a map in MARPLOT. The **Show on Map** button opens the dialogue box shown in Figure 17.

---

1 It is not necessary to go to your Home State when accessing the **Block Groups** tab. Each LandView 'Find' reverts to the entire dataset. Each Find must identify all layers of Census geography necessary to appropriately identify the specific data subset. In this instance a State identification is needed to identify all Block Groups within the State.

[2] Each LandView search starts from the complete dataset, and there are more than 200,000 Census Block Groups records to be searched. Some LandView Searches are prolonged. **Indexed** fields are searched much more quickly. However, indexing all fields that might interest individual researchers would add immeasurably to data content of LandView. For purposes of the Tutorial, '**One Race—White**' and '**Poverty Status in 1999—Families**' have been specially indexed to speed this search. For more on indexing, see LandView Help, **Indexing LandView Files**.

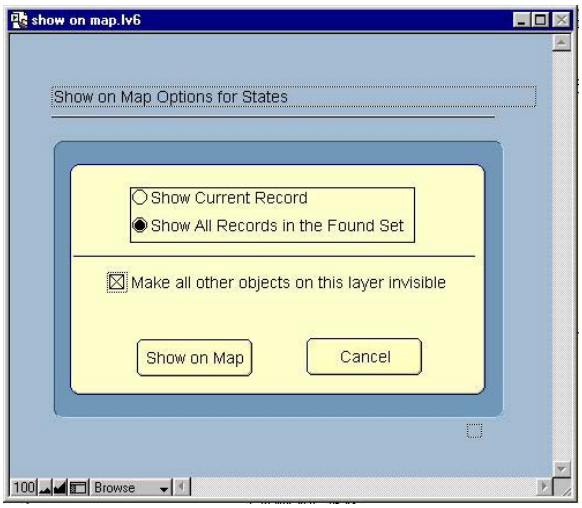


Figure 17. The Show on Map Dialogue

In the dialogue are several display options. In this case, we would like to 'Show **All Records**' and we would like to '**make invisible**' those objects not in our Found Set. On the other hand, if we had chosen to make all objects visible, MARPLOT would display the Found Set in **Select** mode and those objects not in the Found Set would display unselected. On **Show on MAP**, we move from the LandView application to MARPLOT. If MARPLOT is not running, the application opens. The map displays the Found Set. Some customizing of MARPLOT's layers is generally necessary to display the data in an appropriate geographic context. Figure 18 displays a Found Set for the State of Virginia with the State boundary in display mode to provide appropriate context.

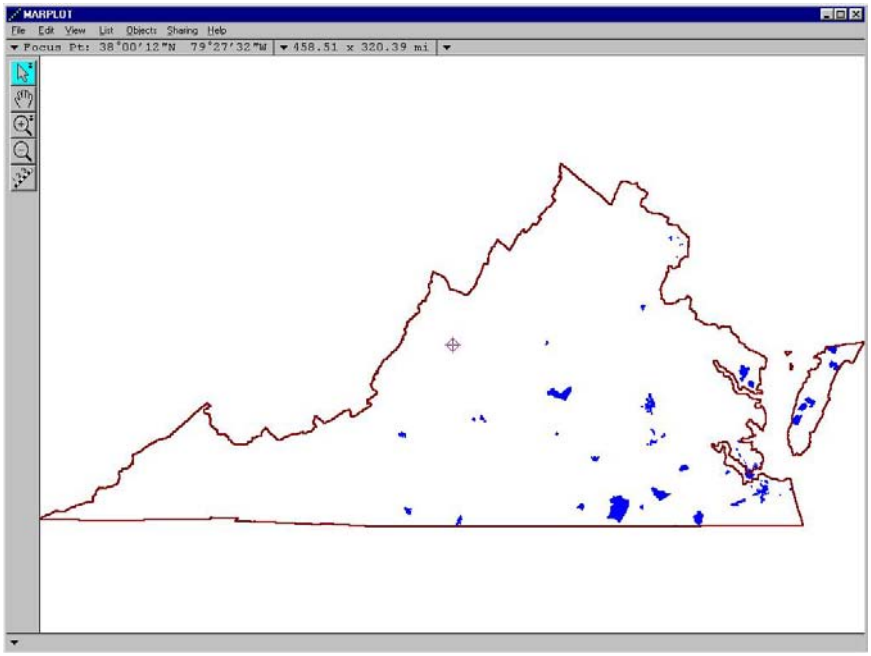


Figure 18. Census Block Groups in Virginia that Meet an Environmental Justice Concern

From here, we will build on what was presented in the tutorial . . .

First, though, we will need to make two modifications to our previous procedure. We will need our LandView Found Set in Select mode in MARPLOT, and this will require that we display the Found Set with the option in Figure 17 changed so as to not make all other objects invisible. This will cause the Found Set to display in Select mode in MARPLOT. Secondly, since we want a seamless dataset for the State of Virginia, we need to add a term to our search that will insure that Census Block Groups with a zero population are excluded from the search. Were this not done, such groups would meet the definition for a minority population. We will refer to this again as we proceed.

The identified set of map objects in the above example—Census Block Groups—do not remain in MARPLOT memory once the task has been accomplished and MARPLOT has turned to other tasks or is shutdown. If, tomorrow, we wished to show this same relationship, we would need to recreate our 'Setup a **Find**' and re-display the Found Set in MARPLOT. There are methods that can place this information in MARPLOT's memory and have it available for future use[3]. This article will explore copying the objects to a new MARPLOT layer that will contain just the found set. If all possible variations of the variables are examined and each variation is assigned to its own identified layer and if each layer is assigned its own distinctive display attributes, displaying all layers together would create a thematic display of Census Block Groups for the entire State of Virginia.

There are two MARPLOT Export formats—an **MIE** file and a **Simple Point Format**. Here, our concern is with the MIE files, since this fully replicates the boundaries of each Census Block Group. To export MARPLOT objects, the objects must either be **Selected** or be included in a MARPLOT Search Collection. Our method of showing the Found Set in MARPLOT places these objects in **Select** mode. The MenuBar command **File/Export . . .** creates the MIE file in a location of our choosing. We will name this file as *both.mie*, this to indicate that both minority status and poverty are concerns. During this procedure, we will create five similar files. Figure A. displays the names of the five files.

both.mie	454 KB	MIE File
minority.mie	1,501 KB	MIE File
No Test.mie	18,877 KB	MIE File
poverty.mie	1,056 KB	MIE File
zero.mie	7 KB	MIE File

Figure A. The Five MIE files to be Created in this Exercise.

An MIE file is a text file and it can be opened and edited with a text editor. MS Word Pad is suggested as having the necessary functionality. Do not use MS Word or Word Perfect. Such word processing applications frequently distort text files in a manner that makes them unworkable in MARPLOT. Figure B. displays *both.mie* as opened with WordPad. An MIE file displays three lines of **Word Wrapped** text for each map object. Users interested in the subject should consult MARPLOT Technical Documentation. However, our concern here is only with the three items of highlighted test shown on the second line.

---

[3] Users interested in an alternate methodology should explore MARPLOT MenuBar **List/Copy** (the selected objects**) to Search Collection** and **Save Collection . . .**

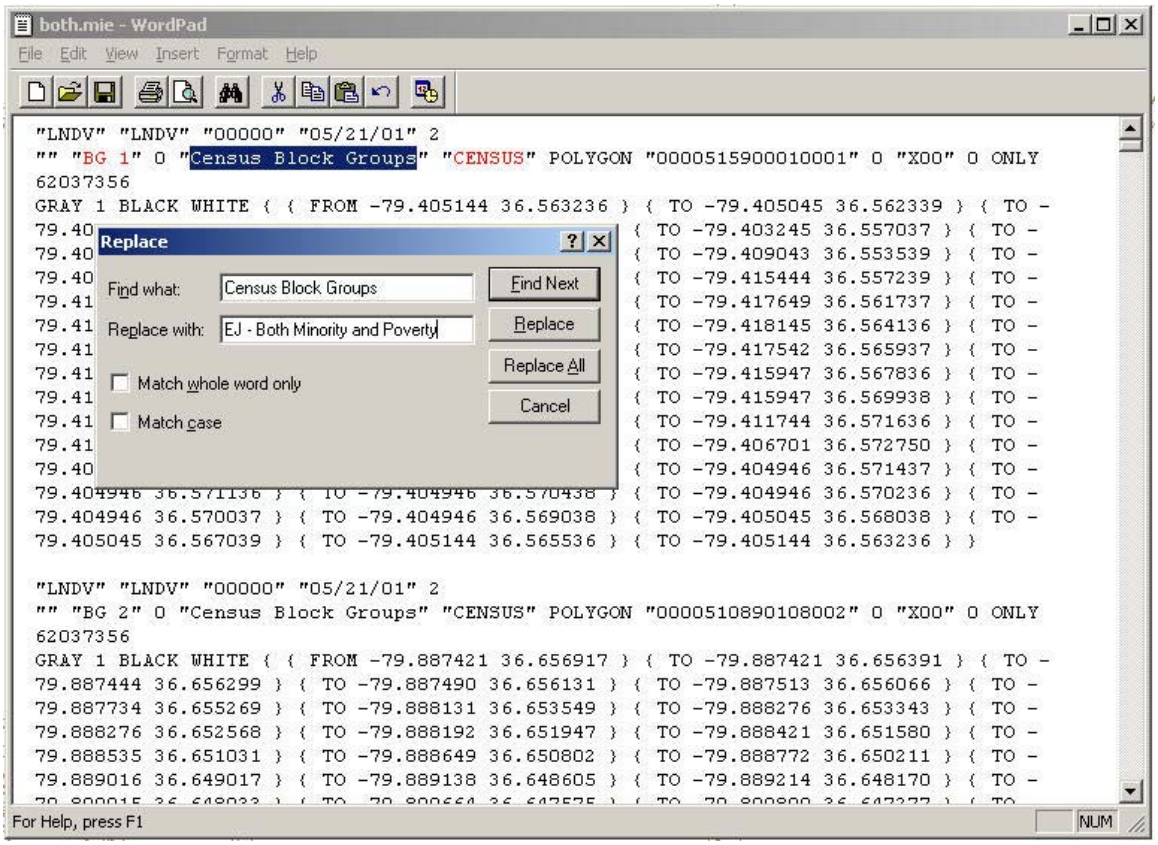
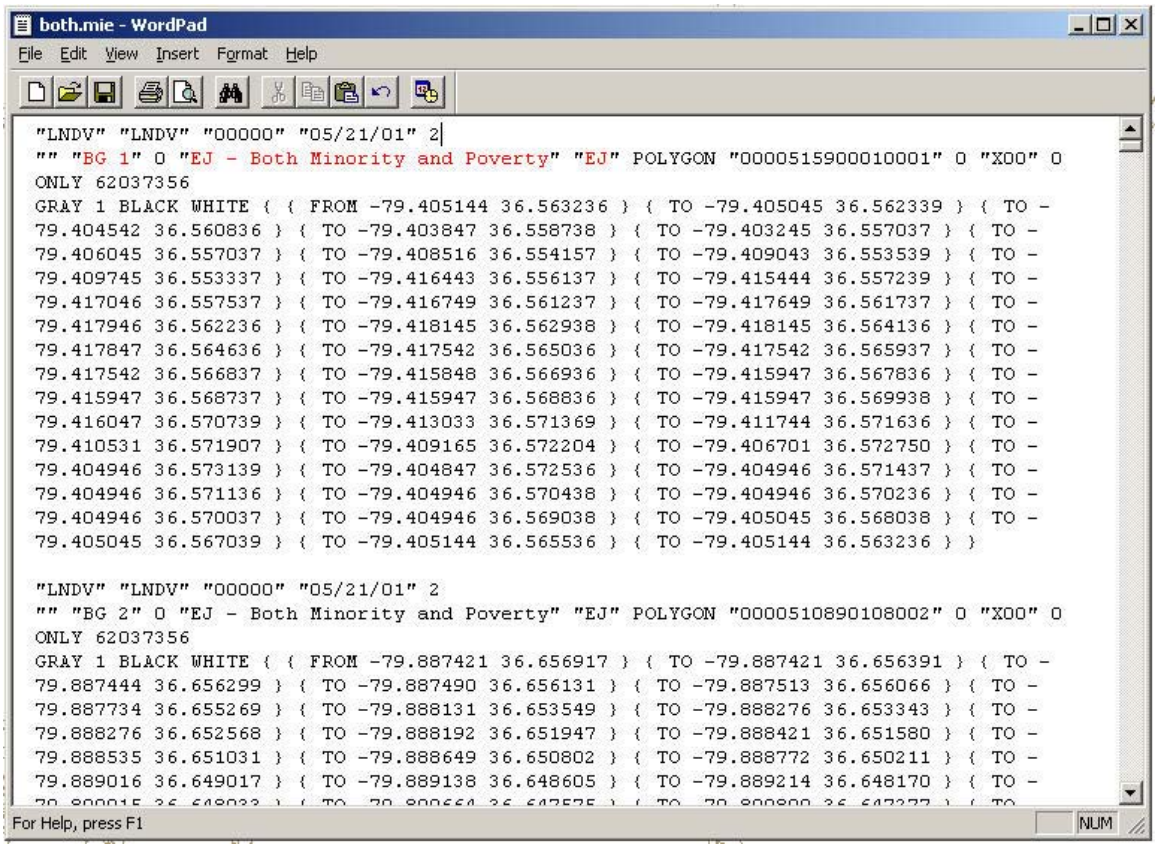


Figure B. The *both.mie* File Unedited

The first term, "BG 1" is the name of the map object, and this remains unchanged. The second term, "Census Block Groups" is the name of the layer containing the exported objects. The third term, "Census", is the name of the map containing the exported objects. We are about to edit this file, and, in the process, we will create a new file which, on MARPLOT Import, will recreate these map objects on a new layer and a new map.

With **Census Block Groups** in Select mode, open the **Edit/Find/Replace** dialogue. The '**Find what:**' is automatically entered. For '**Replace with:'**, enter **EJ – Both Minority and Poverty**. The process is easier if your work completely inside of the quotation marks, which must remain. When ready, do a **Replace All**.



```
"LNDV" "LNDV" "00000" "05/21/01" 2
"" "BG 1" 0 "EJ - Both Minority and Poverty" "EJ" POLYGON "0000515900010001" 0 "X00" 0
ONLY 62037356
GRAY 1 BLACK WHITE { { FROM -79.405144 36.563236 } { TO -79.405045 36.562339 } { TO -
79.404542 36.560836 } { TO -79.403847 36.558738 } { TO -79.403245 36.557037 } { TO -
79.406045 36.557037 } { TO -79.408516 36.554157 } { TO -79.409043 36.553539 } { TO -
79.409745 36.553337 } { TO -79.416443 36.556137 } { TO -79.415444 36.557239 } { TO -
79.417046 36.557537 } { TO -79.416749 36.561237 } { TO -79.417649 36.561737 } { TO -
79.417946 36.562236 } { TO -79.418145 36.562938 } { TO -79.418145 36.564136 } { TO -
79.417847 36.564636 } { TO -79.417542 36.565036 } { TO -79.417542 36.565937 } { TO -
79.417542 36.566837 } { TO -79.415848 36.566936 } { TO -79.415947 36.567836 } { TO -
79.415947 36.568737 } { TO -79.415947 36.568836 } { TO -79.415947 36.569938 } { TO -
79.416047 36.570739 } { TO -79.413033 36.571369 } { TO -79.411744 36.571636 } { TO -
79.410531 36.571907 } { TO -79.409165 36.572204 } { TO -79.406701 36.572750 } { TO -
79.404946 36.573139 } { TO -79.404847 36.572536 } { TO -79.404946 36.571437 } { TO -
79.404946 36.571136 } { TO -79.404946 36.570438 } { TO -79.404946 36.570236 } { TO -
79.404946 36.570037 } { TO -79.404946 36.569038 } { TO -79.405045 36.568038 } { TO -
79.405045 36.567039 } { TO -79.405144 36.565536 } { TO -79.405144 36.563236 } }

"LNDV" "LNDV" "00000" "05/21/01" 2
"" "BG 2" 0 "EJ - Both Minority and Poverty" "EJ" POLYGON "0000510890108002" 0 "X00" 0
ONLY 62037356
GRAY 1 BLACK WHITE { { FROM -79.887421 36.656917 } { TO -79.887421 36.656391 } { TO -
79.887444 36.656299 } { TO -79.887490 36.656131 } { TO -79.887513 36.656066 } { TO -
79.887734 36.655269 } { TO -79.888131 36.653549 } { TO -79.888276 36.653343 } { TO -
79.888276 36.652568 } { TO -79.888192 36.651947 } { TO -79.888421 36.651580 } { TO -
79.888535 36.651031 } { TO -79.888649 36.650802 } { TO -79.888772 36.650211 } { TO -
79.889016 36.649017 } { TO -79.889138 36.648605 } { TO -79.889214 36.648170 } { TO -
```

Figure C. The Edited *both.mie* File

Similarly, replace **Census** with **EJ**, the name of our new map containing the EJ layer set. We have now edited the MIE file to create both a new layer name and a new map name for each Census Block Group. The edited file is shown in Figure C.

Save and **Close** the file. Do a **File/Import . . .**

This same process must be completed for each of the identified MIE files. The table below provides the parameters needing for creating the Found Sets for each layer to be created in MARPLOT. As an absence of population within a Census Block Group can skew set definitions, the Zero Population search needs to be included. An examination of the separate layer definitions will show that all possible cases are included. The total objects on all layers should equal the total of Census Block Groups within the State.

MARPLOT Layer	Population	Minority	Poverty	File Name
EJ – Both Minority and Poverty	> 0	<50.00	>20.00	*both.mie*
EJ – Minority Only	>0	<50.00	<=20,00	*minority.mie*
EJ – Poverty Only	>0	>=50.00	>20.00	*poverty.mie*
EJ – No CBGs meet Tests	>0	>=50.00	<=20.00	*no test,mie*
EJ – Zero Population	0			*zero.mie*

Table A. Parameters Defining the Contents of Each EJ Layer

When all edited MIE files have been **Imported** back into MARPLOT, **Open List/Layer List . . .** You should show the five newly created layers grouped alphabetically under "EJ". You can create a new **Group** called **Environmental Justice** and move the layers into the Group. Use the **Graphic Override** mode, blue-blue, to customize the layers as shown in Figure D.

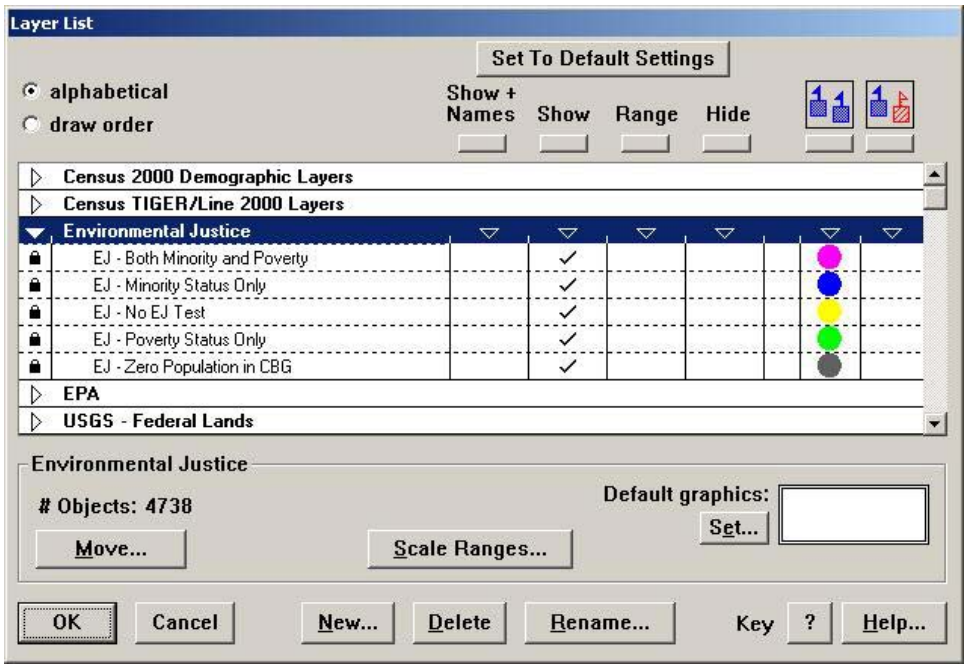


Figure D. The Environmental Justice Layer Group

When all files in the Group are place in **Show** mode, we can return to the MARPLOT screen with a Thematic representation of Environmental concerns in the State of Virginia. This is shown in Figure E.

Aside from creating a thematic map display for the State of Virginia, we have accomplished a second purpose which can be just as valuable as a technique. We can now go to any mapped point in the State of Virginia and immediately tell if that site is an Environmental Justice concern. In List/Layer List . . . , place the list in Draw Order and move all Environmental Justice layer to the bottom of the draw order. We can place these layers in Hide mode and do an Address Search. On plotting the address to the map, we now place the Environmental Justice layers in Show mode. From the position of the Focus Point and the EJ image underlying it, we know immediately if the site is a concern.

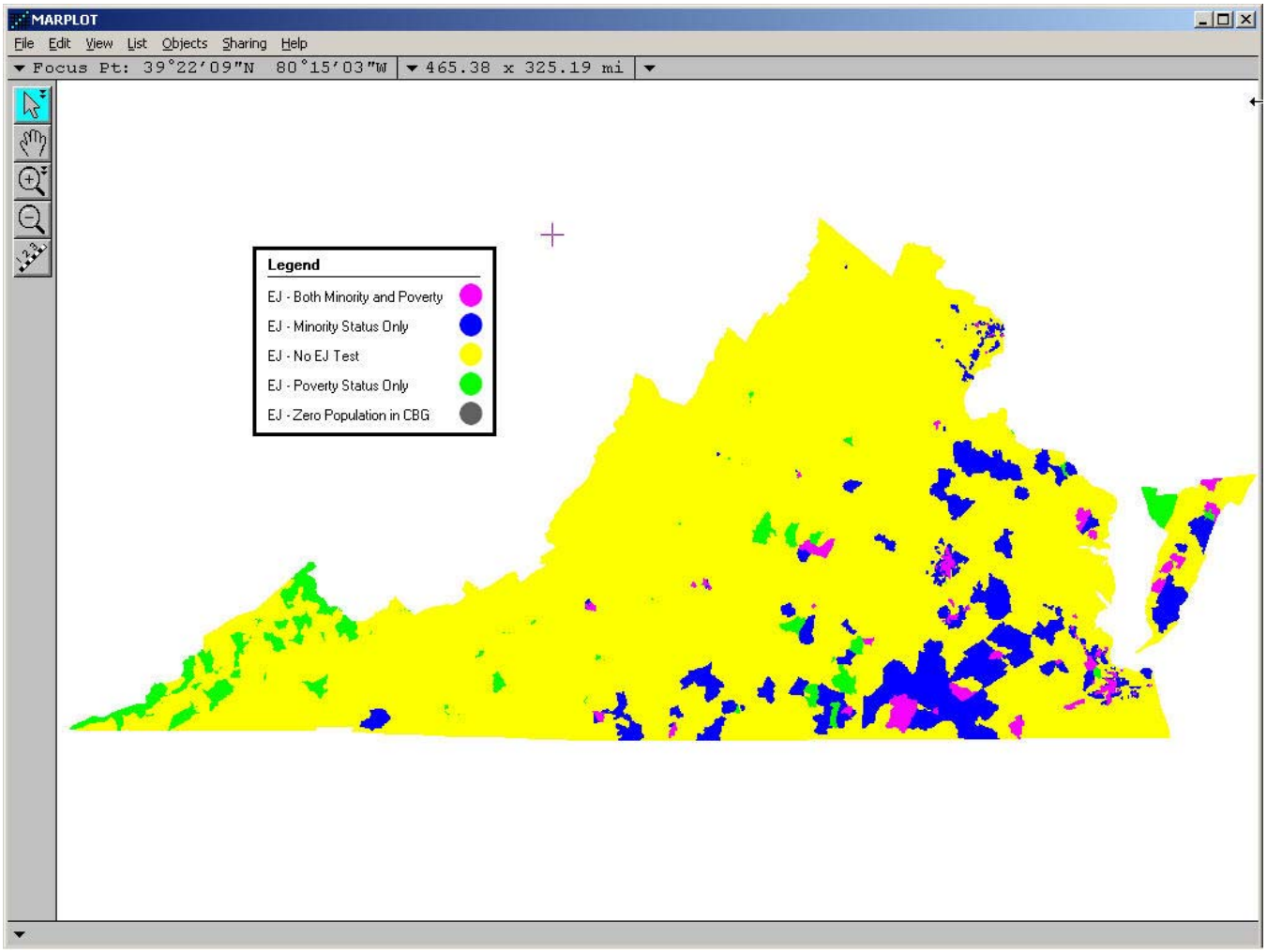


Figure E. A Thematic Map of Environmental Justice Concerns for the State of Virginia

The following is an example of extracting Lat/Long data from a larger polyline or polygon to create a new map object.

Populated Coastline Methodology

Problem: Determine the population living within five miles of the Florida coastline defined by the Latitude/Longitude pairs—27.455, -80.280 and 28.144, -80.581.

1. Create a new MARPLOT layer called "Florida Coastline". Creating a new layer places the layer in active mode with the map drawing tools available. Use MenuBar View/Go to Lat/Long . . . to go to point defined by the initial Latitude/Longitude pair at scale of 10 miles. Mark the point. Create a new arbitrary four point polyline called, "Coastline 27.455, 80.280", Color = pink and Line = double. Export the object as *coastline.mie*. After exporting, the polyline can be deleted. It has served its purpose of creating a shell to contain lat/long data that will be obtained in the next step.

2. In the general area of the marked point, select the closest segment on the polygon object that defines Florida. Using Objects/Object Segments . . . , determine the number that identifies the segment. In this case, it is segment 2125 0f 3796 segments. Similarly, locate the segment number closest to the second latitude/longitude pair. It is segment 2066. This means that the series of lat/long pairs that define the Florida polygon proceed from Segment 2066 in order to Segment 2125. We have established the text order in the MIE file for Florida.

2. Export the State of Florida as *florida.mie*. Open the file with WordPad. The following process is somewhat easier if Word Wrap is turned on. Use Edit/Find to find, "28.14"[1]. Your initial Find may not match the designated lat/long pair Use 'Find Again' (F3) to scroll through the latitude/longitude pairs until a best match is found. Use Format/Fonts to place this found vertex in **Bold** text for easy recognition. Similarly locate, "27.45" and its best matched lat/long pair.. Place this vertex in **Bold**. Ignoring that part of the text that reads, "**{ To** ", select the text bounded by the two **Bolded** texts and do a 'Copy'. This graphic is shown below.

3. Open *coastline.mie* with WordPad. Select and delete all latitude/longitude data immediately following the text, "**From** ". Do not include the final bracket as, " **}**". Replace this selected text with the text as copied in Paragraph 2., above. This is shown below. Save the edited document.

4. Import the edited *coastline.mie* into MARPLOT. This is shown below.

5. With this new coastline polyline in 'Select' mode, use Edit/Make New Polygon . . to create a new polygon of radius "5 miles" about the polyline. This polygon can be used to capture containing Census Blocks and to determine population information in LandView. The new coastline polygon resides on the Temporary

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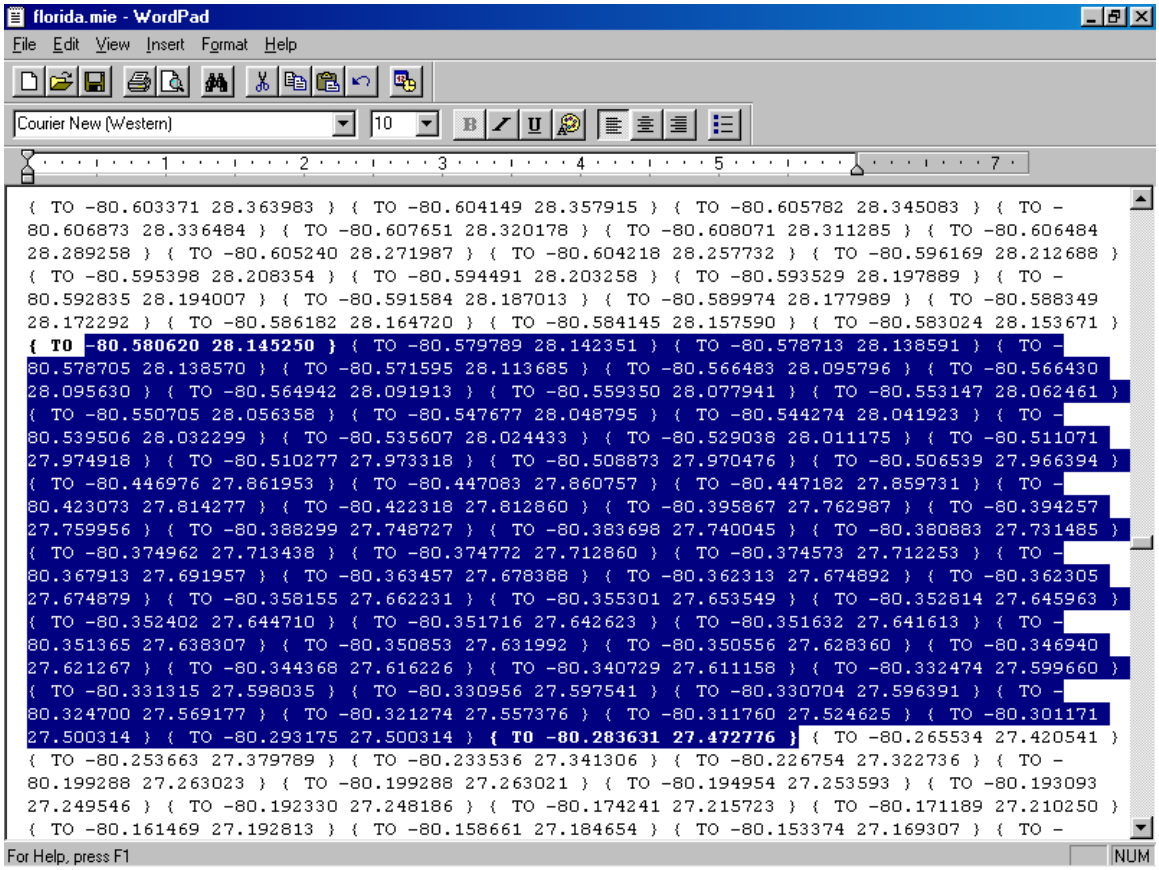
[1] While our initial search is for Latitudes defined to two decimal places, we could be told that this value is not 'found'. It could be necessary to expand our search up or down by several hundredths. In this case, we would expand our search to 28.15 and/or 2813.

layer in MARPLOT. If it is to be saved for future reference, it needs to be moved to a permanent layer.

6. The answer, as shown below, is 263, 746.

7. This method can be applied to saving a portion of any larger polygon/polyline as a new polyline.



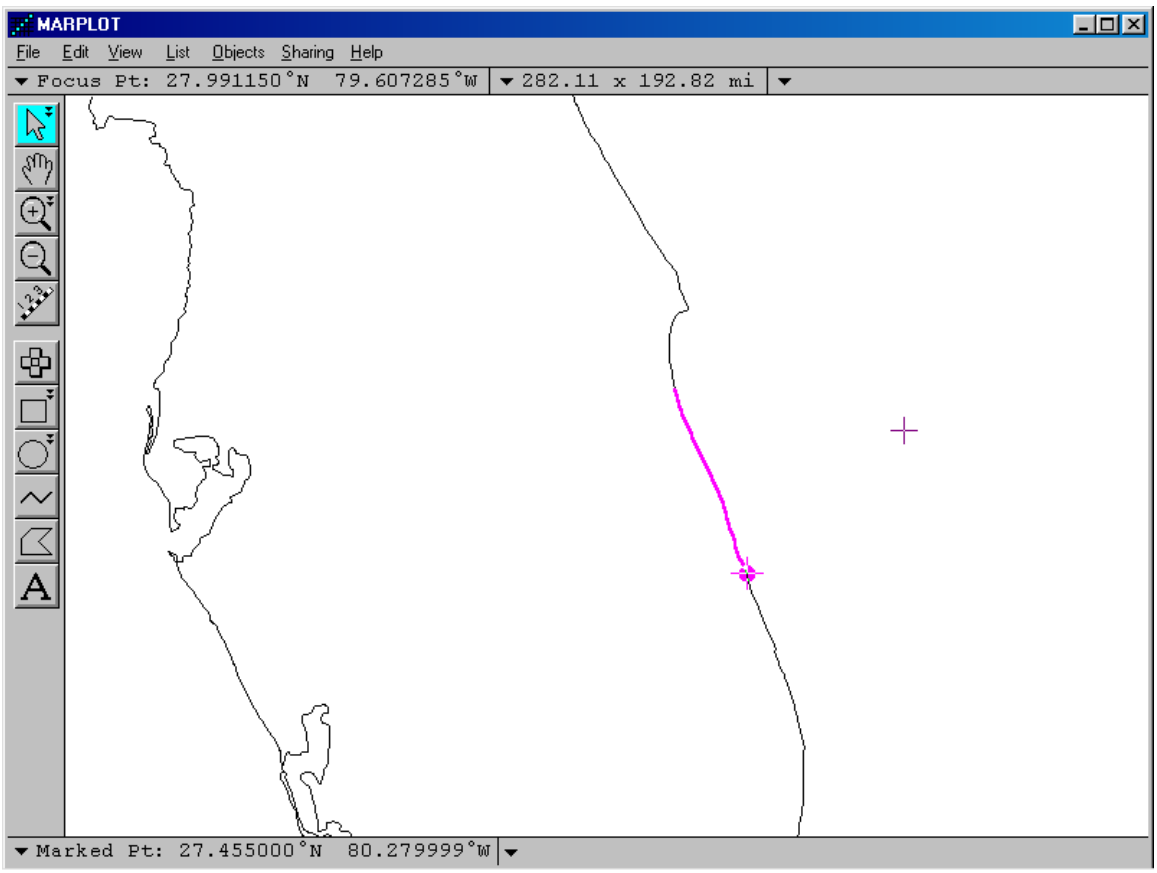
Select and Copy the **Bolded** Text

```
"USER" "USER" "00000" "06/12/03" 2
"" "Coastline 27.455, 80.280" 0 "Coastline" "User's Map" POLYLINE "BB0DE01E60FB0001" 1263771
"X00" 0 ONLY 16777216
PINK 2 BLACK WHITE { { FROM -80.350114 28.266390 } { TO -80.094485 28.034531 } { TO -79.784322
28.157989 } { TO -79.630944 28.432004 } }
```

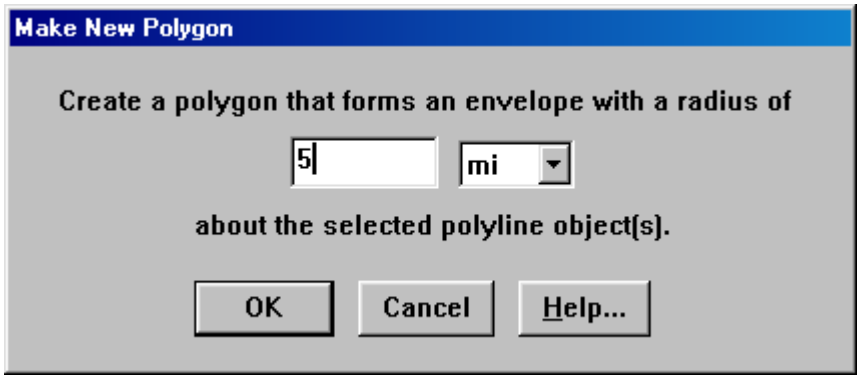
Replace the lat/long data in the Shell file with the Extracted Data from Florida

"USER" "USER" "00000" "06/12/03" 2
"" "Coastline 27.455, 80.280" 0 "Coastline" "User's Map" POLYLINE "BB0DE01E60FB0001" 1263771
"X00" 0 ONLY 16777216
PINK 2 BLACK WHITE { { FROM **-80.580620 28.145250 }** { TO -80.579789 28.142351 } { TO -80.578713
28.138591 } { TO -80.578705 28.138570 } { TO -80.571595 28.113685 } { TO -80.566483 28.095796 }
{ TO -80.566430 28.095630 } { TO -80.564942 28.091913 } { TO -80.559350 28.077941 } { TO -
80.553147 28.062461 } { TO -80.550705 28.056358 } { TO -80.547677 28.048795 } { TO -80.544274
28.041923 } { TO -80.539506 28.032299 } { TO -80.535607 28.024433 } { TO -80.529038 28.011175 }
{ TO -80.511071 27.974918 } { TO -80.510277 27.973318 } { TO -80.508873 27.970476 } { TO -
80.506539 27.966394 } { TO -80.446976 27.861953 } { TO -80.447083 27.860757 } { TO -80.447182
27.859731 } { TO -80.423073 27.814277 } { TO -80.422318 27.812860 } { TO -80.395867 27.762987 }
{ TO -80.394257 27.759956 } { TO -80.388299 27.748727 } { TO -80.383698 27.740045 } { TO -
80.380883 27.731485 } { TO -80.374962 27.713438 } { TO -80.374772 27.712860 } { TO -80.374573
27.712253 } { TO -80.367913 27.691957 } { TO -80.363457 27.678388 } { TO -80.362313 27.674892 }
{ TO -80.362305 27.674879 } { TO -80.358155 27.662231 } { TO -80.355301 27.653549 } { TO -
80.352814 27.645963 } { TO -80.352402 27.644710 } { TO -80.351716 27.642623 } { TO -80.351632
27.641613 } { TO -80.351365 27.638307 } { TO -80.350853 27.631992 } { TO -80.350556 27.628360 }
{ TO -80.346940 27.621267 } { TO -80.344368 27.616226 } { TO -80.340729 27.611158 } { TO -
80.332474 27.599660 } { TO -80.331315 27.598035 } { TO -80.330956 27.597541 } { TO -80.330704
27.596391 } { TO -80.324700 27.569177 } { TO -80.321274 27.557376 } { TO -80.311760 27.524625 }
{ TO -80.301171 27.500314 } { TO -80.293175 27.500314 } **{ TO -80.283631 27.472776 }** }

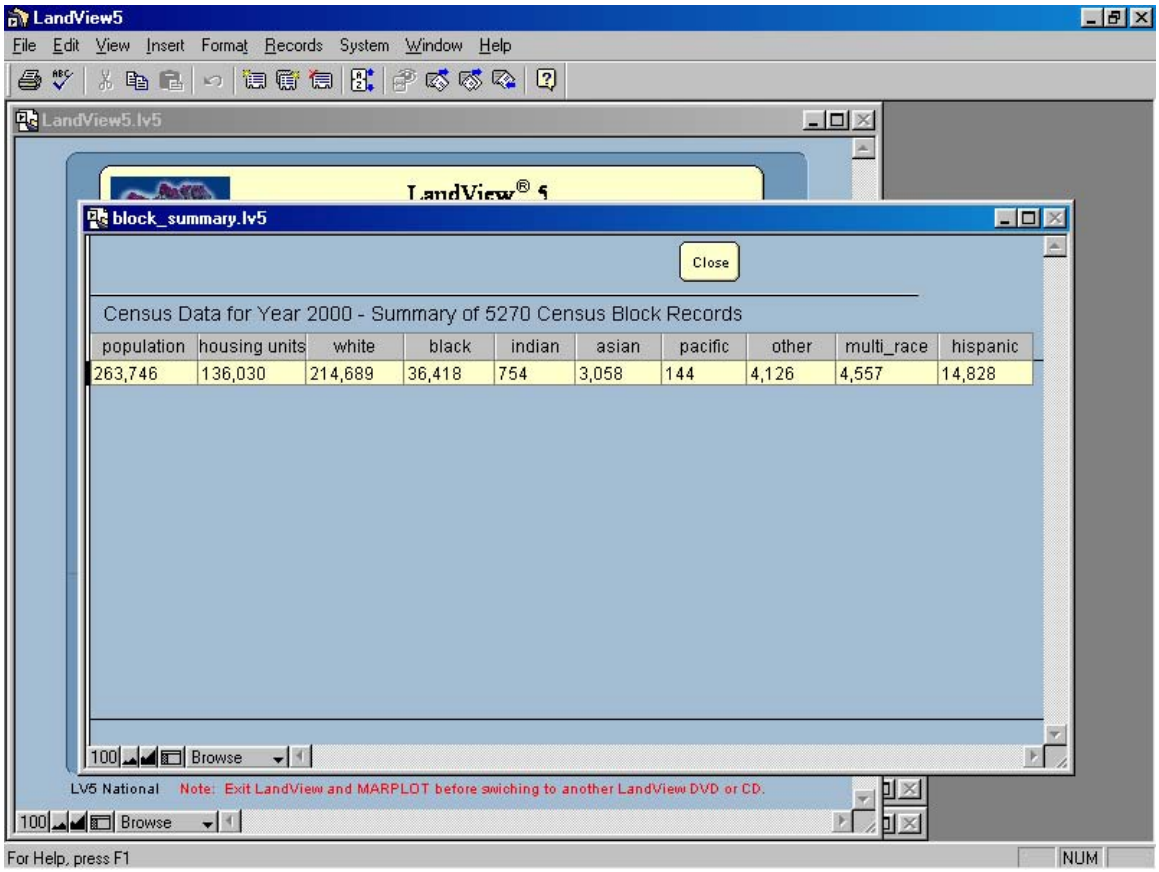
The Edited MIE File to be imported back into MARPLOT



The Coastline map object super-imposed on the Florida State Boundary Object



Making the polyline Coastline Map Object into a Polygon



LandView Population Statistics from Block Points within the Coastline Polygon

Other Population Searches Defined in MARPLOT

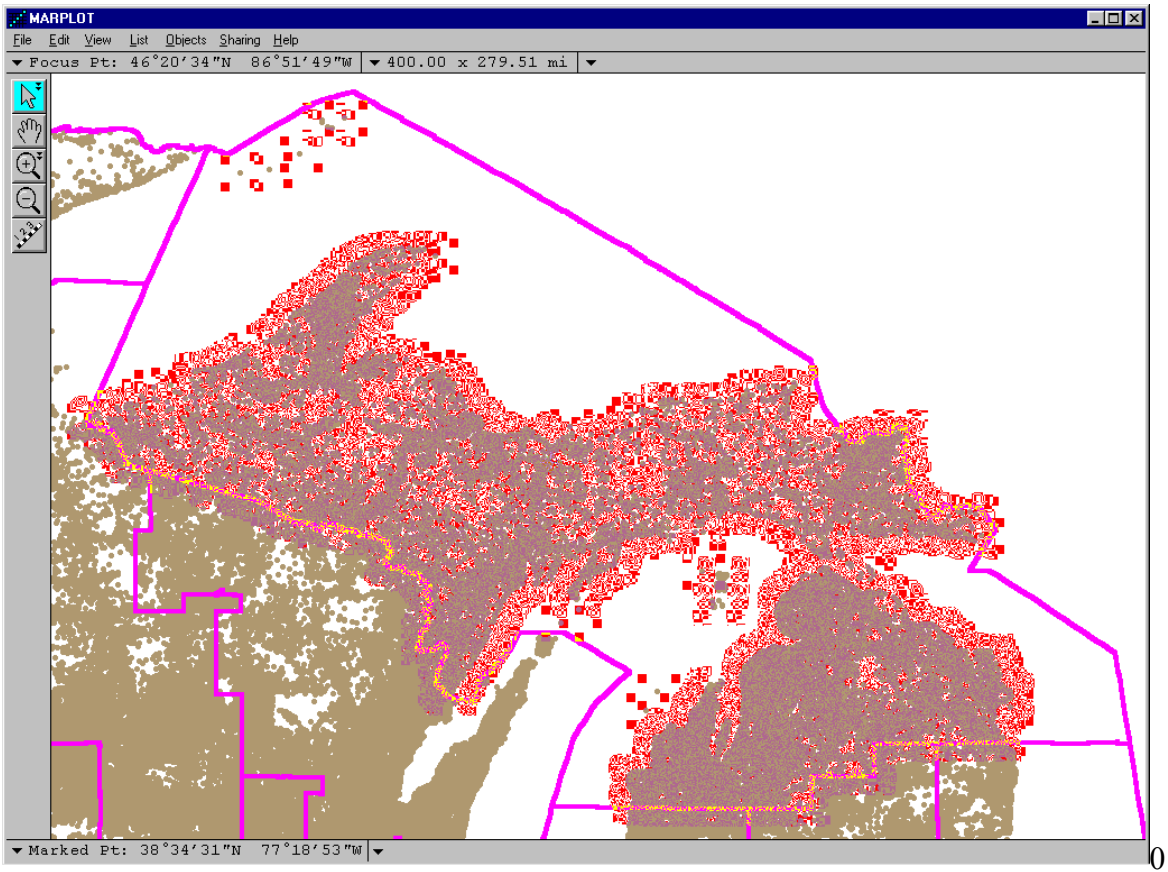
LandView 6 provides two search methodologies for populations around a point─using Census Block points, the most exact population count, and using Census Block Group polygons, for richer demographics. However, there are other population search concerns, and these can be addressed by identifying the area of concern in MARPLOT and using MARPLOT/LandView Sharing functionality to create a population profile. Some examples . . .

Census Block Points within a Defined Polygon

As published, most polygon objects in MARPLOT are already linked to defined population profiles in LandView, but there are exceptions. For example, MARPLOT includes boundary files for both the 106th and the 108th Congressional Districts. Only the 108th Congressional District boundary files─those currently in place and prevailing until after the 2010 Decennial Census─are linked to LandView population data. If we wished to compare the present population of, say, the 1st Congressional District in Michigan with its boundary population as it existed at the time of the 2000 Decennial Census, we would initiate our search in MARPLOT.

In **List/Search . . .** , the search would be for, "Names that start with MI-01 on the Individual Layer, Congressional Districts (106th), on Maps in View". With this object highlighted in the Search Collection, use **Show on Map and Zoom**.

With the object in **Select** mode on the map screen, a second search can be initiated. This time the search definition is as follows, "Objects that are inside of or touched by the currently selected object on the Individual Layer, Census Block Points, on Maps in View". With the search completed, use **Show All on Map**. The Search Collection is transferred to the map screen in Select mode, as shown below.



Use **Sharing/LandView/Get Info . . .** The record for each identified block point is **Found** in LandView. The first record is shown. A **Summarize** button summarizes the data for each data field. The Summarized data is as shown below.

Census Data for Year 2000 - Summary of 28589 Census Block Records									
population	housing units	white	black	indian	asian	pacific	other	multi_race	hispanic
639,161	359,404	600,770	6,775	17,056	2,659	173	1,931	9,797	6,478

0

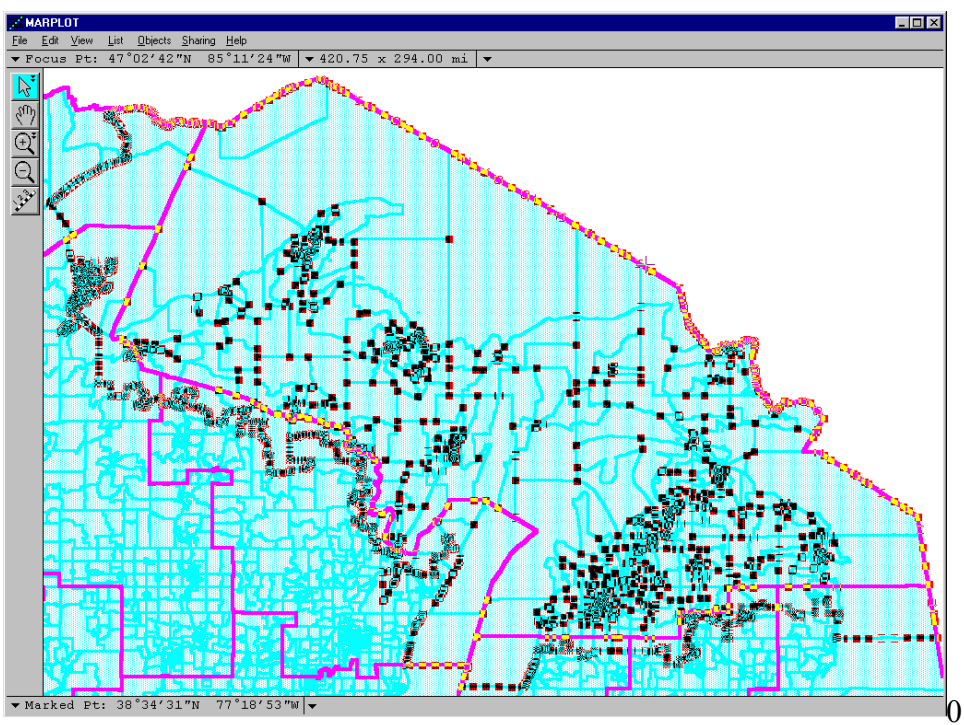
Demographic Data using Census Block Groups within a Defined Polygon

We will discuss two approaches to identifying Census Block Groups that define an impacted population Again we will use the 1st Congressional District of Michigan as our example. In each case, we will be identifying the centroid of area for selected Census Block Groups. In both cases, the principle is the same—for those Census Block Group polygons that lie across the boundary of the defining polygon, if the centroid lies within the defining polygon, it is counted, and if the centroid lies outside the polygon, it is not counted. On the average, plus and minus, the results should closely approximate an averaging of the demographics.

Our first approach requires manual selection . . .

Manual Selection and Deselection of Census Block Groups

After placing MI-01 in Select mode, we mimic the second search above. Our search is for, "Objects that are inside of or touched by the currently selected object on the Individual Layer, Census Block Groups, on Maps in View". Again **Show All on Map**. The task of deselection will be easier if first we use **the 'Blue-Blue' Graphic Override** mode in **List/Layer List . . .** to change the display of our two layers of concern. Set the display of Census Block Groups to, say, blue and the fill to a light crosshatch. Set the display of the Congressional Boundaries to another color, say, pink. It will also be necessary to change to **Draw Order** mode and **Move** the Congressional Boundaries to the **Top**. Returning to the map screen, your view should appear as below.

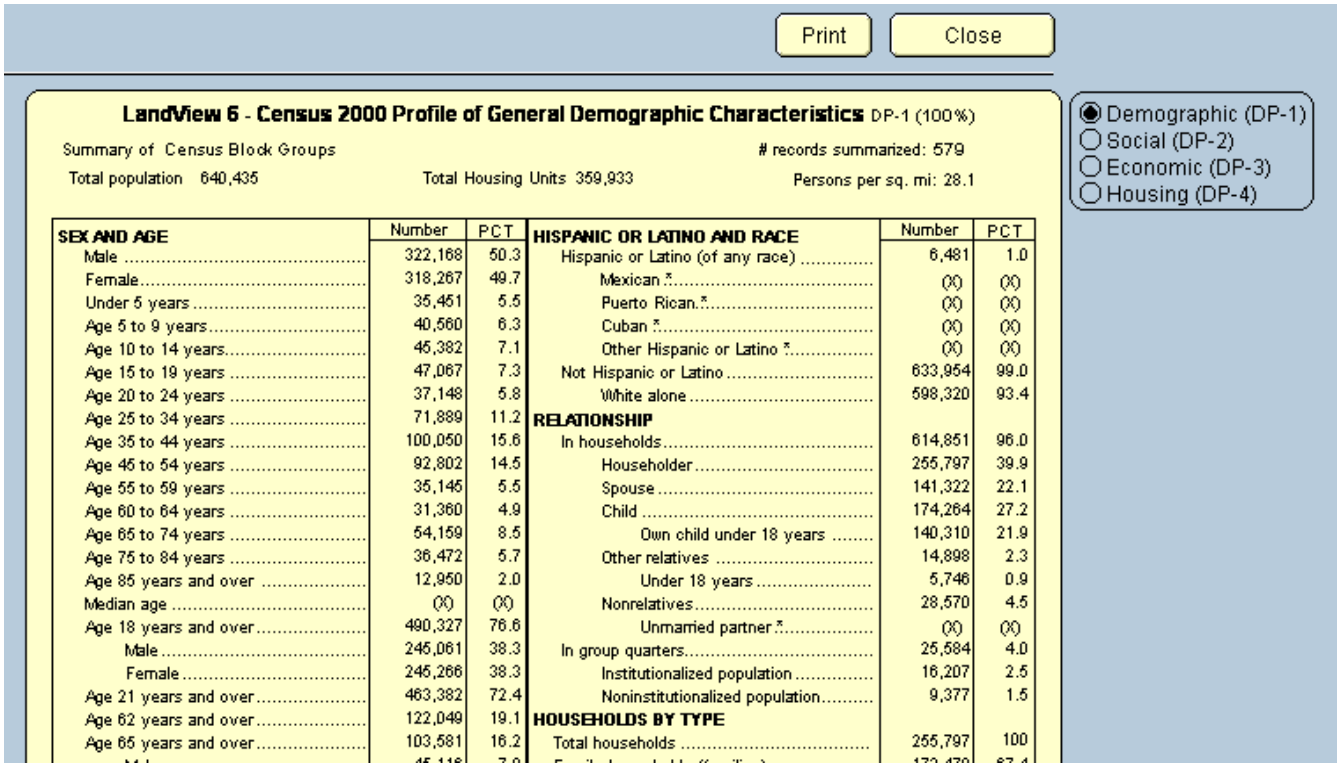


0

At this point, it would be useful to use the **Plus Magnifying Glass** to drag a map window of

about 100 miles around the Census Block Group at the northwest corner of the Congressional District. As you deselect and/or select, use the **Hand Tool** to move around the periphery to a new area. Holding down the [Shift] key while clicking with the arrow tool allows multiple selection. **Deselect** the first polygon that lies outside the boundary of the defining polygon. If more than half its area lies outside, leave it unselected. If more than half it area appears to lie inside, reselect it. Move around the boundary until the Census Block Groups approximate the area within the defining polygon. For a polygon such as a Congressional District, planners attempt to match established geography. Only a minor number of Census Block Groups straddle the boundary, and only minor correction is needed.

Repeat **Sharing/LandView/Get Info . . .** LandView identifies related records in the DP-1 table. The first of 579 records is shown, and, again, **Summarize** is used to create the DP-1 profile record, below. Notice that the available profiles extend to the tables, DP-2 through DP-4.



LandView 6 - Census 2000 Profile of General Demographic Characteristics DP-1 (100%)

Summary of Census Block Groups — # records summarized: 579

Total population 640,435 — Total Housing Units 359,933 — Persons per sq. mi: 28.1

SEX AND AGE	Number	PCT
Male	322,168	50.3
Female	318,267	49.7
Under 5 years	35,451	5.5
Age 5 to 9 years	40,560	6.3
Age 10 to 14 years	45,382	7.1
Age 15 to 19 years	47,067	7.3
Age 20 to 24 years	37,148	5.8
Age 25 to 34 years	71,889	11.2
Age 35 to 44 years	100,050	15.6
Age 45 to 54 years	92,802	14.5
Age 55 to 59 years	35,145	5.5
Age 60 to 64 years	31,360	4.9
Age 65 to 74 years	54,159	8.5
Age 75 to 84 years	36,472	5.7
Age 85 years and over	12,950	2.0
Median age	(X)	(X)
Age 18 years and over	490,327	76.6
Male	245,061	38.3
Female	245,266	38.3
Age 21 years and over	463,382	72.4
Age 62 years and over	122,049	19.1
Age 65 years and over	103,581	16.2

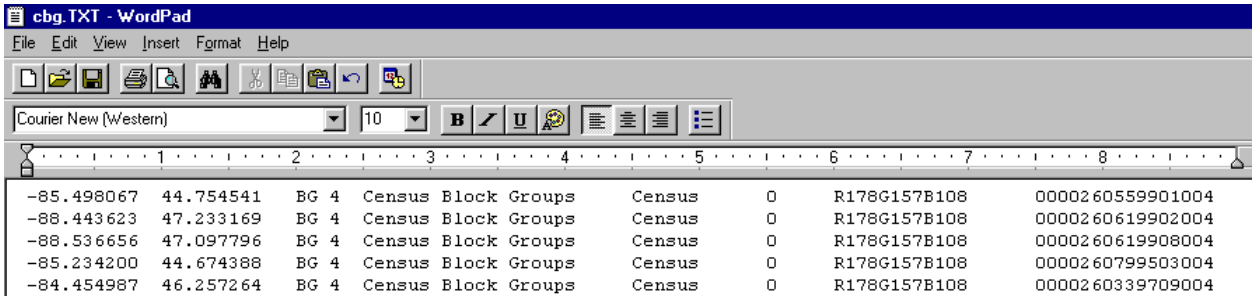
HISPANIC OR LATINO AND RACE	Number	PCT
Hispanic or Latino (of any race)	6,481	1.0
Mexican *	(X)	(X)
Puerto Rican *	(X)	(X)
Cuban *	(X)	(X)
Other Hispanic or Latino *	(X)	(X)
Not Hispanic or Latino	633,954	99.0
White alone	598,320	93.4
RELATIONSHIP		
In households	614,851	96.0
Householder	255,797	39.9
Spouse	141,322	22.1
Child	174,264	27.2
Own child under 18 years	140,310	21.9
Other relatives	14,898	2.3
Under 18 years	5,746	0.9
Nonrelatives	28,570	4.5
Unmarried partner *	(X)	(X)
In group quarters	25,584	4.0
Institutionalized population	16,207	2.5
Noninstitutionalized population	9,377	1.5
HOUSEHOLDS BY TYPE		
Total households	255,797	100

We will now repeat the above process, but we will let the computer identify those block groups inside and outside of the search area.

Computerized Selection and Deselection of the Census Block Groups

In MARPLOT, Census Block Groups are displayed as polygons, and these polygons are linked to LandView records. We can create a new layer that displays the centroids of these polygons. These centroids will not be linked to LandView data. To do this, we need to use MARPLOT's **Import** and **Export** functionality. We can do this for all Census Block Groups (a very time consuming) or we can do it only for the Search Collection identified above. We will use the latter approach.

Repeat the above Search for Census Block Groups inside of or touched by the polygon. Access **File/Export . . .** There are two available Export formats—a **MARPLOT Import/Export (MIE)** format[1] and a **Simple Point** format, which we will use. We can use the **Search Collection** option, and we can identify where we would like to temporarily store this file. We need to modify the file, and the text editor employed should not change its text characteristics. WordPad is suggested. The first lines of text are as shown below:




```
-85.498067  44.754541   BG 4  Census Block Groups     Census     0     R178G157B108     0000260559901004
-88.443623  47.233169   BG 4  Census Block Groups     Census     0     R178G157B108     0000260619902004
-88.536656  47.097796   BG 4  Census Block Groups     Census     0     R178G157B108     0000260619908004
-85.234200  44.674388   BG 4  Census Block Groups     Census     0     R178G157B108     0000260799503004
-84.454987  46.257264   BG 4  Census Block Groups     Census     0     R178G157B108     0000260339709004
```

The first two columns identify the longitude and latitude of the centroid point. The third column identifies an object name; the fourth—its layer name, and the fifth—its map name. We need to change the layer name, and we will do this with a global **Replace**. Use **Edit/Replace . . .** to replace "Census Block Groups" with "CBG Points". **Replace All**. **Save and Close**.

In MARPLOT, import the modified file. A new, searchable layer is created on the Census map. If we examine the layer in **List/Layer List . . .** , we would see that the layer contains 660 objects. Again place the 1st Congressional District in Select mode. Use it to search for, "Objects that are inside of or touched by the currently selected object on the CBG Points layer on Maps in View". The Search Collection shows 602 objects—Census Block Group centroids—inside the Congressional District. With **Show All on Map**, these are placed in Select mode and become new objects to define our next search, "Objects that are inside of or touching the currently selected objects on the "Census Block Group" layer on Maps in View".

Completing the Search, we find that only 539 Census Block Group objects have been captured!! A supposedly more exact methodology has given us an inferior result! Why? A close examination of Census Block Groups will show that they are very oddly shaped polygons. Many bear a close resemblance to a 'quarter moon' shape. If so, its centroid of area will fall outside of the polygon. An adjacent polygon will contain two centroids while the generating polygon contains none. Polygons that should be counted are not counted.

The Census Bureau when publishing point data is mindful of this and will manually reposition centroid points so that it lies inside of the generating polygon. As you can see, in this instance, such a task can be extremely tedious.

In general, the first methodology suggested, although seemingly less exact, will provide a more exact result.

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[1] The MIE format provides all information necessary to recreate the complete map object, including polyline and polygon boundary files. The Simple Point format provides only enough information to recreate the object as a single point—its centroid. For example, in some views, we would like to see the boundaries of the City of Chicago. In others, our concern would be the relative location of Chicago and New York as point objects.

Other Polygon Objects

The **USGS − Federal Lands** layers in MARPLOT come without associated LandView data. Population data associated with these sites could be of interest to users.

A Unique Solutions article on identifying coastlines demonstrates searching for populations that are within a specified distance from a polyline object. A new polygon object is created that is an envelope or buffer zone around the polyline. An example of this might be determining populations within a half mile of a section of freeway, if noise pollution were a concern.

The ALOHA program, part of the CAMEO Suite of emergency planning and response programs, will generate a polygon representing the toxic zone downstream of a toxic gas release. The population residing in this zone is a concern to emergency managers needing to plan evacuation scenarios.

Creating and Organizing New MARPLOT Layers

MARPLOT, as included in LandView, comes with many layers of information—topological files of roads, railroads and rivers, boundary files for selected levels of Census geography, locational files of places included in the Geographical Names Information System and the physical locations of U. S. EPA regulated facilities. However, the ability to create and use new layers of geographical information of a user's own choosing markedly extends the functionality of the application.

First, let us examine two concepts—MARPLOT Maps and MARPLOT Layers. For each we will give two definitions . . .

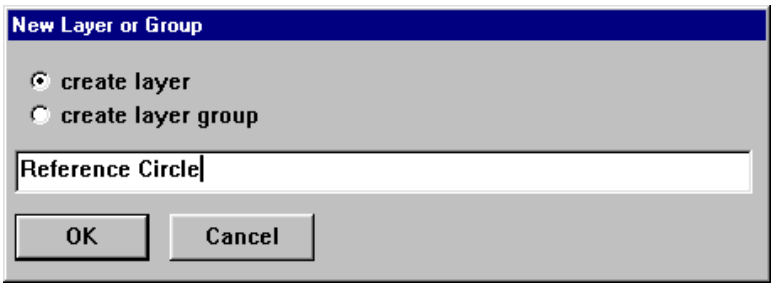
> A MARPLOT map as viewed on screen is the smallest rectangle, defined by latitude and longitude, that will contain all features assigned to the map. A map defining the State of Pennsylvania would touch the left and right of the display screen. A map of Illinois would touch the top and bottom of the screen.
>
> As computer data available to MARPLOT, a map is a directory that contains a *name.map* file. If this directory is nested in the same directory and at the same level as the *marplot.exe* executable file, the map is immediately available to MARPLOT. Otherwise, MARPLOT needs to be provided with a path statement. LandView provides this statement with the *marplot.vnx* file. Users can point to new maps with the **Find New Map** button located in MARPLOT's **List/Map List . . .** dialogue.
>
> A MARPLOT layer is a container for MARPLOT map objects—normally points, (poly)lines and polygons, but a layer can contain circles, rectangles and text. A layer can be displayed independently of other layers or in conjunction with other layers to provide additional context. Normally, objects on a layer are associated by a common theme.
>
> As computer data available to MARPLOT, layers are defined by one or more sets of three similarly named files contained in one or more MARPLOT map directories. Generically, these files are *name.lyr*, *name.obj* and *name.sum*.

A map can contain many layers—the Census map contains layers representing each layer of Census geography. The same layer can be contained on many maps—each County map in MARPLOT contains a Roads layer. It is not necessary for a map to contain layer files—a map directory with a *name.map* file is still a map though it contains no layer files. A layer need not contain any map objects—MARPLOT independently tracks available layers and available maps. As new map objects are created, they must be assigned to both an available layer and an available map. MARPLOT has no prohibition against mixing types of map objects on a layer. The same layer can contain a mix of points, polylines and polygons.

While new map objects can be added to existing maps and existing layers, it is generally not good practice to edit the data of others. New data should be assigned to new layers and/or new maps. MARPLOT contains a **User's Map** designed specifically to contain new data. A simple method for creating new maps will be discussed later in this article. First, let us address the creation of a new layer . . .

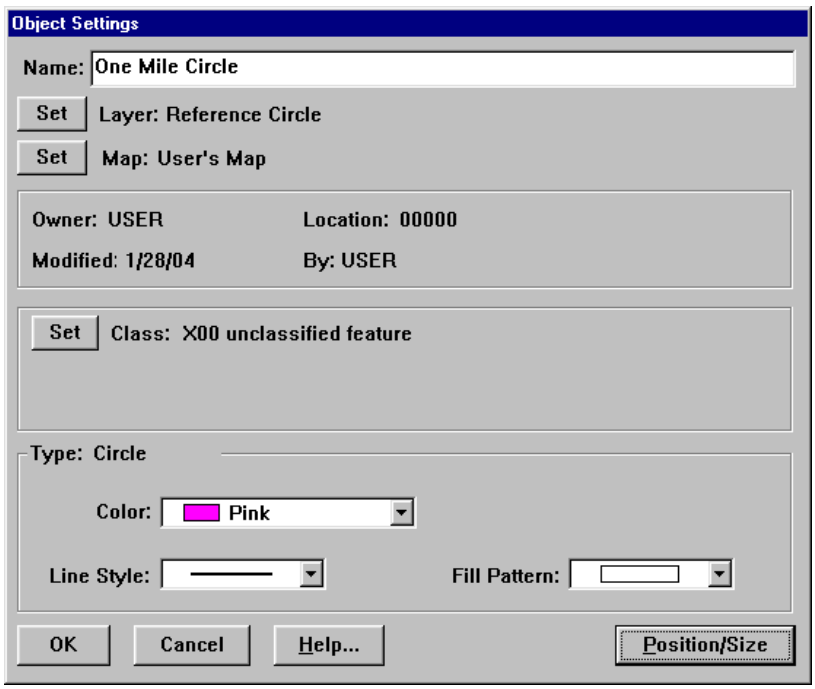
Creating a New Layer

In MARPLOT's **List/Layer List . . .** , a **New . . .** button has dual functionality—it allows creation of either a new layer or a new group[1]. We will illustrate the process by creating a layer containing a Reference Circle[2]. The dialogue box is displayed below.



On **OK**, a new layer, Reference Circle, appears in the Layer List in **unlocked** mode. New map objects can only be added to an unlocked layer. On returning to the MARPLOT display window, a set of map object drawing tools becomes available in the left margin, as displayed below.

Respectively, they are Point, Rectangle, Circle, (Poly)line, Polygon and Text. Since our objective is to create a reference circle, we need to select the Circle tool. Previously, we should have identified the location of the center point of the circle[3]. First, click on the Circle tool and, then, on the location of the map point. The circle needs to be drawn out to the desired radius, as displayed at the foot of the screen. On release of the mouse, a Map Object dialogue box opens that requires entering formatting information.



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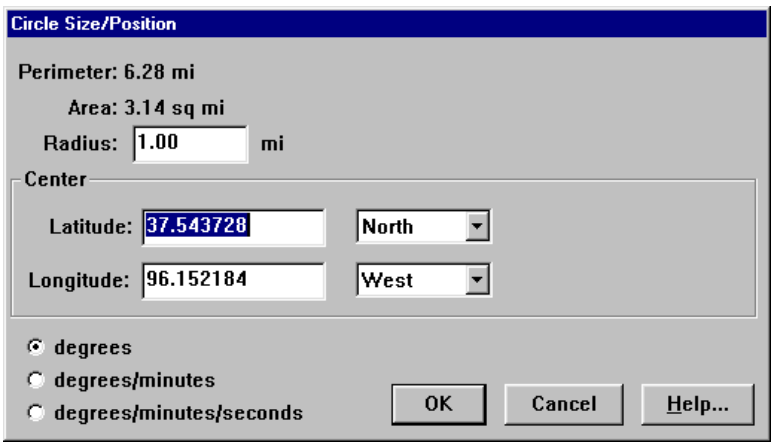
[1] As new layers are created, it is good practice to assign them to either an existing Group or to create a new group to contain them

[2] A Reference Circle can clarify other related information. For example, if we identify the population at a radius around a map point, a Reference Circle would identify road and river networks related to the population study.

[3] Techniques for plotting to a point in MARPLOT are not subjects of this article. Other Help files and the LandView Tutorial provide discussion.

We will call the object, “One Mile Circle”. Since only the new Reference Circle layer is unlocked, the name displays by default. If other layers were unlocked, a choice would have to be made. By default, the object is assigned to the User’s Map. We can now set the display attributes of the object; we have selected pink, a double-weighted line style and an empty fill pattern. It is not necessary to exercise extreme care when drawing the circle on the map; both the center point and radius can be adjusted by using the **Position/Size** button to open a new dialogue box, displayed below.



A More Complex Example

Let us say that you are a Company Environmental Manager tracking data for a number of plants across the country. You have several datasets—the locations of your several facilities, the end point distance for worst case scenarios relating to the accidental release of several chemicals in inventory at these facilities (these will become the radii for Circles of Vulnerability relating to the chemicals), end point distances for alternates release scenarios relating to these same chemicals, and the locations of environmental receptors (schools, hospitals, etc) that would cause special concern in the event of an accidental release.

There are a number of ways that the data can be displayed in MARPLOT, and informed users can elect different methodologies. For example, each dataset can be assigned to its own layer. However, a more practical approach might be to create individual layers for each plant and assign all data relating to the plant to the same layer. We will illustrate.

We will create three layers—Plant A, Plant B, and Plant C. Each facility has a worst case scenario and an alternate scenario for SO2 gas, for Chlorine and for Ammonia. For consistent object identity, we would say, e.g., Worst Case SO2, Alternate SO2, etc. Since the environmental receptors will be identified by their geographical locations, we need only say St. John’s School, Central Hospital, etc.

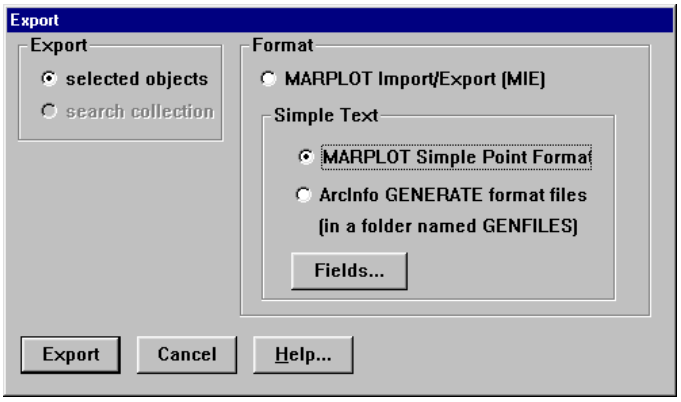
After the layers are created, it would be useful to group them under a new Group—**Company Facilities**[4]. The remaining data is plotted to the appropriate layers. For visual recognition, Worst Case Scenarios could be assigned the color, pink, and Alternate scenarios assigned the color, green. A number of symbols are available as MARPLOT fonts for identifying types of environmental receptors.

[4] One benefit of grouping layers is that alphabetically disparate layers are brought together instead of being scattered throughout the layer list.

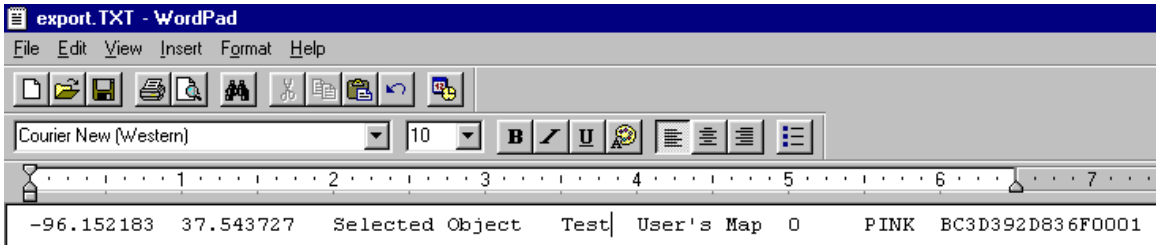
Creating a New Map

By default, all new map objects are assigned to the User's Map. This may be entirely appropriate, but, if other, unrelated, objects are also assigned to this map, their presence can complicate some MARPLOT searches. There are several methods for creating new maps, but the following method is particularly easy.

We will create a new map called "Company Facilities", as follows. Any map object in MARPLOT—point, line or polygon— can be placed in **Select** mode by mouse clicking. Using **File/Export . . .** , **Export** the object in **Simple Point Format**.



An Export file in Text format is created at a user designated location. Edit the file with a text editor. For PCs, WordPad is suggested, as it contains a number of text formatting capabilities, yet it retains the required text structure. The output file appears as below:



The first and second entries refer to the longitude and latitude of the object centroid. The third entry is the object name; the fourth, its containing layer; the fifth, its containing map. The last three entries are display and ID entries and can be ignored. Replace the Object name with "Object", the layer name with "Test" and the map name with Company Map.

On re-importing into MARPLOT, a new layer called "Test" is created on a new map called "Company Map". Using **List/Layer List . . .** , delete the new layer called "Test". This also deletes the unwanted new map object, but leaves an available new map directory nested in the directory containing the *marplot.exe* executable file. This is the map directory that should be used in creating the new layer objects.

Using the New Data

Effective use of MARPLOT data requires appropriate selections when using **List/Search . . .** in MARPLOT. We will present several examples, but, first, a principle . . .

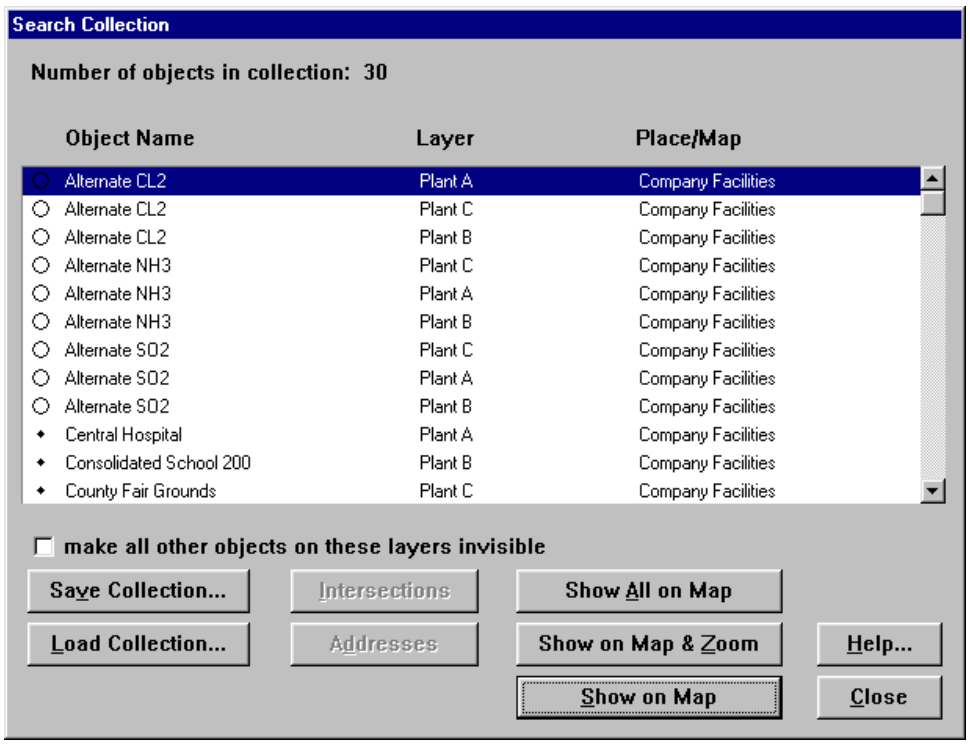
Every MARPLOT search is for one or more objects on one or more layers of one or more maps.

The MARPLOT search dialogue makes this easy. Pulldown menus in each category provide appropriate choices.

The simplest search is for all objects of a class. For the voluminous data available from LandView, this is not practical, but for the limited data in our example, it is ideal. The search is as follows:

Search for objects: “With Any Name”, Layer(s) to Search: “All Layers”, Map(s) to Search: “Selected Maps . . . ” “Company Facilities”

The results are as shown below. Note that by judicious selection of object names and layer names specific objects are easily identified. An object can be selected by scrolling the list. Once selected, the **Show on Map & Zoom** button places the object in Select mode on the map display window.

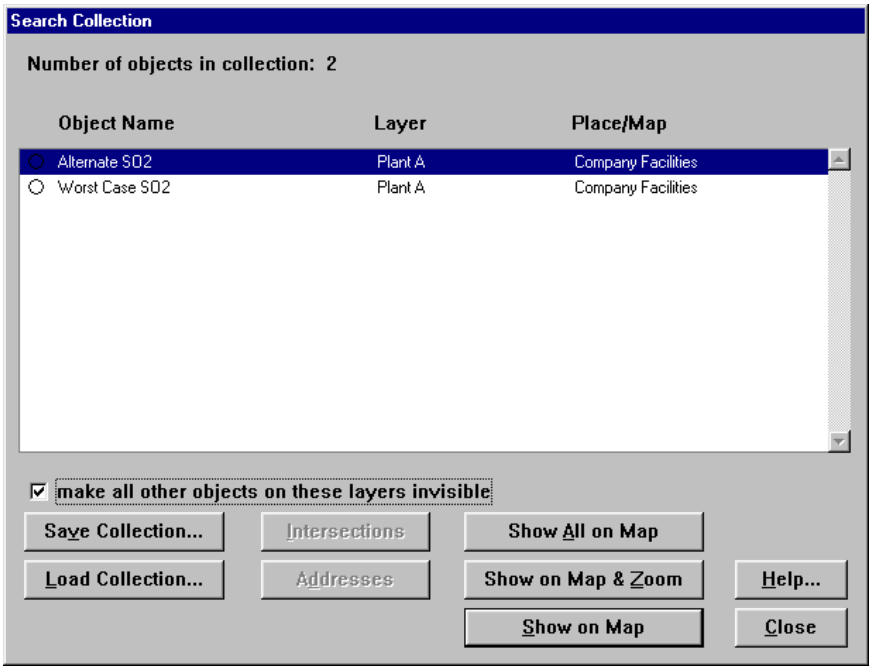


Perhaps we want to see all data related to Plant A. The search is as follows:

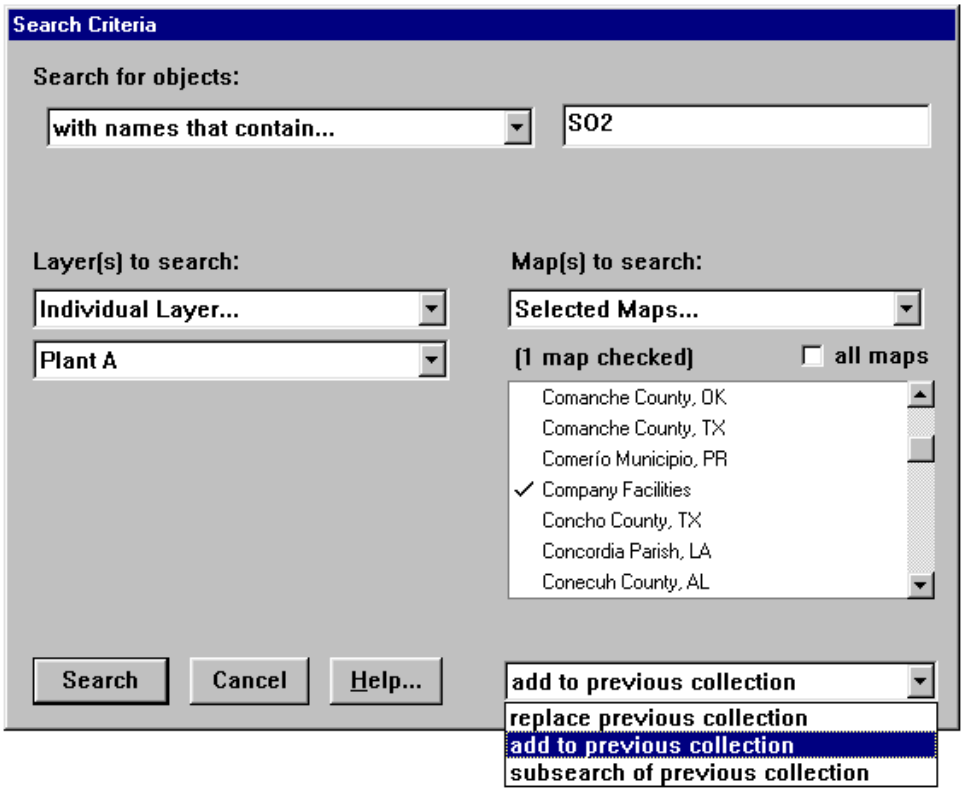
Search for objects: “With Any Name”, Layer(s) to Search: “Individual Layer” “Plant A”, Map(s) to Search: “Selected Maps . . . ” “Company Facilities”

A more likely search might be to show the risk potential for a particular chemical at a particular plant. We want to know the risks associated with SO2 at Plant A. The search is as follows:

Search for objects: “With names that contain . . . ” “SO2”, Layer(s) to Search: “Individual Layer” “Plant A”, Map(s) to Search: “Selected Maps . . . ” “Company Facilities”

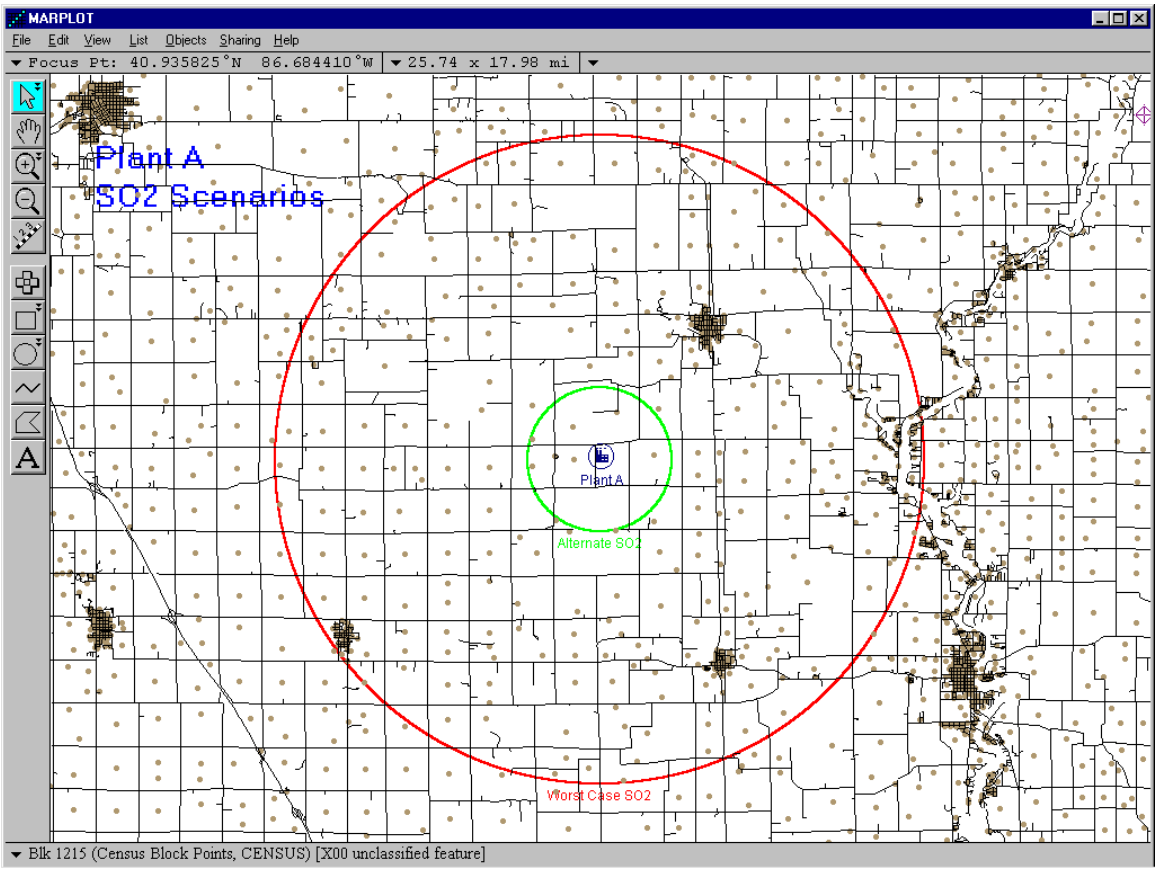


Using the **Show All on Map** button will place both the Alternate and Worst Case SO2 releases in Select mode. However, in this case, you will probably first want to 'check' the option to 'make all other objects on these layers invisible'. This will hide scenarios for CL2 and NH3. It will also hide the location of the facility. To show the facility location, it is necessary to use another built in bit of search functionality. It is necessary to institute a new search, as displayed in the following dialogue:



Note that choice of "add to previous collection" is the equivalent of the Boolean "or". A "subsearch of previous collection" is the Boolean equivalent of "and". Again, we will want to

hide unwanted objects on the layer. To provide additional context to the map display, in the following graphic, we have placed the Roads layers in display mode. Additionally, we have place the Census Demographic layer, Census Block Points, in display mode. This provides a visual display of census block points containing population or housing units.



Note that, additionally, we have unlocked the **Temporary** layer (in the Group—**Other**) to add an identifying text to the printout. We have also placed the displayed objects on the 'Plant A' layer into **Display** mode which shows identifying labels.

U.S. Census Bureau 10 Years on the Web

Viewing LandView® Data

When first opening a LandView database-either Census, EPA or USGS GNIS-records display in an unsorted format in **Form view**.

A Menu command, **Records/Sort** . . . , opens a dialogue box that will place records in sort order by an appropriate data Field. Often, this is sufficient to meaningfully examine a dataset.

A Roladex-type icon to the left of the LandView data screen, in an area known as the **Status Area**, allows scrolling through individual data records. A slide lever at the right of the icon permits rapid scrolling. Message displays in the Status Area tells whether **All Records** are available for viewing or whether the displayed records represent a **Found Set**. In either event, the number of records available for viewing is shown.

The data set in Form View can be viewed as a table by using the **View as a List** button at the top of the data screen.

In List View, at the left of each record is a small check box. Clicking here selects an individual record. When in List View, the **View as a List** button is replaced by **View as a Form**. Clicking on View as a Form returns the user to Form View with the selected record in display.

In LandView 6, the Census dataset has expanded dramatically from the 2000 Decennial Census data available for publication in LandView 5. In LandView 5, Census data was limited the demographic data known as Table DP-1 (a sub-set of data available in Census Summary File 1-SF1). In addition to the DP-1 table, LandView 6 adds the data in Tables DP-2 through DP-4-social, economic and housing data (a sub-set of the data in Census Sumary File 3). A set of tables DP-1 throught DP-4 summarized for the 50 States and the District of Columbia is known as the **National Profile**. A **National Profile** button at the top of each Census geography permits viewing the current dataset in relation to the National Profile.

The U.S. EPA database of regulated facilities show only limited data for each facility-facility name, locational information, assigned identifiers and the various EPA media programs under which each facility is regulated. However, with Internet access, much additional information is available for each facility. The **Web Link** button takes the user to EPA's **EnviroFacts Warehouse** to display a detailed regulation history for the displayed facility.

The USGS's **Geographic Names Information System** provides information on a broad database of geographic features, including feature names and feature types. The GNIS, however, is a relational database, and buttons provide additional descriptive and historical information, when available.

MARPLOT® Mapping Expands the Data in LandView

Each LandView record links to a geographic feature in MARPLOT. Identify one or more records in a LandView database and their geographic locations can display on a map. Similarly, MARPLOT map objects can be identified in a MARPLOT **Search**. Once identified, the information attributes of the **Search Collection** can be displayed in LandView.

However, this is only part of the LandView/MARPLOT story. Once map objects are identified either throught a LandView record search or a MARPLOT map search, their location vis-à-vis other map objects provides broad new information. What is the population living withing three miles of your home? Are there hazardous waste sites in proximity to your children's schools? What neighborhoods in your city, county or state meet a defined demographic profile?

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Geography Division
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