

# LandView®IV/The Federal Geographic Data Viewer


## Quick Tour

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**LandView®IV/The Federal Geographic Data Viewer**  
(for Windows® 95/98 and Mac) in DVD

**USCENSUSBUREAU**  
*Helping You Make Informed Decisions*

**U.S. Department of Commerce**  
Economics and Statistics Administration  
U.S. Census Bureau

 **TIGER inside.**

## LandView® IV Quick Tour

This document is designed to quickly introduce you to the LandView IV product and its capabilities.

At the end of this document, we provide further information on how to order this product as well as provide information on obtaining a fully functional demonstration copy of this software.

### What is LandView IV?

The LandView IV product contains both database management software and mapping software that:

- Presents detailed information for EPA-regulated sites and maps their locations.
- Maps point features from the U.S. Geological Survey's Geographic Names Information System (GNIS). The GNIS contains geographic names for all known populated places, features, and areas in the United States that are identified by a proper name.
- Maps a detailed network of major and minor roads, rivers, and railroads for the entire United States based on TIGER/Line® 1998 files.
- Presents 1990 Census demographic and socioeconomic data from the U.S. Census Bureau along with 1990 Census maps of legal entities (states, counties, cities & towns, and congressional districts) and statistical entities (such as census tracts and block groups).

LandView IV reflects the collaborative efforts of the U.S. Environmental Protection Agency, the U.S. Census Bureau, the U.S. Geological Survey, and the National Oceanic and Atmospheric Administration to produce a "Federal Geographic Data Viewer" that provides the public ready access to published Federal spatial and related data.

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

### LandView IV — Its Software Components

The LandView IV product contains two software programs — the **LV4 data viewer** and the **MARPLOT map viewer**. These two programs work in tandem to create a simple computer mapping system that can display individual layers of information that have location or "spatial" information associated with them. For example, the LV4 EPA "ENVIROFACTS" database shows information for a selection of EPA regulated sites, while the location of each site is stored in an individual MARPLOT map layer.

MARPLOT allows the user to access all or some of the spatial information stored in each layer. Layers can be shown or hidden to tailor the displayed information to a user's needs. For example, if only the EPA layer is shown, a user will only see EPA objects displayed. Without other layers in view, there is no context to see which roads or rivers or cities are nearby. By showing other relevant layers, a user can create a map that displays the layers of interest. One analogy frequently used to describe the "layer" concept is that layers can be thought of as a series of transparent sheets that are overlaid one a top of each other, so that each layer is visible either above or below the others. The power of the MARPLOT software lies in the user's ability to customize the map view to display only the layers of interest, as well as specify the desired scale for the map view and then use LV4 to get further information regarding the map objects.

### **LandView IV Minimum System Configuration**

*Note: LandView IV 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.*

The minimum system configuration required:

#### ***Hardware Requirements:***

- Intel compatible Pentium-class computer or later or Power Macintosh or Mac OS computer with a PPC 601 processor or higher
- 16MB RAM required
- CD/DVD-ROM drive
- Hard disk drive with 12MB of free hard disk space
- VGA color display

#### ***Software Requirements:***

Windows 95\* (Requires Internet Explorer 4.0 or later. See note below for details), Windows 98 or Windows NT 4.0 (Service Pack 3), System 7.6.1 or later for MAC

\* There are two required DLL files, Shfolder.dll and Comctl32, that need to be installed separately on the user's hard disk. These DLLs are automatically installed by Windows NT 4.0 with Service Pack 3 and by Internet Explorer 4.0 or later.

If these DLL files are not up-to-date or missing, the LV4 program module will not run. Instead you will receive the following error message. "FilemakerPro could not be launched because of incorrect installation, missing system components or insufficient memory. Please see the FilemakerPro documentation."

If you experience the problem mentioned above, you will need to obtain and install Internet Explorer from the Microsoft web site at [www.microsoft.com](http://www.microsoft.com). When you install Internet Explorer 4.0 or higher, the DLL files are updated so that LandView IV can run.

## What Can LandView IV Do For Me?

1. **Access and Query Published Federal Databases** -You can access information from the EPA Envirofacts, U.S. Geological Survey Geographic Names Information System, or 1990 Census databases. After locating a record of particular interest, you can then map its location.

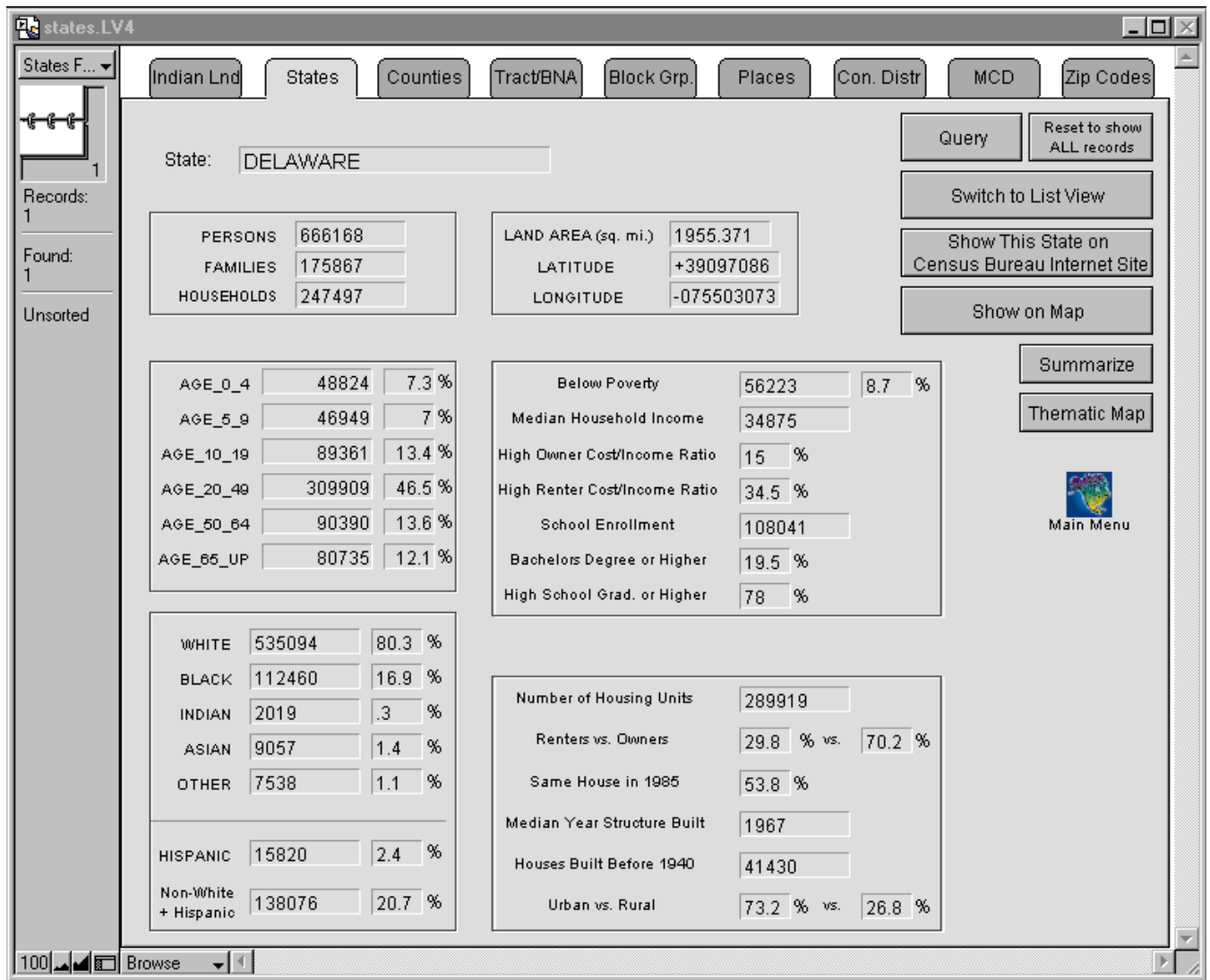


Figure 1 — 1990 Census Data

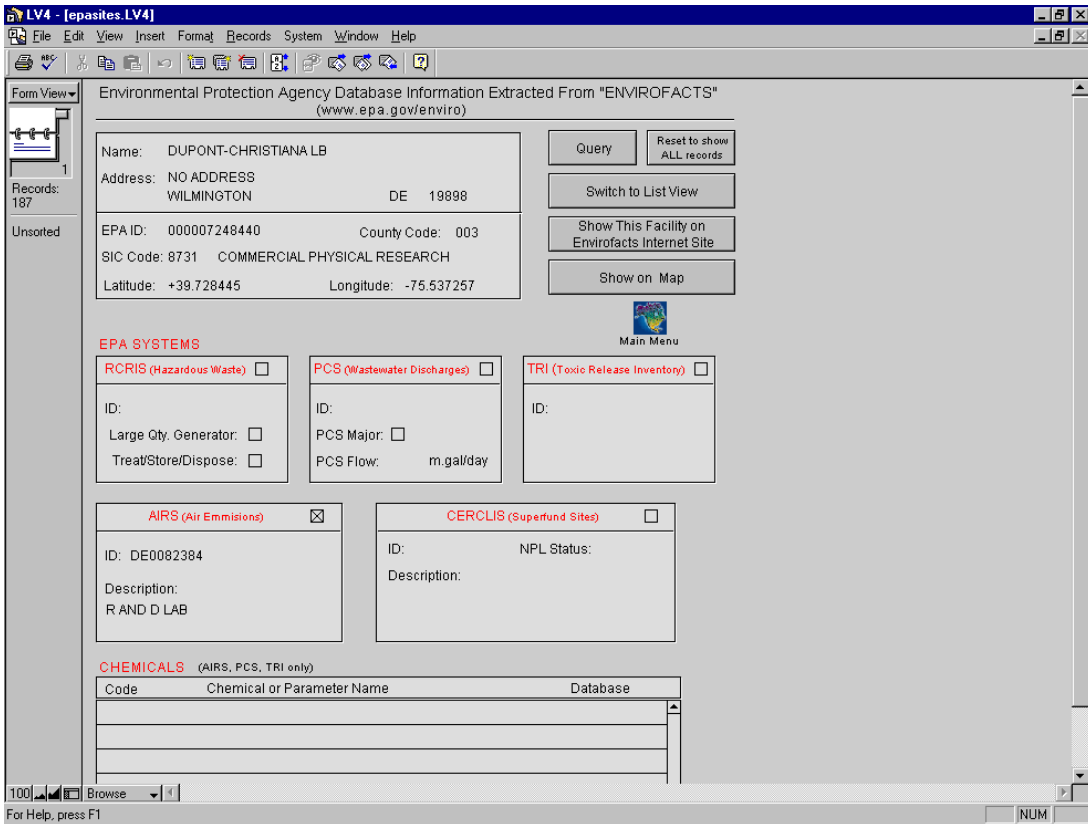


Figure 2 — EPA Database

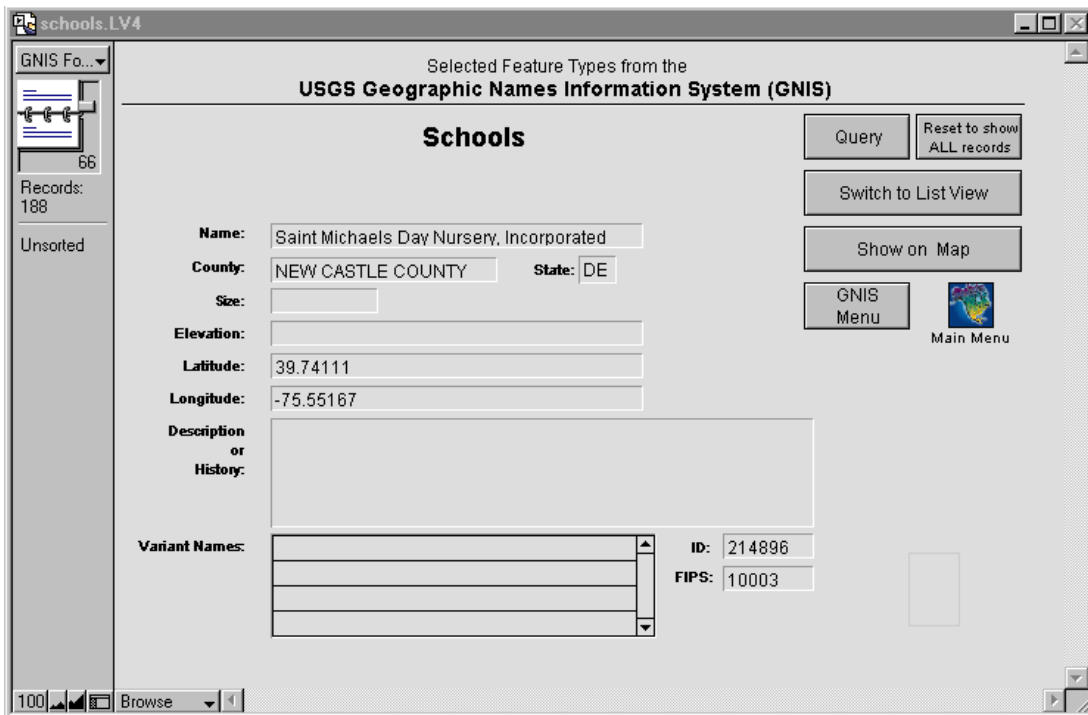
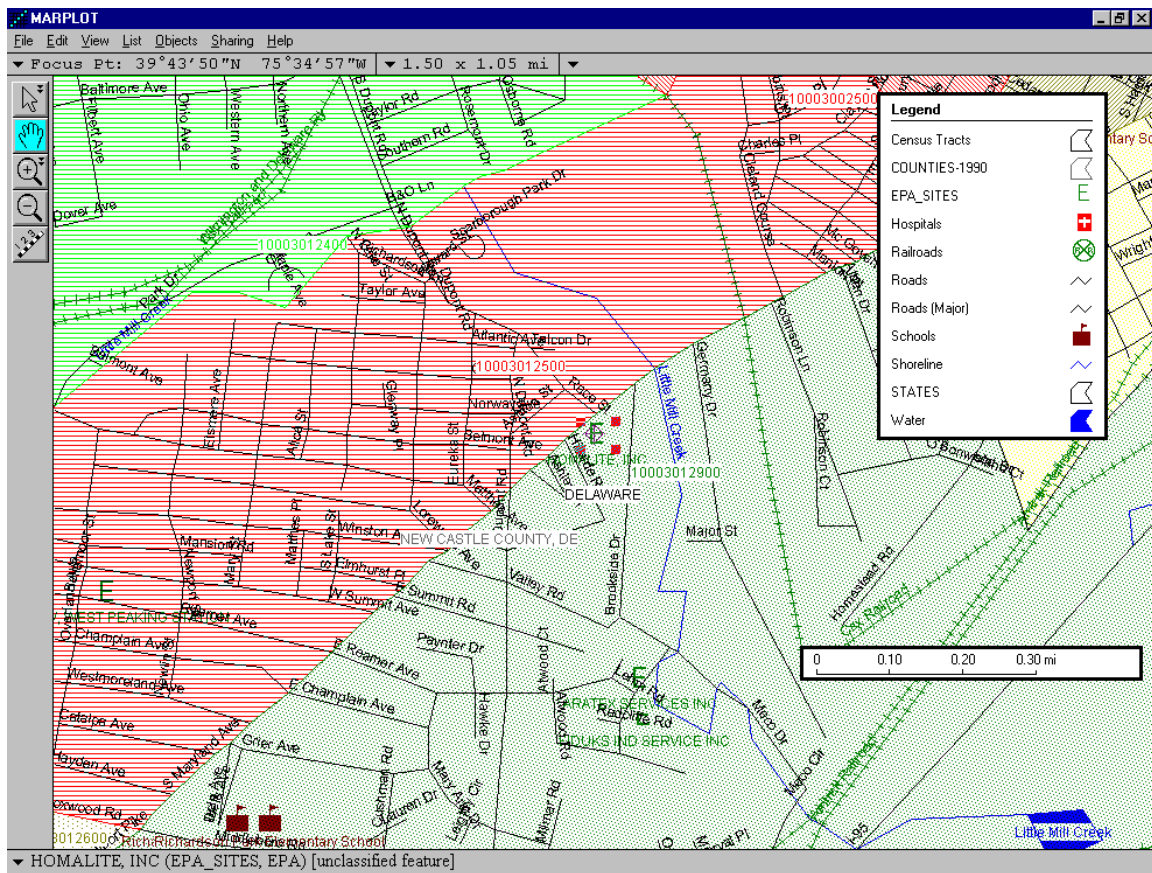


Figure 3 — USGS GNIS Database

2. **Create customized maps** - When you click the **Show on Map** button on the **LV4** database screens, the **MARPLOT** mapping software automatically maps the geographic area selected. You can then further customize the map by changing the map window (zooming in and out) and by activating or hiding various map layers.

You can show as many or as few layers of data as you need to create the right type of map for your application. (See the table below for details about layers.) The figure below shows a customized map where selected census, EPA and USGS layers are active. In the example below, note that an EPA Superfund site is highlighted by four red squares and census tracts are represented by color fill patterns. If you want, you can add layers to the map and manually add map features or import ESRI Shapefiles containing geographic data from another source.



**Figure 4 — Customized Map View**

**Figure 5 — Map Layers Available in LandView IV**

Layer Grouping	Layers
<p><b>Census Demographic Layers</b> Unless otherwise noted these layers show either statistical or legal boundaries as defined for the 1990 Census of Population and Housing. (Some of these boundaries have been generalized. See note below table.)</p>	<p>American Indian reservations and trust lands, census block points, census block groups, census tracts, counties, congressional districts (105<sup>th</sup> Congress), metropolitan areas (June 30, 1999), minor civil divisions (20 states plus Puerto Rico), places and place centroids, states, ZIP code centroids (TIGER-November 1999).</p>
<p><b>Census TIGER/Line 1998 Layers</b></p>	<p>Miscellaneous, railroads roads, shoreline and water.</p>
<p><b>EPA Layers</b> Extracted from the EPA Envirofacts database in March 2000.</p>	<p>Air facilities (major dischargers, Hazardous Waste facilities, (Large Quantity Generators and Treatment/Storage/Disposal (TSD) facilities), active Superfund sites, Toxic Releases (all facilities from reporting year 1997), and all active Water Permits sites.</p>
<p><b>U.S. Geological Survey (USGS) Federal Lands</b> Selected Federal Lands were taken from the USGS National Atlas of the United States.</p>	<p>Bureau of Land Management, Bureau of Reclamation, Department of Defense, Fish and Wildlife Service, Forest Service, National Park Service, Tennessee Valley Authority and Other Federal Holdings.</p>
<p><b>USGS Geographic Names Information System (GNIS)</b> A database that contains geographic names for all known places, features, and areas in the United States that are identified by a proper name.</p>	<p>Airports, cemeteries, churches, hospitals, land features, man-made features, miscellaneous features, populated places, schools, and transportation features.</p>

**Note on Generalized Boundaries.** The boundary files for the mapping of states, counties, minor civil divisions, metropolitan areas, and congressional districts are generalized which means that the number of lines making up the perimeter of those polygons are reduced, and the polygon shapes are simplified. The purpose of generalizing the boundaries is to reduce the size of the map files and to speed their display on the computer screen. Generalized boundaries are suitable for thematic mapping but are not suitable for precisely determining the legal or statistical area for a point on a map near the boundary. Users who need to determine this, should use the **Identify Census Areas at current map pointer** function under **LandView** in the **MARPLOT** Sharing Menu.

- 3. Search Map Features** -You can use the search capability of **MARPLOT** to create a list of sites in a particular layer or group of layers. The search criteria may be based upon the feature name, its location within a specified radius from a point on the map or its location within another map object such as legal or statistical area.

Search Criteria

Search for objects:

with names that contain... Shipley

Layer(s) to search:

Individual Layer... Roads

Map(s) to search:

Maps in View

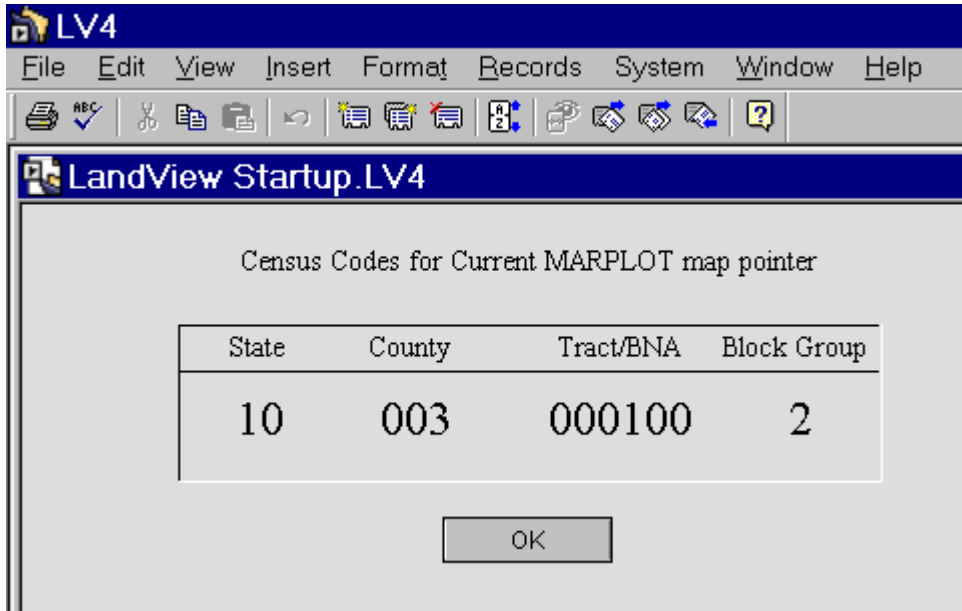
Search Cancel Help...

replace previous collection

**Figure 6 — MARPLOT Map Search Dialog**

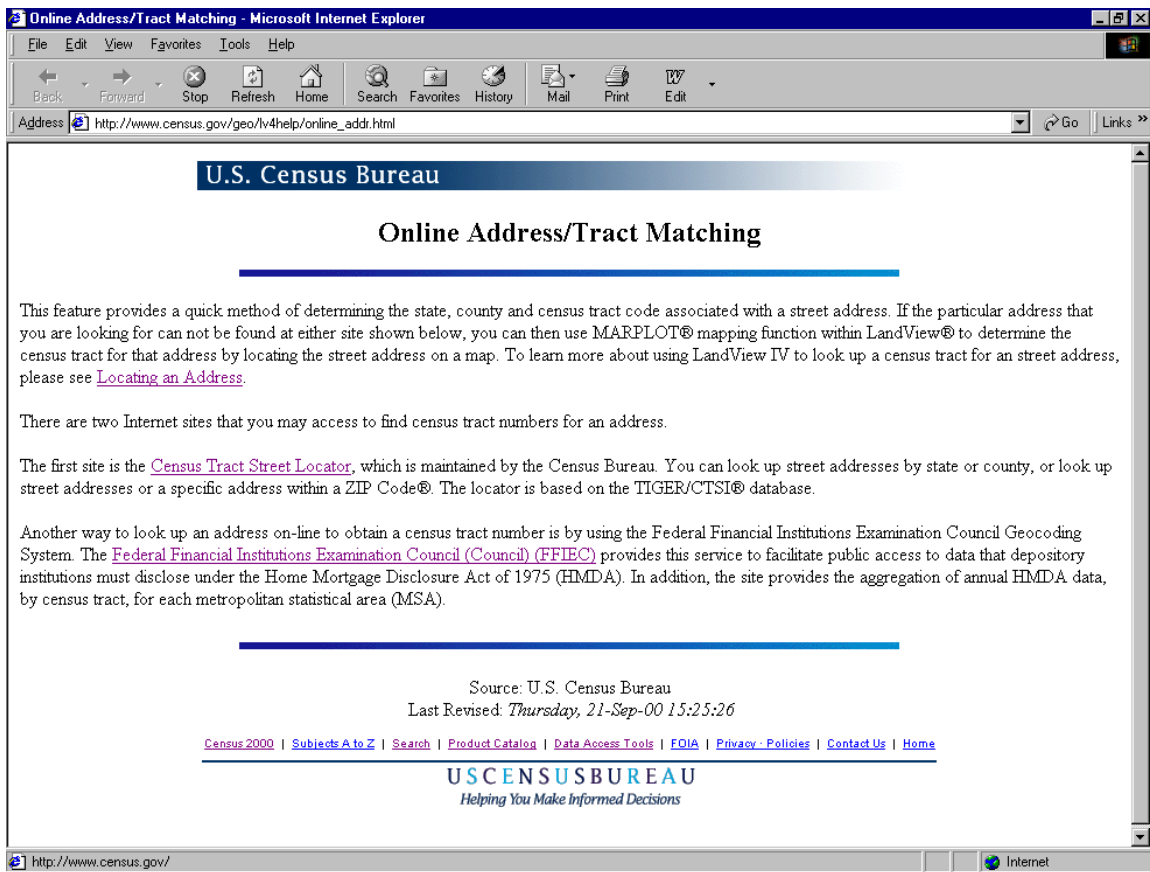


4. **Identify Census Tract and Block Group at Map Pointer** - Using the **Identify Census Areas at current map pointer** function under the **LandView** submenu in the **MARPLOT Sharing Menu**, a user can readily determine the state, county, census tract and block group codes associated with the position of the map pointer.



**Figure 7 — Census Codes for Map Pointer**

5. **Access Internet Services for Coding Address to Census Tracts** - This function is particularly useful for those users who need to quickly determine the 1990 census tract for a street address. There are a variety of Federal regulations that require home lenders, medical providers and other community service providers to report their client activities by census tract. Although, a user can determine this information from the MARPLOT map, these online resources provide a handy way to quickly determine that information.



**Figure 8 — Internet Lookup to Determine Census Tracts for Addresses**

6. **Create Population and Housing Unit Estimates Within a Radius** - The LV4 **Population Estimator** function calculates the population and housing unit counts within a radius from a given map point. The function also allows the resulting circle to be shown on the map.

**LandView 1990 Census Population Estimator**

Step 1: Enter Latitude and Longitude. The defaults are the current MARPLOT map values.  
Or, you may enter your own values in Degrees/Minutes/Seconds, or Decimal Degrees.

Step 2: If you entered the Latitude & Longitude, choose the appropriate Hemisphere.  
The continental U.S. is North and West.

Step 3: Enter the Radius.

Step 4: Press the Calculate Population button.

	deg.	min.	sec.	hemisphere	decimal degrees
Latitude	39	44	35	<input checked="" type="radio"/> North <input type="radio"/> South	39.743112
Longitude	75	33	0	<input checked="" type="radio"/> West <input type="radio"/> East	75.550247

Enter Radius: 1 miles **Calculate Population**

**Clear all fields**   **Refresh Lat/Long from MARPLOT**   **Print this screen**   **Show this radius on map**

Note: Population Statistics are not available for Virgin Islands., Guam, American Samoa, and N. Mariana Islands.  
Race statistics are not available for Puerto Rico.

Results	
Total population:	31439
Housing units:	13907
Census Block count:	409
Area within radius (sq. mi.):	3.142
White:	9474
Black:	19279
Indian:	81
Asian:	138
Hispanic:	3441

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**Figure 9 — LV 4 Population Estimator Screen**

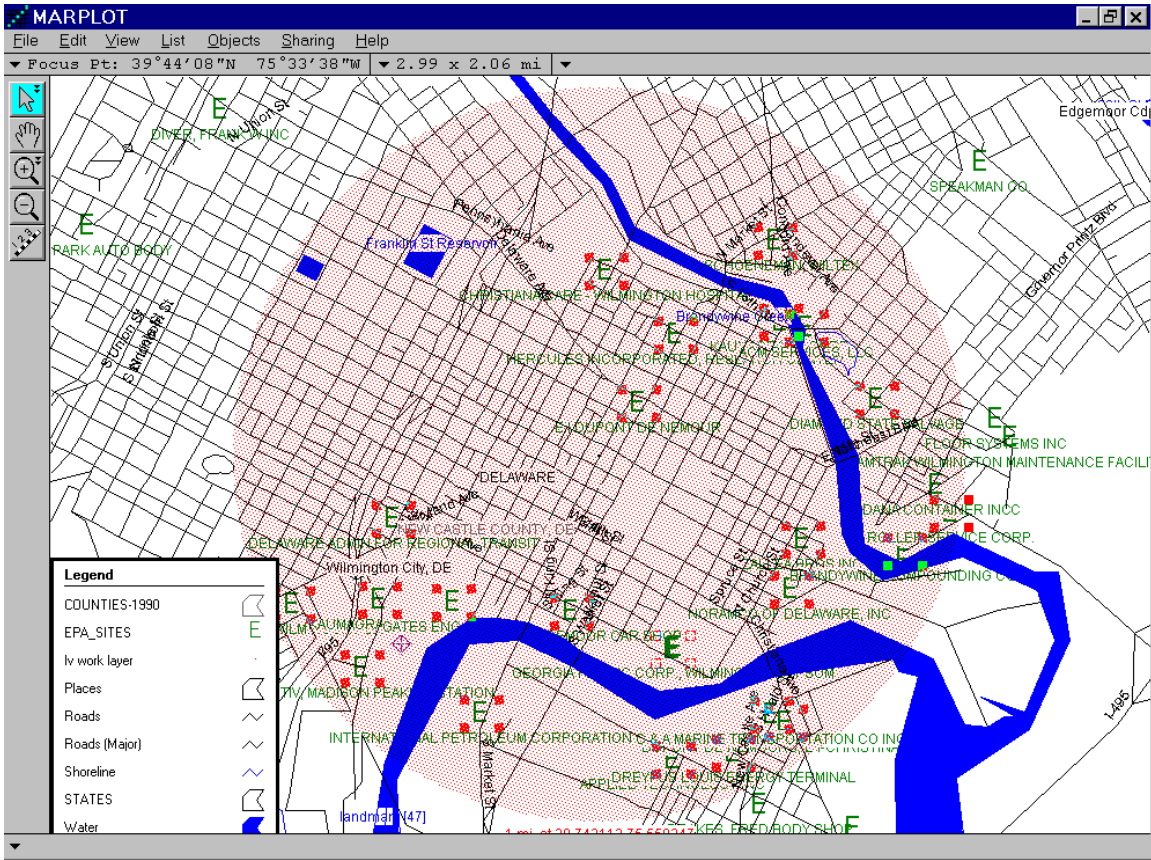


Figure 10 — Population Circle Shown on Map

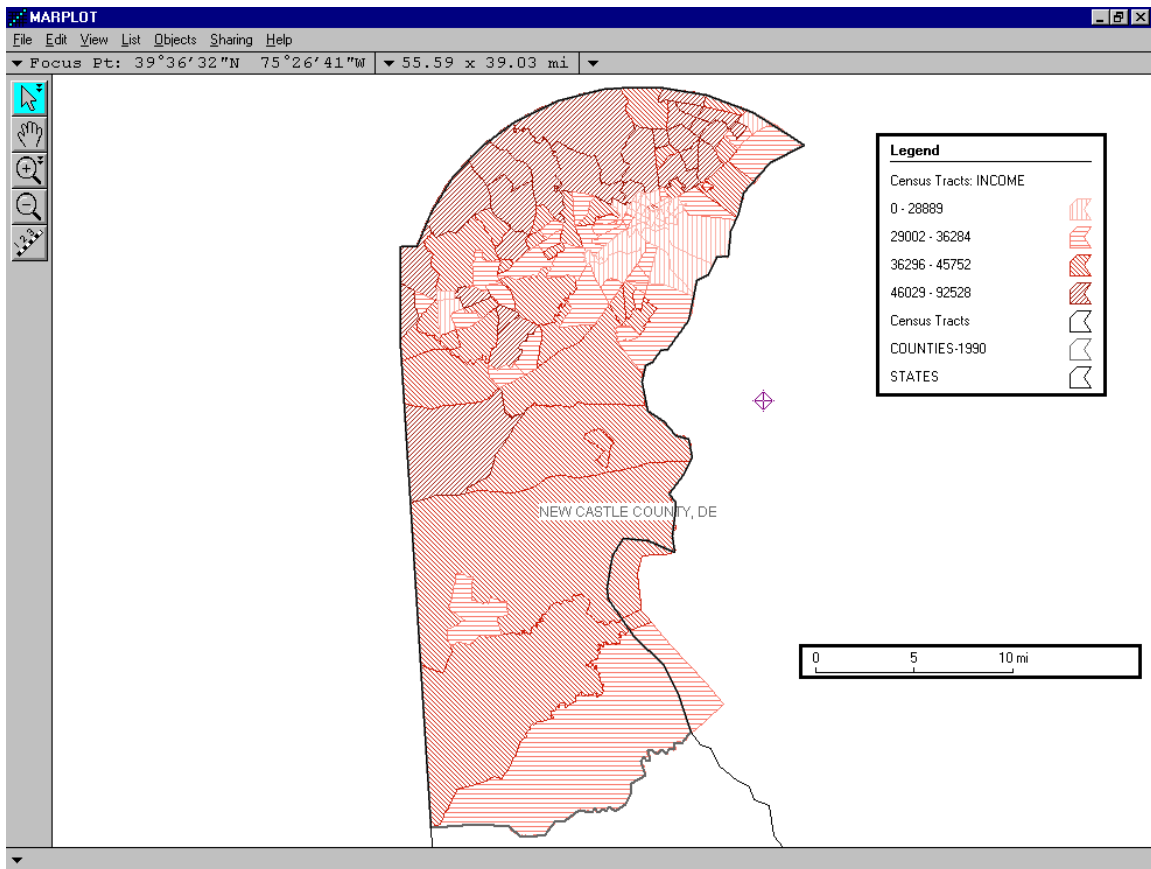
- 7. Extract data for Selected Map Objects** - Once you have selected map objects, you can use the **Sharing – LandView – Get Info** function to retrieve the appropriate database records provided that the selected objects are linked to a LandView database. You can even export the selected records to a separate file in several popular spreadsheet and database formats.

For example, using the **MARPLOT List – Search** function, all EPA sites are identified and marked within the user defined circle as shown in Figure 10. Figure 11 shows the resulting EPA query screen containing the 30 EPA sites located within the user defined circle.

EPA_ID	NAME	STREET	CITY	STATE	ZIP_CODE	SIC_CODE	STATE_CODE	COUNTY_CD	U
000007539580	CONNECTIV,	SOUTH MADISON	WILMINGTON	DE	19804	4911	10	003	+
000007588178	DIAMOND STATE	900 E 14TH ST	WILMINGTON	DE	19802		10	003	+
000008921050	BRANDYWINE	1101 ROSEMONT	WILMINGTON	DE	19802		10	003	+
DE0001265248	INTERNATIONAL	505 SOUTH	WILMINGTON	DE	19801	2992	10	003	+
DED000799767	CONRAIL	FRONT &	WILMINGTON	DE	19801		10	003	+
DED002324127	GEORGIA	PORT OF	WILMINGTON	DE	19899	3275	10	003	+
DED002336790	ZALLEA BROS	TAYLOR &	WILMINGTON	DE	19801		10	003	+
DED002369205	GM WILMINGTON	BOXWOOD RD	WILMINGTON	DE	19899	3711	10	003	+
DED048044820	KAUMAGRAPH	14TH & POPLAR	WILMINGTON	DE	19899	2759	10	003	+
DED060084167	HERCULES	500 HERCULES	WILMINGTON	DE	198081599	2821	10	003	+
DED066038753	GATES ENG. CO.	100	WILMINGTON	DE	19801	3061	10	003	+
DED077069243	CHRISTIANA	501 WEST 14TH	WILMINGTON	DE	19801	8062	10	003	+
DED085693646	NORAMCO OF	500 SWEDES	WILMINGTON	DE	19801	2833	10	003	+
DED093723807	SETON LEATHER	PYLES LANE	WILMINGTON	DE	19899		10	003	+
DED096217591	J.	9 VANDEVER	WILMINGTON	DE	198020000	2329	10	003	+
DED099079428	DELAWARE	#1 SOUTH	WILMINGTON	DE	19801		10	003	+
DED107219446	C & A MARINE	25 S HEALD ST	WILMINGTON	DE	19801		10	003	+
DED131673853	DANA	1280 RAILCAR	WILMINGTON	DE	19802		10	003	+
DED980204614	CONNECTIV,	CHRISTIANA AVE	WILMINGTON	DE	19801	4911	10	003	+
DED980550404	AMERICAN AUTO	FERRY RD PORT	WILMINGTON	DE	19801		10	003	+
DED980555585	APPLIED	800 "A" ST	WILMINGTON	DE	19898	7391	10	003	+
DED980829808	DU PONT, EDL	101 BEECH ST.	WILMINGTON	DE	198800840	3500	10	003	+
DED981944861	DUPONT DE	CHRISTINA	WILMINGTON	DE	19801		10	003	+
DED982705337	TOTAL	1280 RAILCAR	WILMINGTON	DE	19802		10	003	+
DED984066027	DE SOLID	1101 LAMBSON	NEW CASTLE	DE	19720	4953	10	003	+
DED984072256	KAUMAGRAPH	400 S. MADISON	WILMINGTON	DE	19801	2759	10	003	+
DED984073155	DREYFUS LOUIS	LOBDELL &	WILMINGTON	DE	19801		10	003	+
DED984075572	ACM SERVICES,	1603 JESSUP ST	WILMINGTON	DE	19802		10	003	+
DED984075952	ROLLER	1318 E. 12TH ST.	WILMINGTON	DE	19802	2821	10	003	+

**Figure 11 — EPA Sites Located Within User Defined Circle**

8. **Create Thematic Maps** -You can display data on a map. Figure 12 shows the distribution of census tracts by the 1990 Census Median Household Income for New Castle County, Delaware.



**Figure 12 — Median Household Income**

### **How Do I Get LandView IV**

If you wish to order this product, you can visit the LandView website <http://landview.census.gov> and then follow the links to the LandView IV page where you will find ordering information. Alternatively, you can telephone the Customer Service Center (301) 457-4100 to place the order.

If you would like to try a fully functional demonstration copy of LandView IV you can download it from the LandView IV page as well. All of the Quick Tour illustrations were created from this demonstration copy. We suggest that you use the LandView IV Guided Tour to assist you in learning the LandView IV product interface.