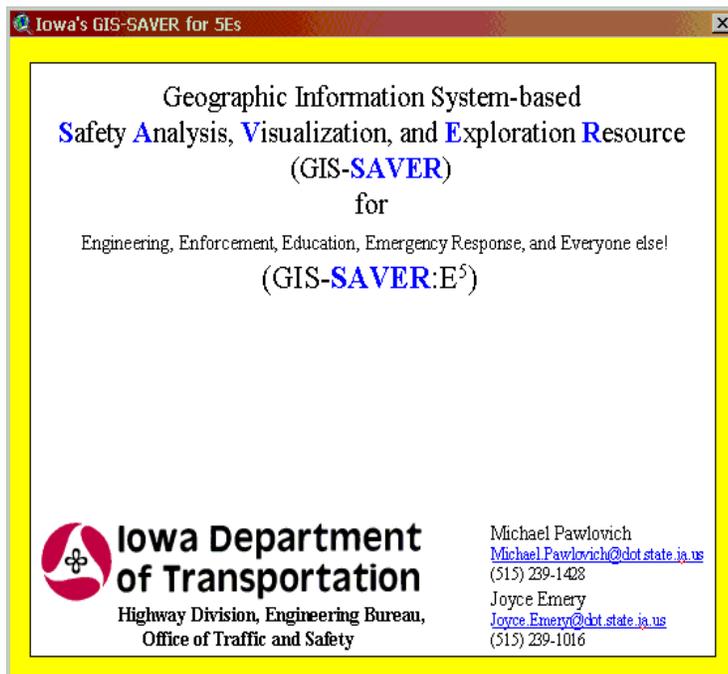


Geographic Information System-based  
Safety Analysis, Visualization, and Exploration Resource  
(GIS-SAVER)  
for  
Engineering, Enforcement, Education, Emergency response, and Everyone else!  
(GIS-SAVER:E<sup>5</sup>)

# Training Guide

**Draft – 09/27/2003**



Highway Division, Engineering Bureau,

**Office of Traffic and Safety**

Phone: (515) 239-1557 Fax: (515) 239-1891

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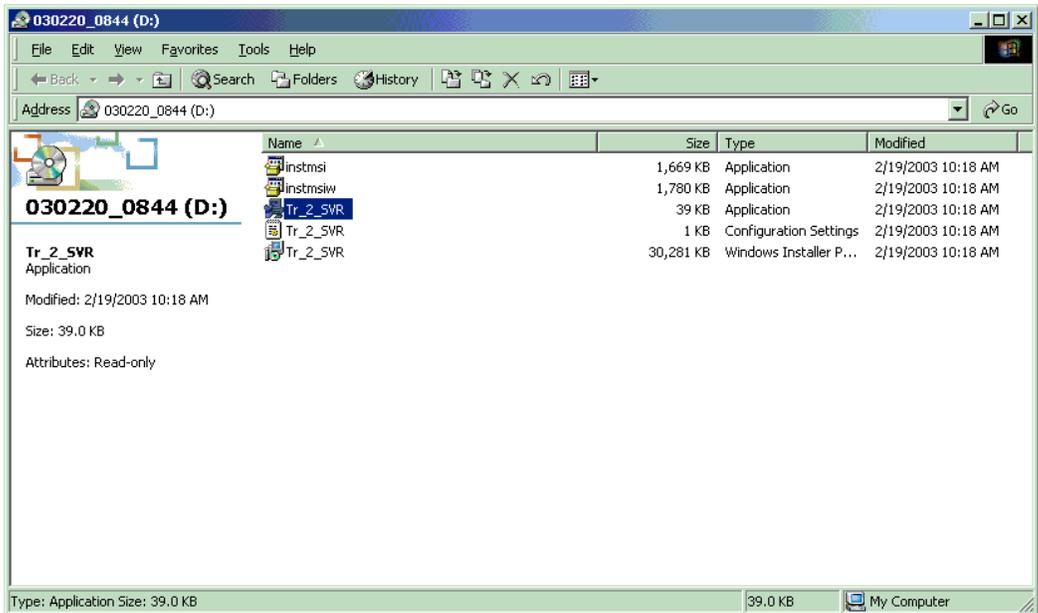
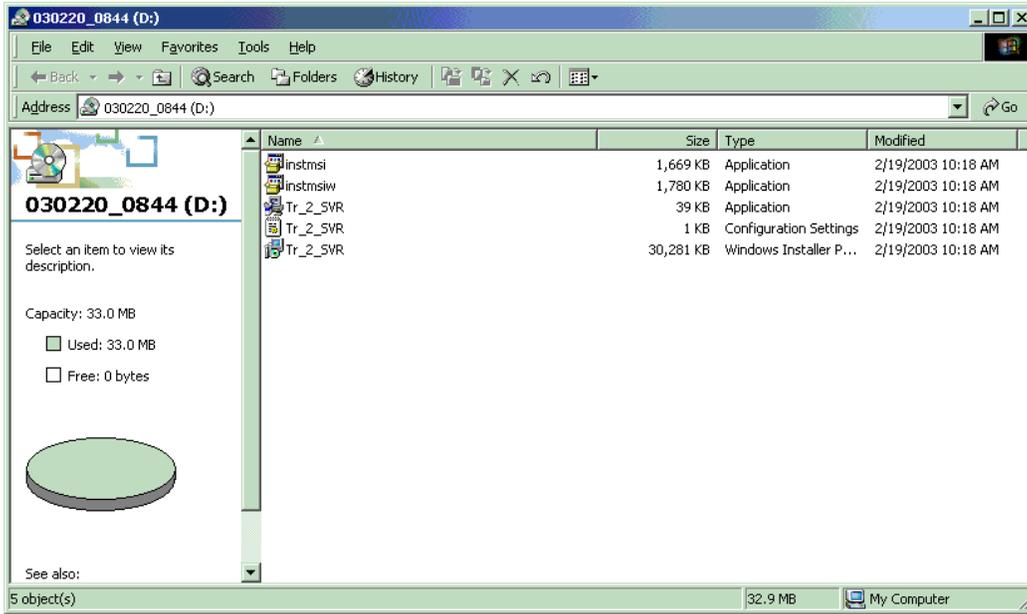
# Installation

## **ArcView 3.2/3.3:**

- Insert ArcView 3.2/3.3 CD into CD drive. Auto-run should begin shortly.
- Proceed through installation, selecting NEXT or OK as is appropriate except that, when presented with installation type options, select CUSTOM.
- Under CUSTOM, choose only:
  - Program Files,
  - Extensions, and
  - Help Files.
- The installation procedure will have progress indicated.
- When installation is finished, open ArcView. You should be asked to enter some information, including an ArcView Registration Number. This number should be on a sticky label sheet in your ArcView box. Enter the number. When the number is fully entered, the OK button should become enabled. Click OK. ArcView is now installed.

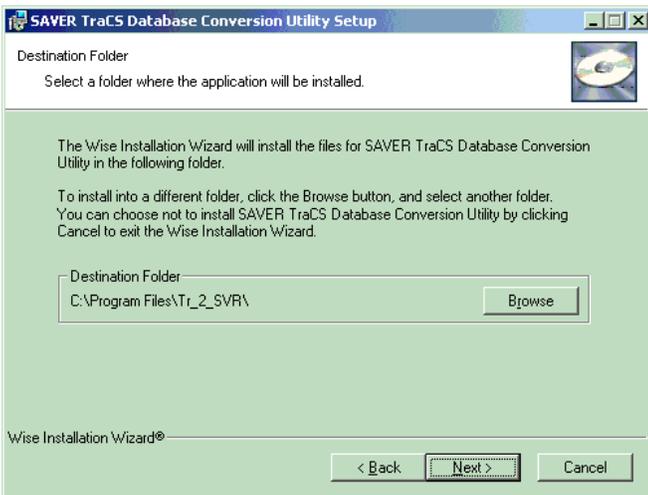
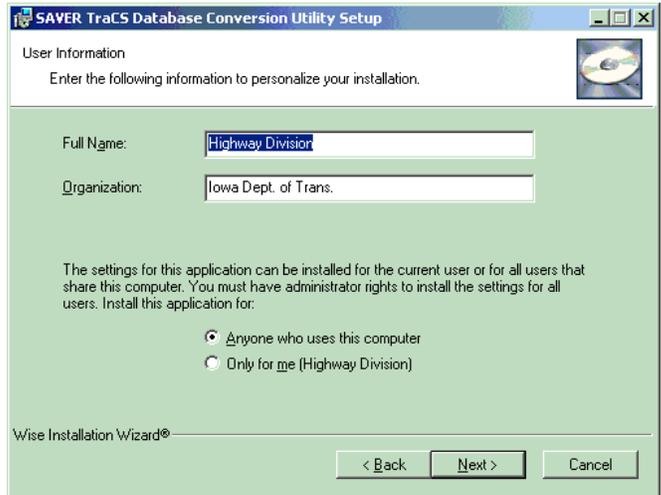
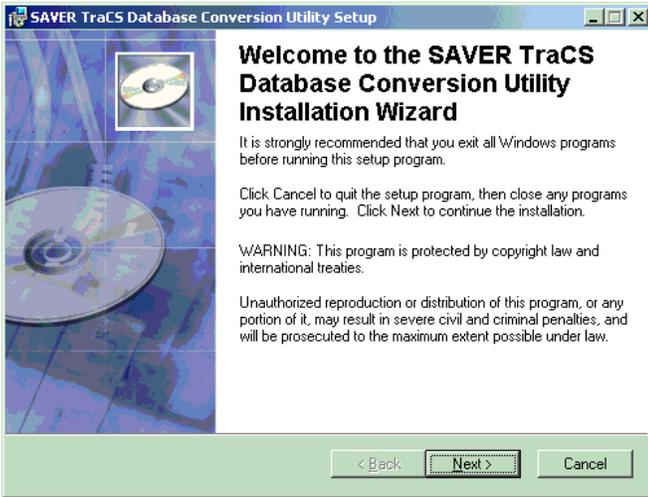
# Installation

## TraCS to SAVER Converter Utility:



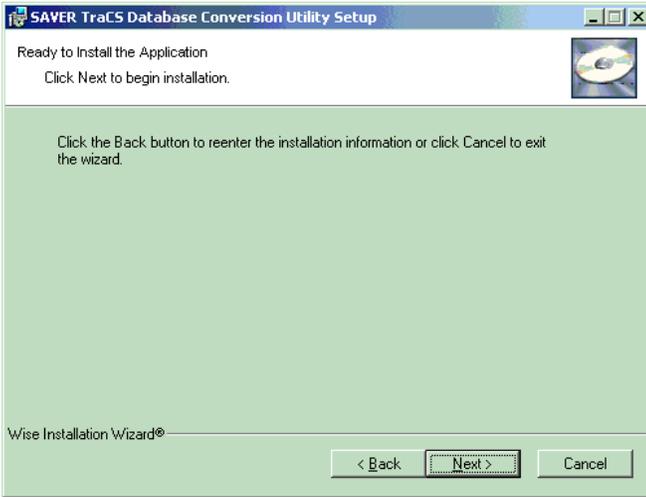
# Installation

## TraCS to SAVER Converter Utility:



# Installation

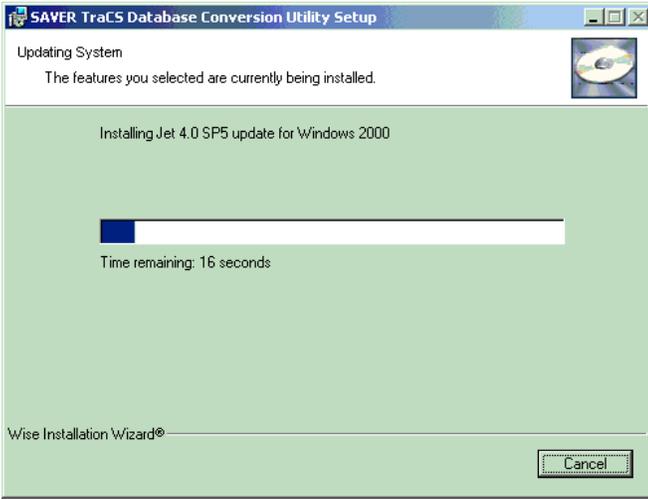
## TraCS to SAVER Converter Utility:



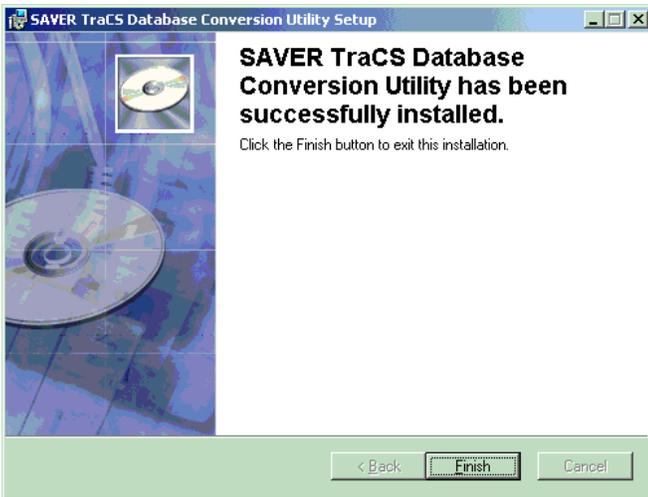
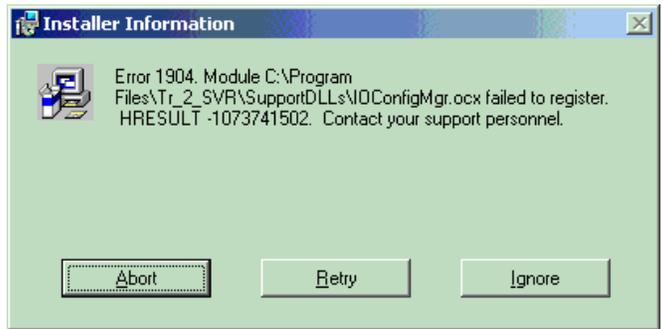
**OK!**

# Installation

## TraCS to SAVER Converter Utility:

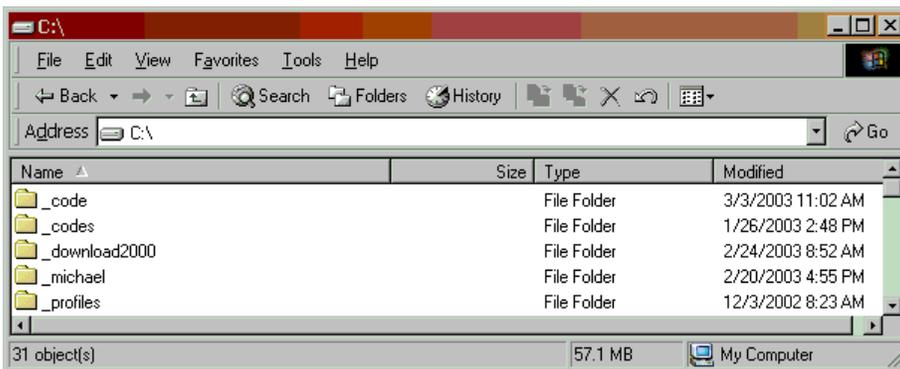
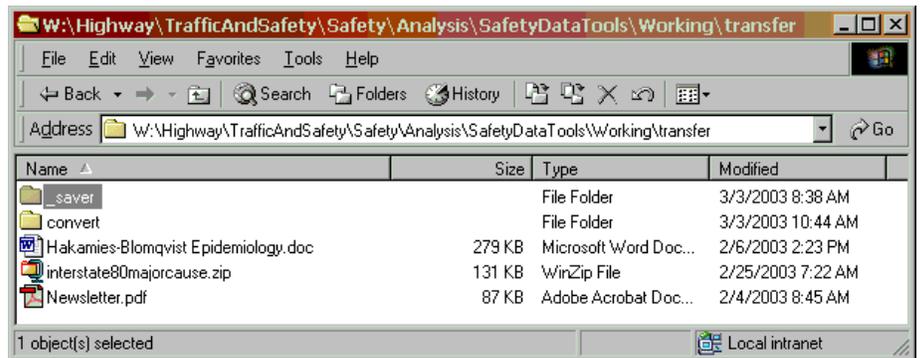
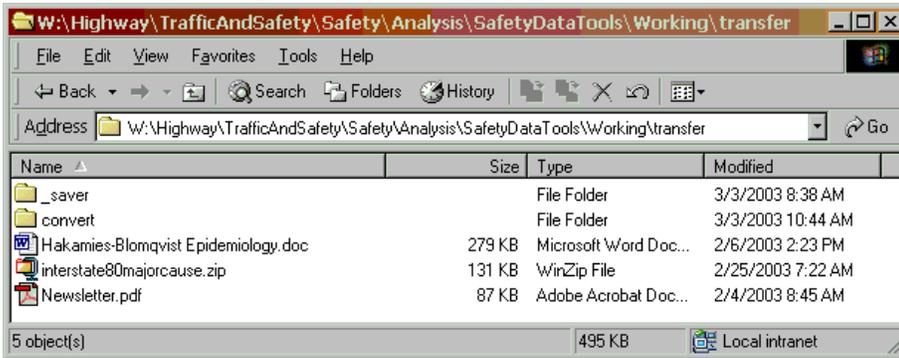


**Ignore!**



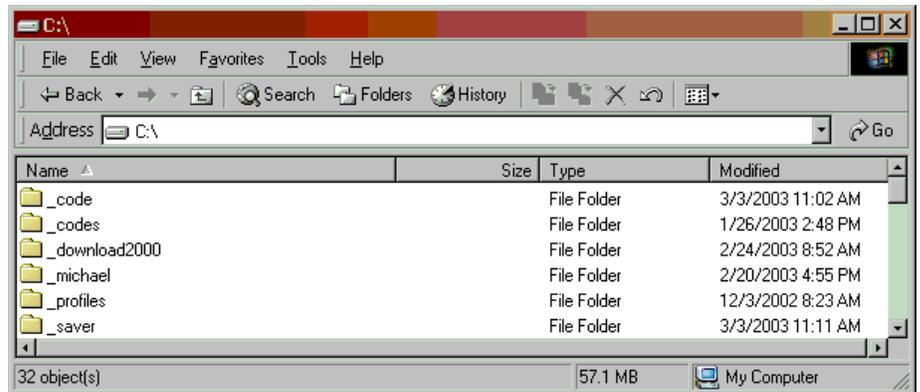
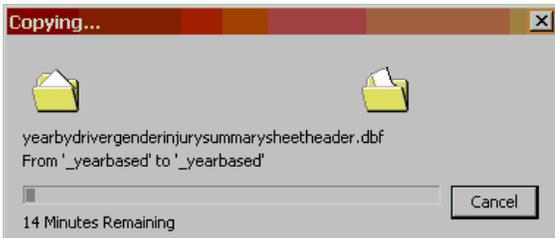
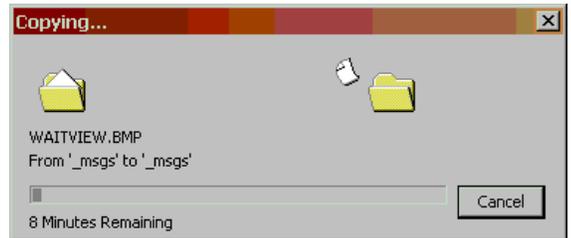
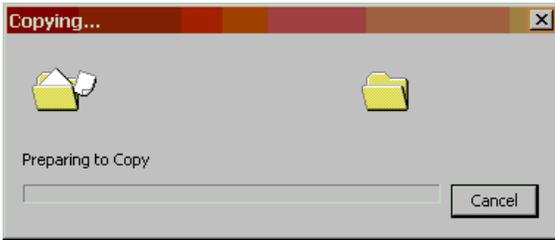
# Installation

## SAVER:



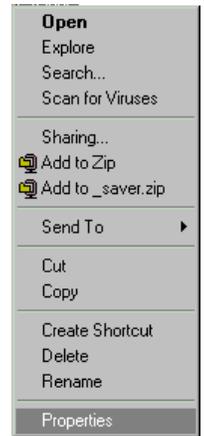
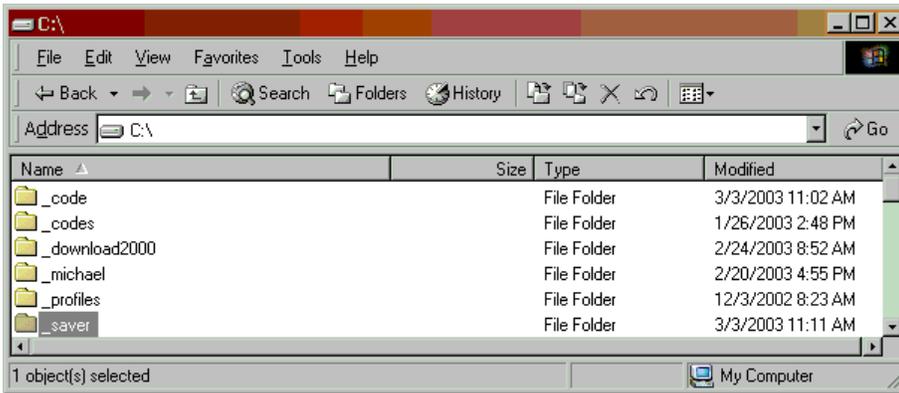
# Installation

## SAVER:



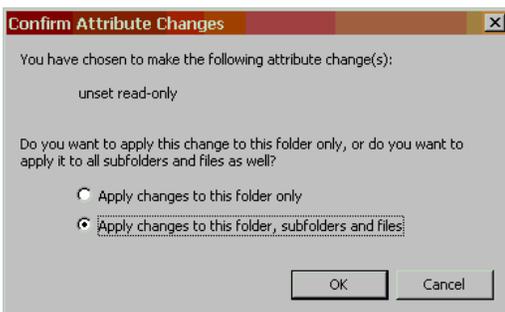
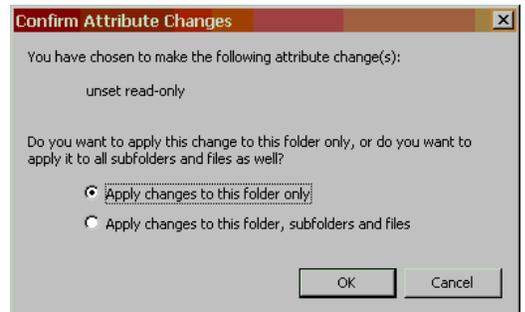
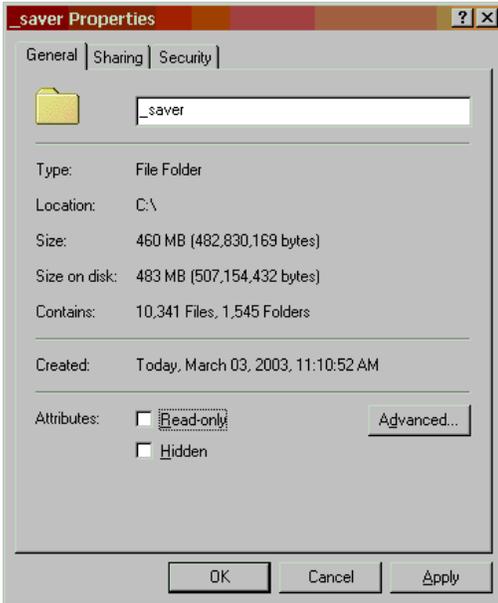
# Installation

## SAVER:



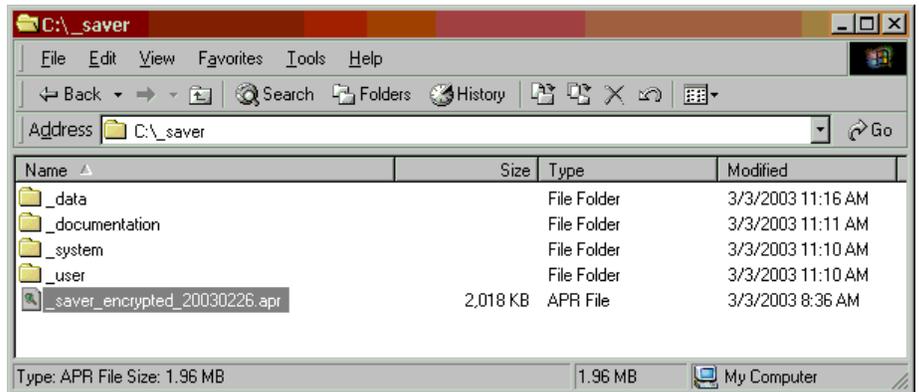
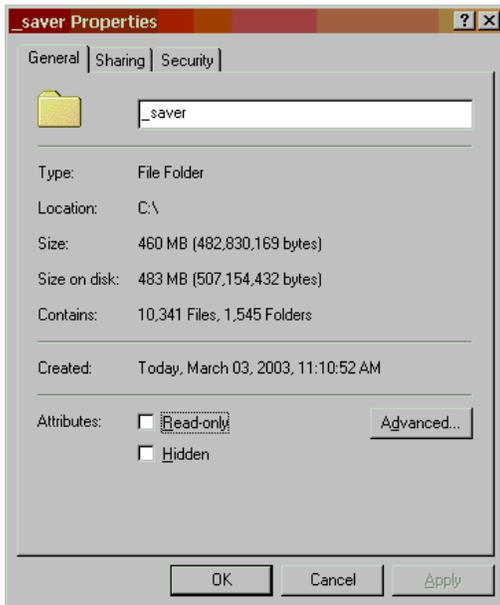
# Installation

## SAVER:



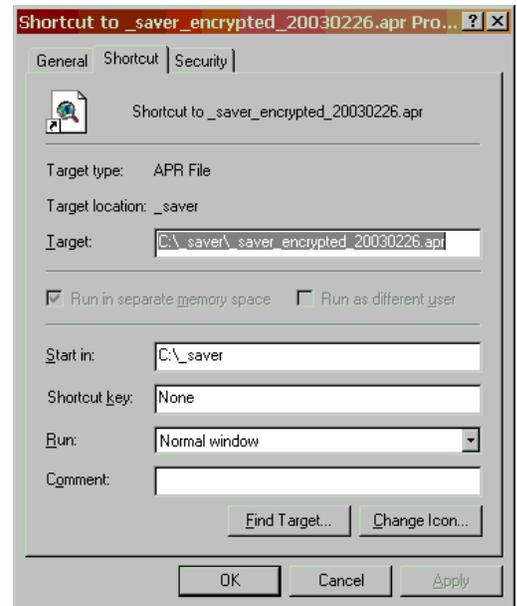
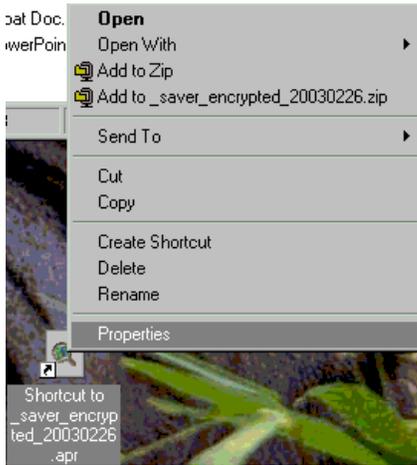
# Installation

## SAVER:



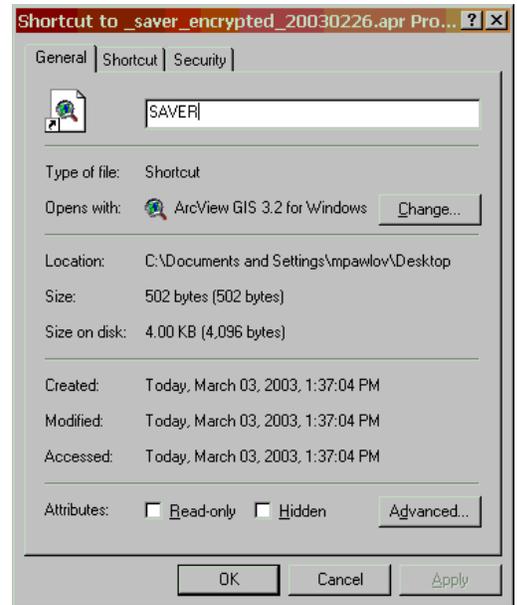
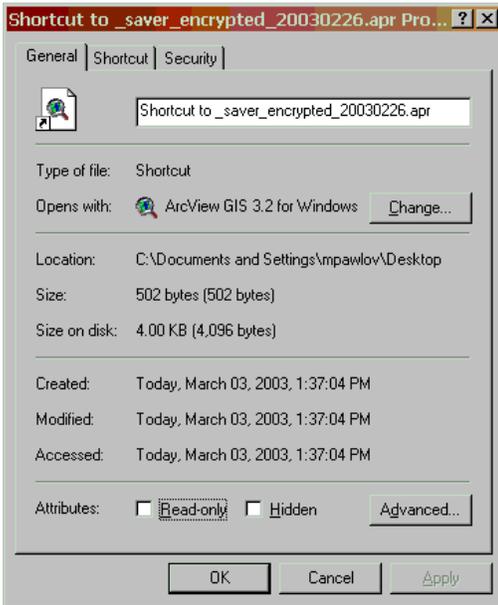
# Installation

## SAVER:



# Installation

## SAVER:



# Using the TraCS to SAVER Converter Utility

## Obtaining/Identifying a Local TraCS Database:

Each enforcement agency using TraCS generates a local Microsoft Access-based database. The key files for the local database are files with the extension “.mdb” and “.asm”. The “.mdb” files are the active, or “working”, database files and the “.asm” are the archived files. Both these file types are needed for complete data conversion.

The “.mdb” and “.asm” files contain all the TraCS data the local agency is collecting, including:

- Mobile Accident Reporting System (MARS) – crash,
- Crime Incident Reporting Form (CIRF) – incident,
- Electronic Citation Collection (ECCO) – citation,
- Mobile Operating While Intoxicated (MOWI), and
- Vehicle Safety Inspection System (VSIS).

Therefore, some of the information may be sensitive and should not be transmitted.

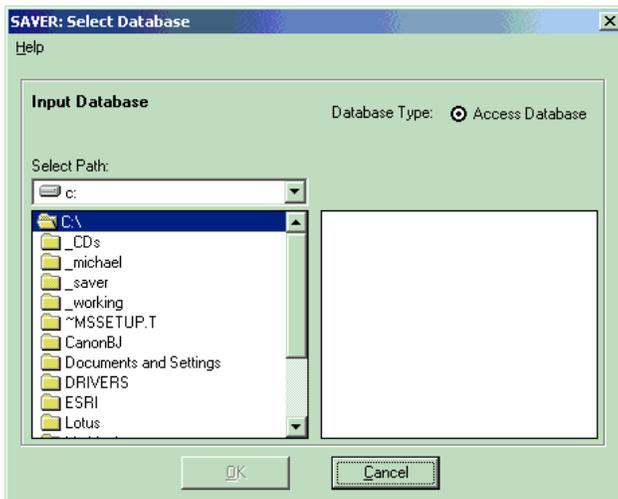
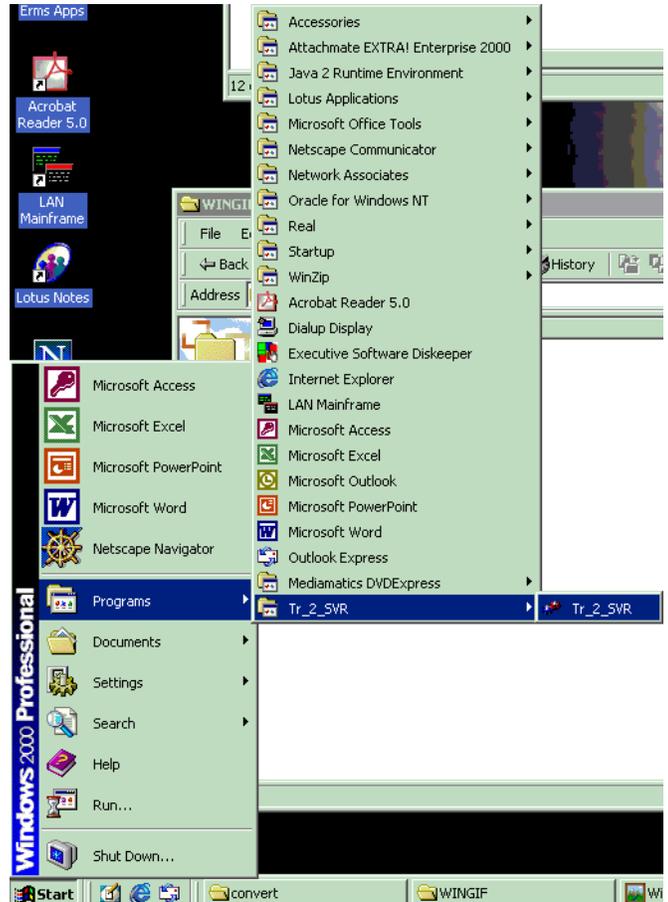
The Converter Utility currently only converts crash data to SAVER format. When complete, the Converter Utility will convert all TraCS local data from the local Access database format to SAVER format. However, as the files output from the Converter Utility are not linked, sharing of the crash files need not involve sharing of the non-crash files. Additionally, much of the sensitive information is located in easily identifiable SAVER format files, allowing selective sharing of data. (These files will be identified under the **Converter Output** section.)

The files can be obtained in two ways:

- Sharing the “.mdb” or “.asm” files: To share the “.mdb” and “.asm” files, first locate them on the enforcement agency computer network. Once located, create CDs for these files. The files are probably too large to e-mail. Additionally, due to the likely size of the files, more than one CD may be required. The agency that receives the information can then copy the files to their network and run the Converter Utility on the database received. Additionally, databases from multiple agencies can be combined in this fashion. **REMEMBER:** Sharing files in this fashion provides **ALL** local TraCS data (crash or otherwise) with another agency.
- Sharing the SAVER format files: To share the SAVER format files, first convert the local TraCS database. From there, following the information provided in the **Converter Output** section, select that information that is being shared and follow the instructions in the **Sharing Converter Output** section. **REMEMBER:** This option allows selective sharing of local TraCS data (crash or otherwise) with another agency.

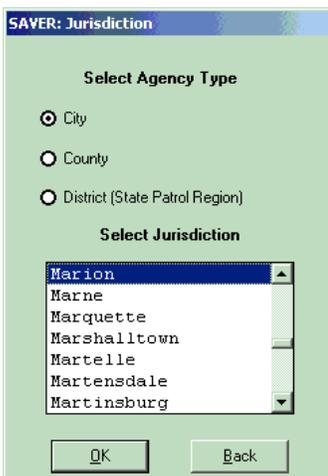
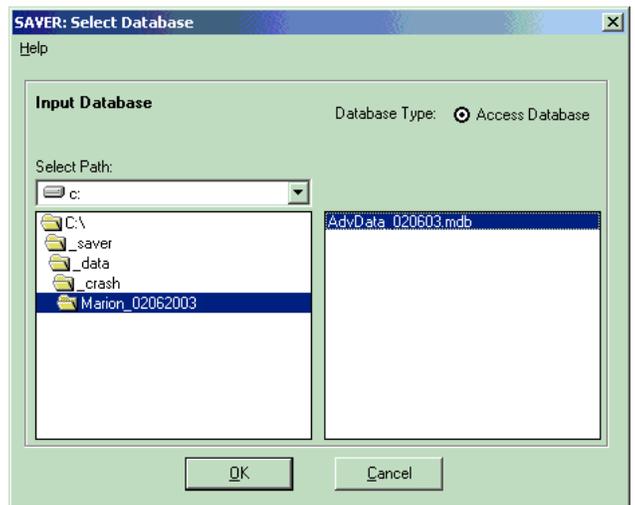
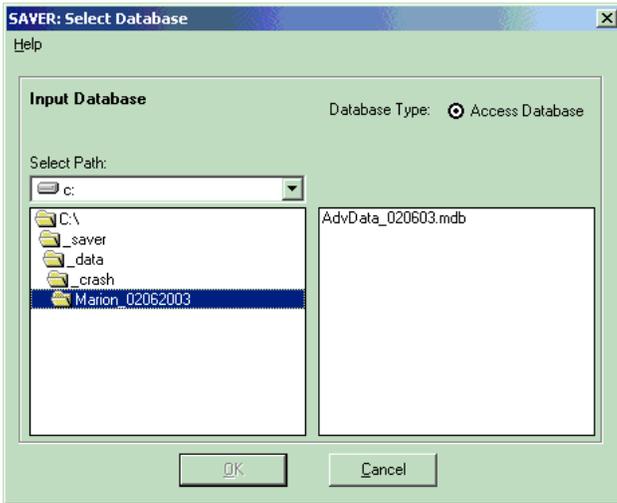
# Using the TraCS to SAVER Converter Utility

## Converter Operation:



# Using the TraCS to SAVER Converter Utility

## Converter Operation:



# Using the TraCS to SAVER Converter Utility

## Converter Operation:



SAVER: TraCS Form

Select Form Type

- CIRF
- CIRF NIBRS
- CIRF NIBRS SUP
- ECCO
- MARS
- MARSS
- MDWI

OK Back

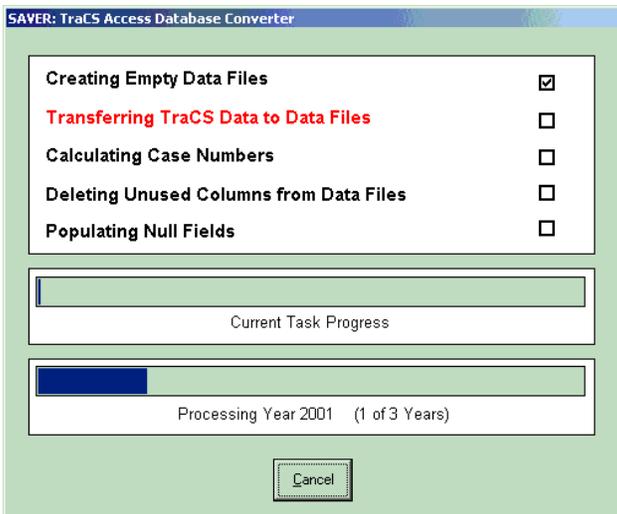


SAVER: Report Status

Select Desired Statuses

- Open
- Validated
- Rejected
- Voided
- Issued
- Accepted
- Located
- Transmitted
- Deleted
- Locked
- Non Reportable

OK Back



SAVER: TraCS Access Database Converter

Creating Empty Data Files	<input checked="" type="checkbox"/>
Transferring TraCS Data to Data Files	<input type="checkbox"/>
Calculating Case Numbers	<input type="checkbox"/>
Deleting Unused Columns from Data Files	<input type="checkbox"/>
Populating Null Fields	<input type="checkbox"/>

Current Task Progress

Processing Year 2001 (1 of 3 Years)

Cancel



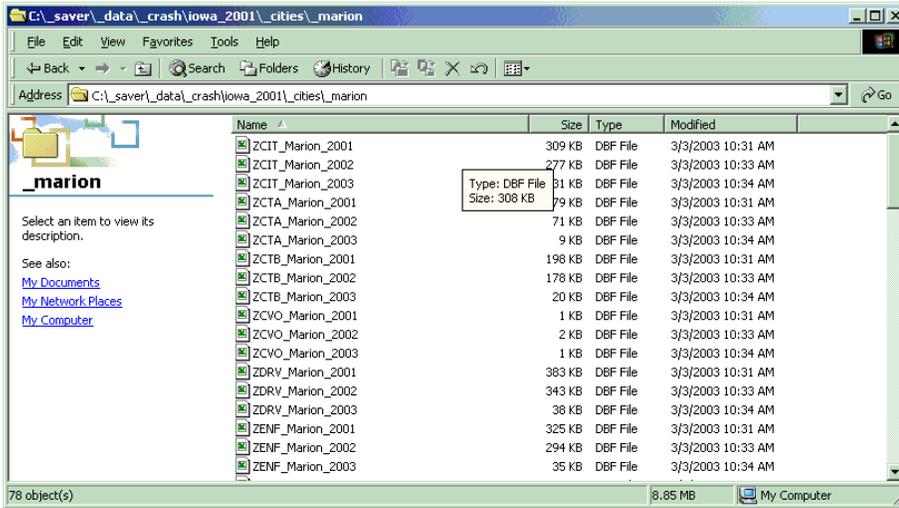
SAVER Status

Translation Complete!

OK

# Using the TraCS to SAVER Converter Utility

## Converter Output:



# Using the TraCS to SAVER Converter Utility

**Sharing Converter Output:**

# SAVER

## Opening the SAVER Project:

3 options:

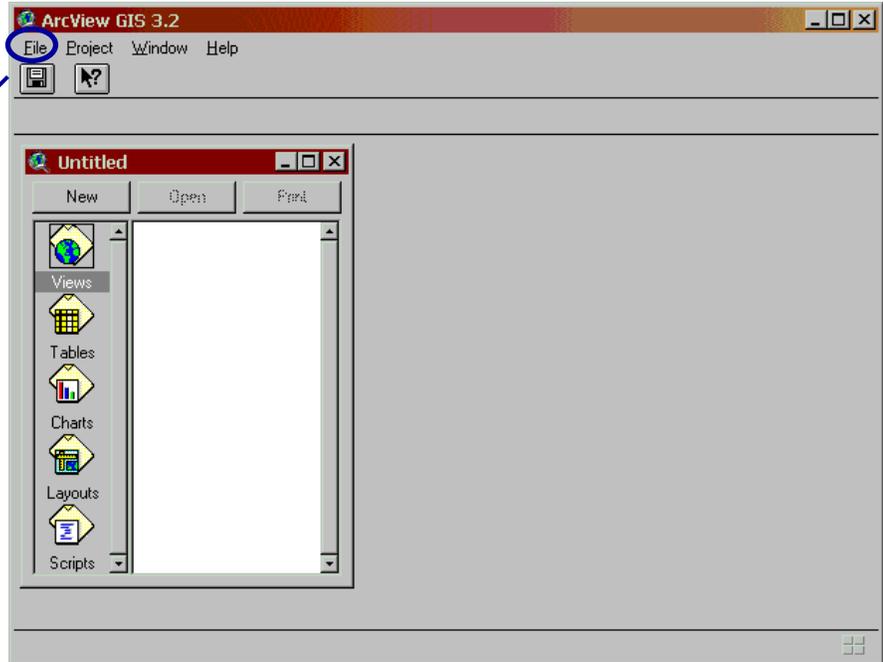
1. Open using the ArcView Desktop Shortcut icon
2. Open using the Windows Start Menu button
3. Open using a SAVER-specific Desktop Shortcut icon

### Option 1: ArcView Desktop Shortcut

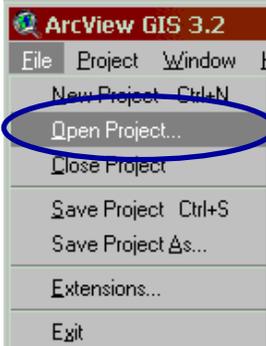


a: Double-click on the ArcView GIS 3.2 or 3.3 Desktop Shortcut icon  
(If you don't have a Desktop Shortcut for ArcView GIS 3.2 or 3.3, either create one or use either option 2 or 3)

b: Click on File

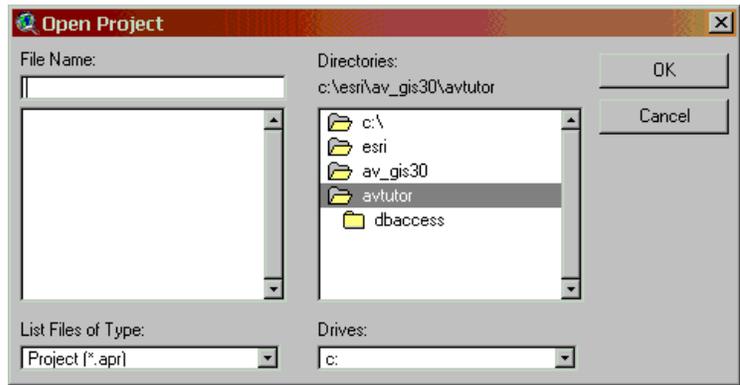


c: Click on Open Project



The Open Project window appears.

d: Double-click "c:\"...then double-click the "\_saver" folder, as shown in step e

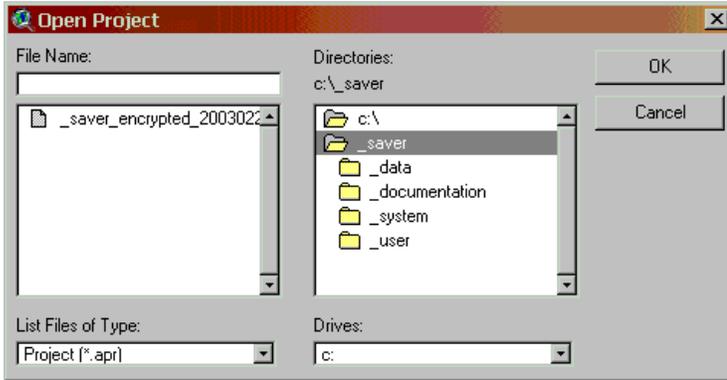


>> Next Page >>

# SAVER

## Opening the SAVER Project :

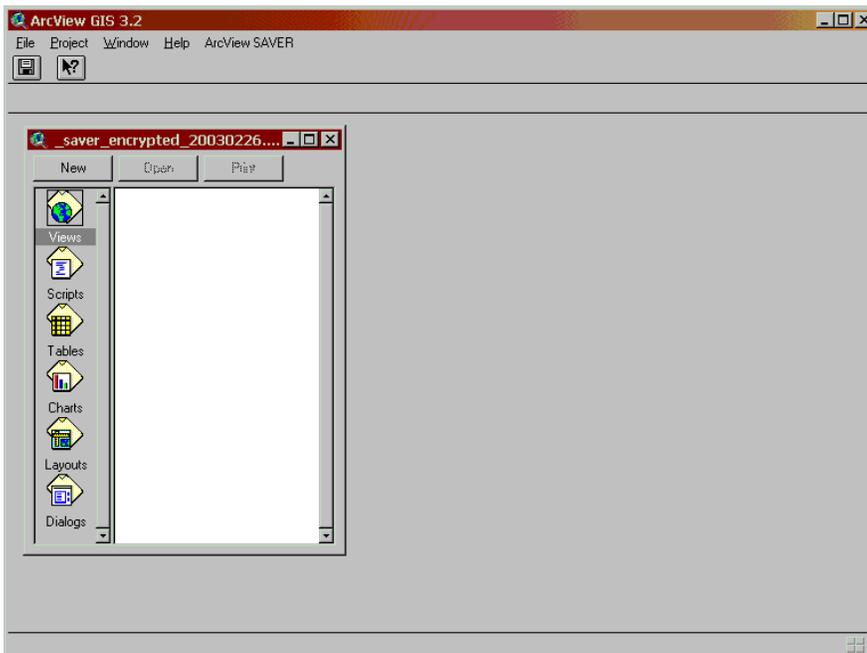
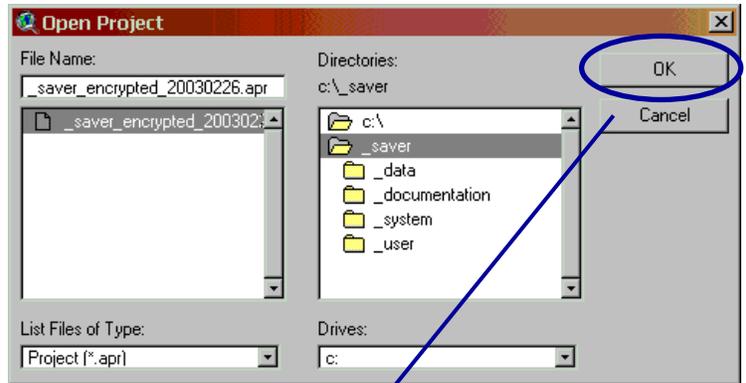
<< from Previous Page <<



e: Click on the latest version of the project file (e.g., saver\_encrypted...).

(Standard format of the project file will be “\_saver\_encrypted\_”<date>”.apr” where <date> equals the creation date of the file in YYYYMMDD format...e.g., “\_saver\_encrypted\_20030226.apr”).

f: Click on the OK button.



g: The SAVER project file is open. Notice the window with the heading that is the same as the project file name (see step e). This window is called the Project window (see page 25) and is an ArcView GIS standard window which controls many of ArcView's standard functions. Do not close/dismiss it.

>> Next Page >>

# SAVER

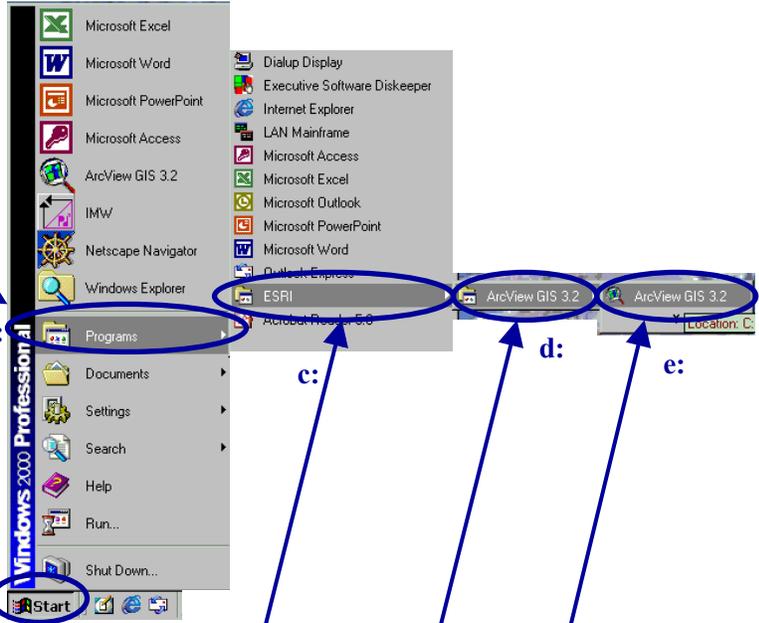
## Opening the SAVER Project :

### Option 2: Windows Start Menu



**a: Click on the Start button.**

**b: Choose the Programs subchoice.**



**c: Choose the ESRI subchoice.**

**d: Choose the ArcView GIS 3.2 or 3.3 subchoice.**

**e: Choose ArcView GIS 3.2 or 3.3.**

**f: See Option 1, Step g on page 22 (previous page).**

### Option 3: SAVER-specific Desktop Shortcut



**a: Double-click on the SAVER Desktop Shortcut icon**

**(If you don't have a Desktop Shortcut for SAVER, either use options 1 or 2 or refer to pages 12-14 which describe creation of a SAVER shortcut)**

**b: See Option 1, Step g on page 22 (previous page).**

# SAVER

## Opening the SAVER Project :

### Maximizing and Saving the SAVER Project for your desktop:

When SAVER is saved for your use, it is set for a screen resolution of approximately 800x600. Therefore, when it opens on your screen it may not fill the screen. Because you are working with maps, however, you might want it to fill the screen so that the map resolution is the best it can be.

Also, you might consider increasing your screen resolution to at least 1280 by 1024 pixels or, at a minimum, 1024 by 768 pixels. Anything smaller than this is really not suitable.

To maximize the SAVER Project and save this setting so SAVER opens maximized each time:

 a: Click on the maximize button in the upper right of the ArcView window.

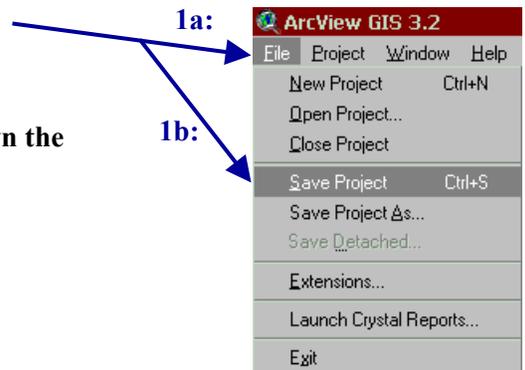
b: Then, either:

1: Click the File menu and choose Save Project,



2: Click the Save Project button, or

3: Use the shortcut/hotkey Ctrl+S (i.e., hold down the CTRL key and punch the S key).

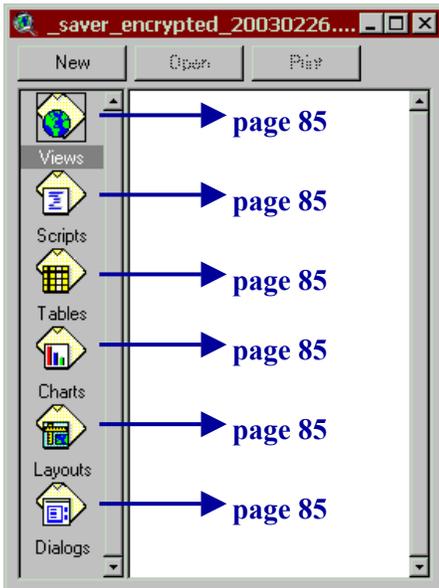


The next time you open the SAVER Project, the ArcView GIS screen will fit your screen...unless you change your screen resolution in the meantime.

# SAVER

## Opening the SAVER Project :

### The ArcView Project window:



The ArcView Project window, as mentioned on page 22, step is an ArcView GIS standard window which controls many of ArcView's standard functions. Do not close/dismiss it.

First, note that the project window header contains the name of the currently open ArcView project, in this case the SAVER Project file (e.g., "\_saver\_encrypted\_20030226.apr"). This will help identify which project you have open, especially when you begin saving your work in projects and opening them later.

Second, notice the icons along the left edge of the project window, one for each of Views, Scripts, Tables, Charts, Layouts, and Dialogs. Each of these is a major feature within ArcView, most of which are also utilized as portions of SAVER functions. Each of these features could be used within ArcView without the SAVER interface and programs but SAVER has been developed to target a special case use of ArcView and to ease your use of ArcView. However, as you can use ArcView itself to manipulate the SAVER output (i.e., maps, tables, etc.), Each of these ArcView functions are described briefly here and in more detail on the pages indicated. A treatise on each is not provided but each are also described in the ArcView GIS guide that came with your copy of ArcView 3.2 or 3.3.

**Views:** Views = maps, maps = views. **What is a view? Double-clicking creates a new view. Views → page 85.**

**Scripts:** SAVER primarily consists of two components within ArcView. Scripts are one of these. Scripts allow a programmer to create new capability within ArcView. Double-clicking on Scripts icon will open a Script editor. You shouldn't need this. **Scripts → page 85.**

**Tables:** Tables are much like Excel spreadsheets. They contain data which, within ArcView, are many times associated with spatial objects (points, lines, polygons) displayed on a View. Double-clicking on the Tables icon will create a new table. **Tables → page 85.**

**Charts:** Charts are much like Excel graphs/charts, though more limited. Double-clicking on the Charts icon will create a new chart. **Charts → page 85.**

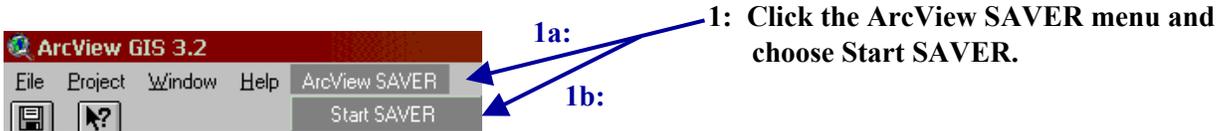
**Layouts:** Layouts are a method of displaying your data using the components of reporting necessary for communicating the message. Layouts will also be described and explained when output and display is discussed (see page XXX). **Layouts → page 85.**

**Dialogs:** SAVER primarily consists of two components within ArcView. Dialogs are one of these. Dialogs allow a programmer to create new dialog boxes within ArcView. **Dialogs → page 85.**

# SAVER

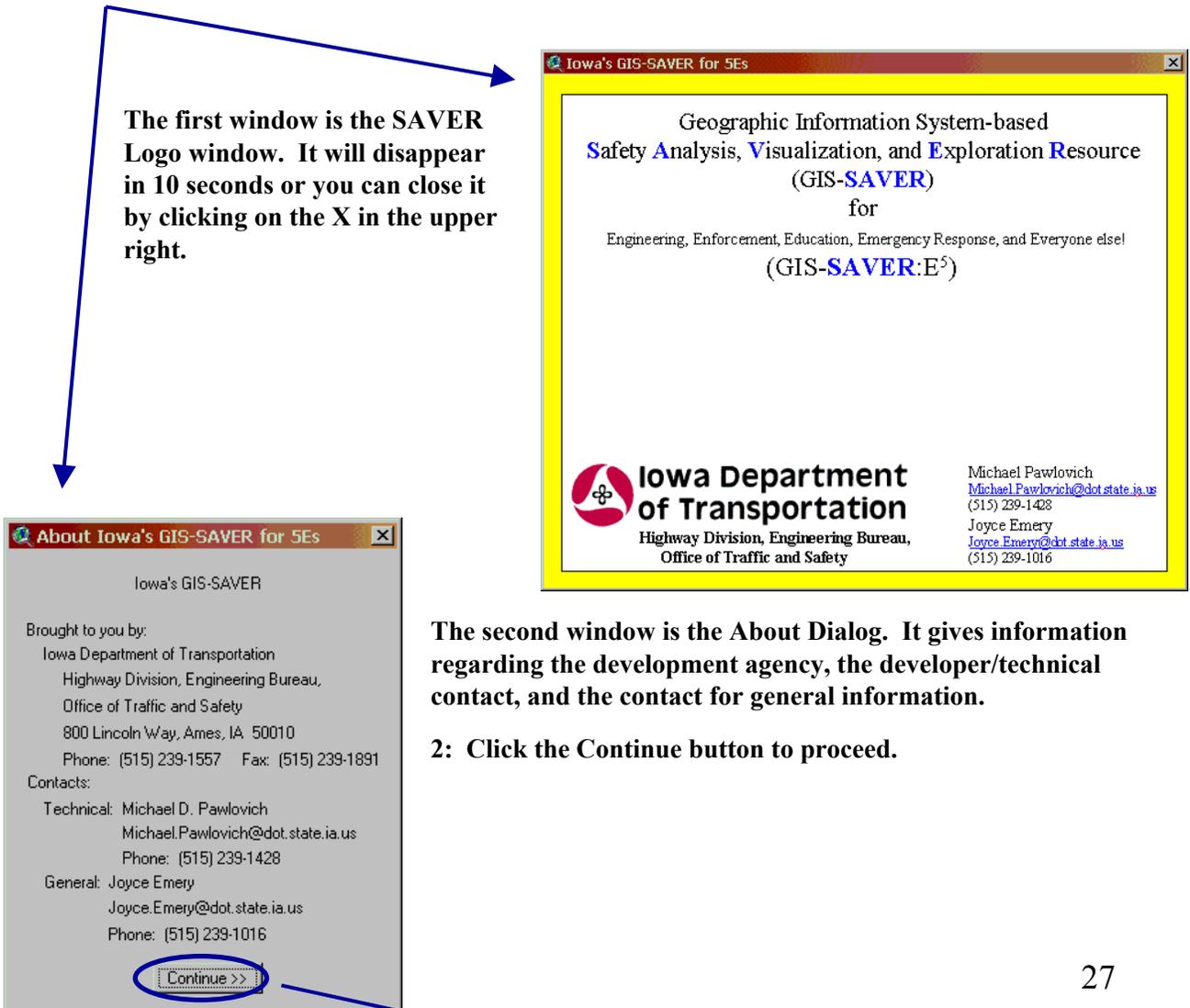
## Starting SAVER:

Thus far, you've only opened ArcView GIS and the SAVER Project. Now you need to initialize SAVER operation. To do this:



The hourglass symbol will appear and you'll wait while SAVER performs some initialization. During this time, SAVER is exploring its data directories to discern the data available. This affects choices given within subsequent operation such as data types (e.g., crash, ecco, etc.), data regions (e.g., city, county, RPA, etc.), and data years.

When this SAVER initialization is finished, two windows will appear:



>> Next Page >>

# SAVER

## Starting SAVER:

<< from Previous Page <<



The first, and most important, SAVER dialog is the Main dialog. From the Main dialog, all primary operations branch. These primary operations include:

- Creating a map (File),
- Identifying the area of interest (Location),
- Selecting attributes of interest (Query),
- Creating reports (Report), and
- Displaying results on a map (Display).

Main dialog → page 85.

Under each of these primary operations are several additional operations but, if to switch from one to another (e.g., from querying to reporting), the Main dialog must be accessed. Additionally, other options appear on the Main dialog, including: Defaults, Session, Exit SAVER, Exit ArcView. These will be explained in their turn.

Note: The Answers dialog (shown below) has a button which always allows Return to the Main dialog. If the Answers dialog is gone, clicking on the ArcView SAVER menu and selecting Start SAVER (as shown on page 26) will return you to the Main dialog as well.

The other central dialog within SAVER is the Answers dialog. The Answers dialog changes to reflect current operational needs and both facilitates operation and provides users with Answers to certain questions.

As stated, the Main Dialog button on the Answers dialog always allow return to the Main dialog.



Answers dialog → page 85.

To begin with, however, begin with setting user default analyst and agency information. These operations are detailed beginning on page 28. If you set these values as defaults, they should remain the same the next time you use SAVER.

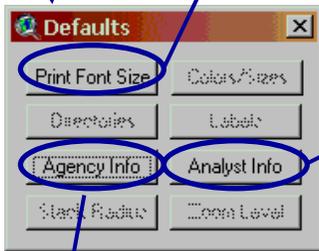
Following that, on page 30, the use of the primary operations begins with Creating a Map.

# SAVER

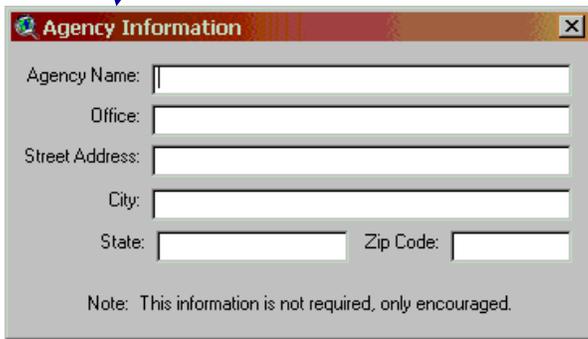
## Starting SAVER:



Click the Defaults button.



Click the Agency Info button.



The Agency Information dialog allows entry of certain information about the agency. This information can then be saved as default to be available each time SAVER is used.

This information will be included on many of the reports output by SAVER. The information will allow recipients to identify and contact the analyst for clarification.



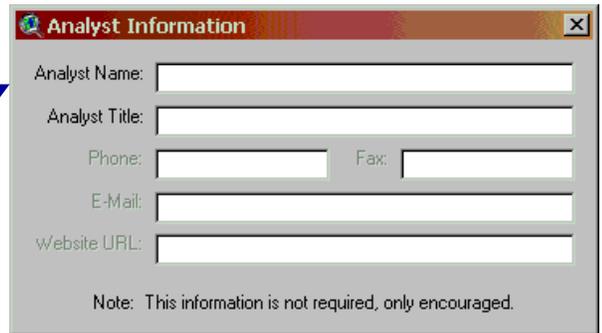
Click the Print Font Size button.

Print Font Size allows three choices, which depend on screen resolution:

1. Small for 1280 x 1024 or less.
2. Medium for 1600 x 1200 and more.
3. Large for larger screen resolutions.

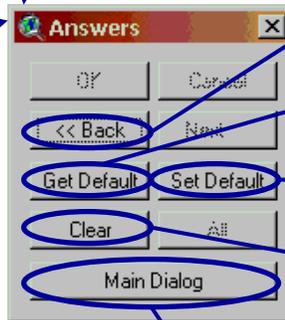
Click the Set Default button on the Answers dialog to set the chosen font size as default.

Print Font Size applies to reports such as Feature Count, Query Selection, Report Selection, and Stack Selection. These can also be copied, pasted, and printed from other software, such as Notepad, Wordpad, or Microsoft Word.



The Analyst Information dialog allows entry of certain information about the analyst. This information can then be saved as default to be available each time SAVER is used.

This information will be included on many of the reports output by SAVER. The information will allow recipients to identify and contact the analyst for clarification.



Returns to the Defaults Dialog.

Retrieves the default values for each setting.

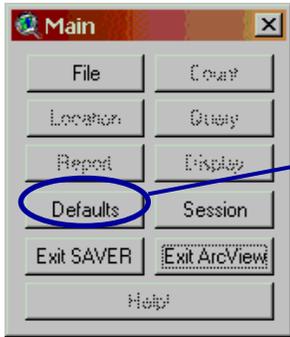
Sets the default values for each setting.

Clears the values for each setting.

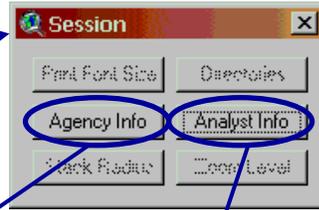
Returns to the Main dialog and base Answers dialog.

# SAVER

## Starting SAVER:

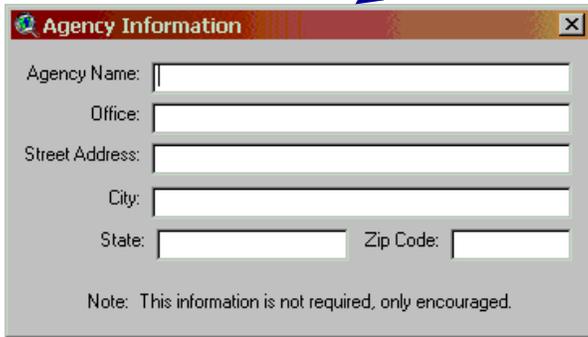


Click the Defaults button.



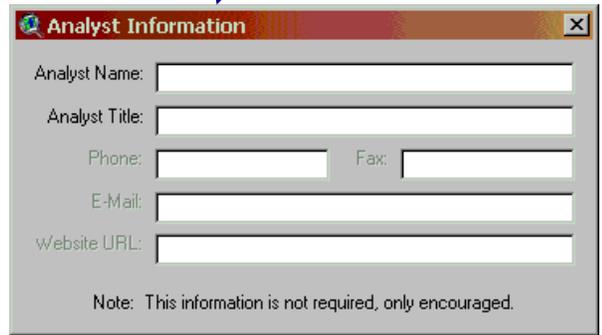
Click the Analyst Info button.

Click the Agency Info button.



The Agency Information dialog allows entry of certain information about the agency. This information can then be saved as default to be available each time SAVER is used.

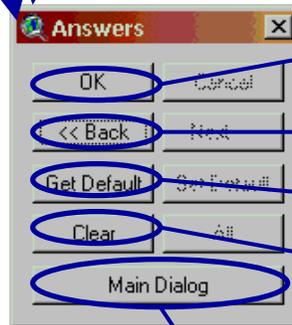
This information will be included on many of the reports output by SAVER. The information will allow recipients to identify and contact the analyst for clarification.



The Analyst Information dialog allows entry of certain information about the analyst. This information can then be saved as default to be available each time SAVER is used.

This information will be included on many of the reports output by SAVER. The information will allow recipients to identify and contact the analyst for clarification.

Note: The Session dialog enables these settings to be changed while within a particular SAVER session. Changes made to these settings through the Session dialog do not affect the defaults, which will reappear when SAVER is opened next.



- Sets the session values for each setting.
- Returns to the Session Dialog.
- Retrieves the default values for each setting.
- Clears the values for each setting.

Returns to the Main dialog and base Answers dialog.

# SAVER

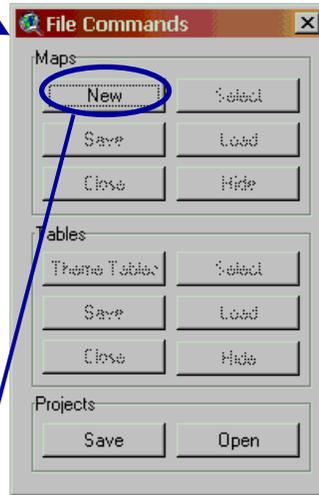
## Creating a Map:



Click the File button.

To begin creating a map, click on the File button on the Main dialog. The File Commands dialog appears and the Answers dialog changes appropriately.

**Note:** There are three areas on the File Commands dialog: Maps, Tables, and Projects. These are called Control Panels and indicate that buttons within those areas only apply to those topics (e.g., the Save button in the Maps control panel applies to Maps, the Save button in the Tables control panel applies to Tables, and the Save button in the Projects control panel applies to Projects). This is an important concept that will be encountered elsewhere in SAVER.

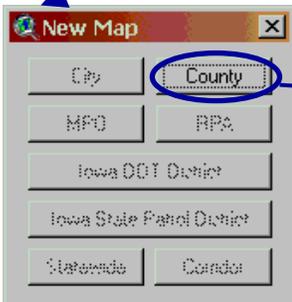


Click the New button.



The New Map dialog contains buttons showing several categories of region types: City, County, MPO, RPA, Iowa DOT District, Iowa State Patrol District, Statewide, or Corridor. Only those with data available (as determined by the SAVER initialization phase) will be enabled (e.g., County because only county data is available).

Click the County button. >> Next Page >>

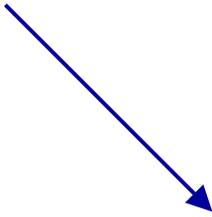


**Note:** The Answers dialog will change to reflect the current operation dialog. These changes aren't always apparent (e.g., the Back button for the New Map dialog will return to the File Commands dialog whereas the Back button for the File Commands dialog returns to the Main dialog). Only special case Answers dialog buttons will be mentioned after this.

# SAVER

## Creating a Map:

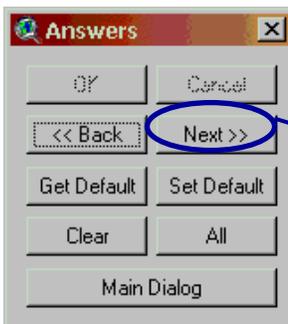
<< from Previous Page <<



The next dialog will reflect the choice taken from the New Map dialog (e.g., if County is chosen, the resultant dialog will display, as here, counties). The choices displayed will reflect, again, those regions (e.g., counties) that are available in the SAVER data directory (e.g., if only 5 counties are in the SAVER data directory on a computer, only those 5 counties will be displayed).



Choose county(ies) of interest by clicking in the checkbox(es) or by clicking All. To clear all checkboxes, click Clear. To set the checkboxes as a default, click Set Default. To retrieve the default selections, click Get Default. Then:



Click the Next button.

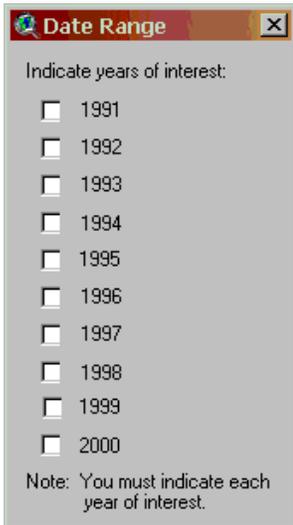


>> Next Page >>

# SAVER

## Creating a Map:

<< from Previous Page <<

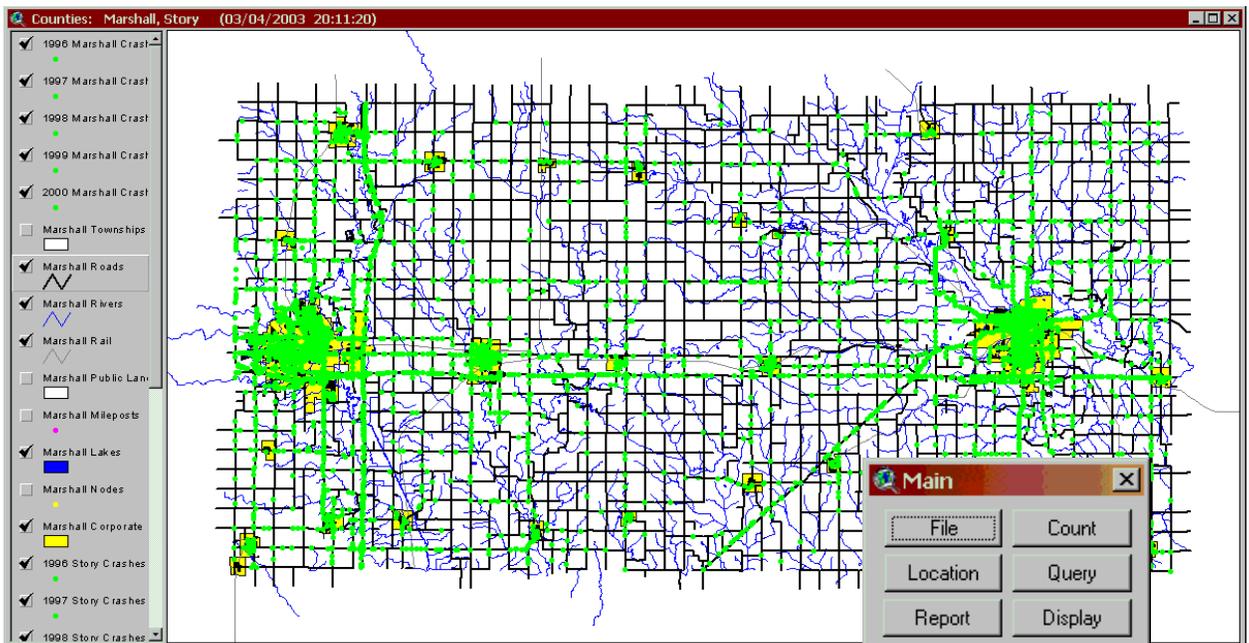


The next dialog will display the available years of data based on the selections from the previous dialog (e.g., the counties chosen). Years will be displayed only for those years worth of data that are available in the SAVER data directory for the county(ies) chosen, up to ten years worth (e.g., if only 5 years are available, only 5 years will be displayed).

Choose year(s) of interest by clicking in the checkbox(es) or by clicking All. To clear all checkboxes, click Clear. To set the checkboxes as a default, click Set Default. To retrieve the default selections, click Get Default. Then:



Click the Next button.



A Map (or View) window will appear and the area of interest will be drawn. To the left of the Map window is the Table of Contents, which briefly describes each feature type. Also, the Main dialog reappears, with more buttons available.

# SAVER

## Creating a Map:

<< from Previous Page <<

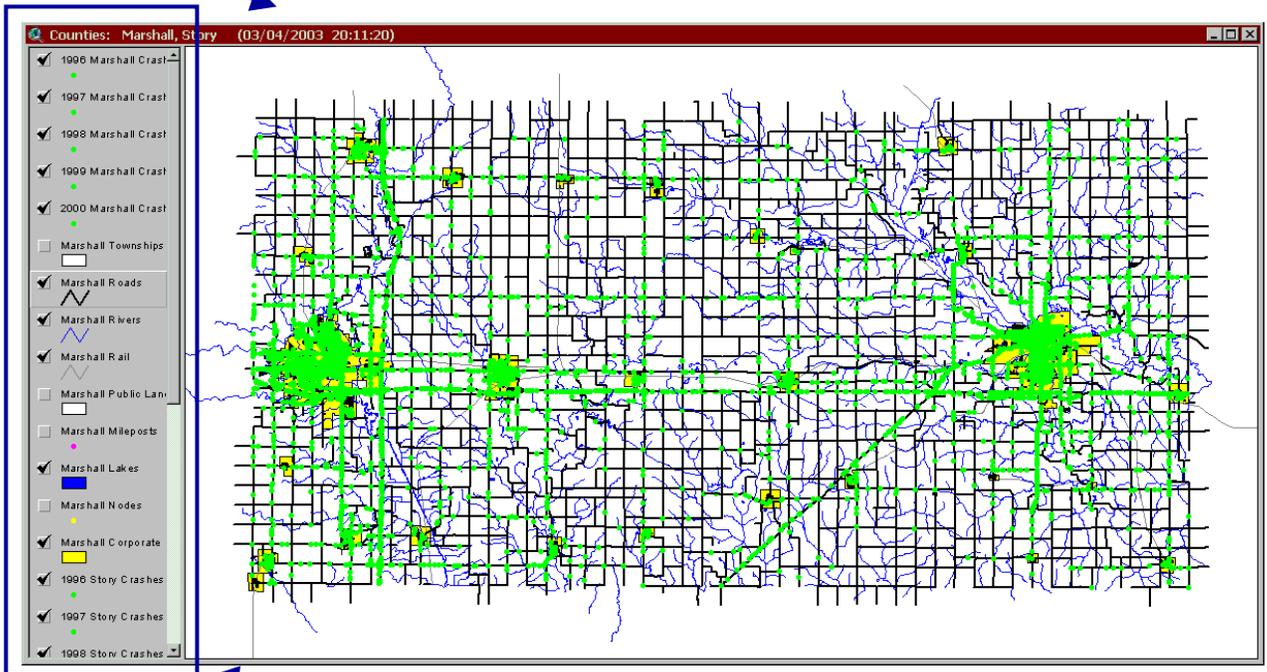


Table of Contents

The Table of Contents (TOC) provides a name for each feature (see definition) type and shows whether a theme (see definition) is visible (see definition) and whether a theme is active (see definition). The visibility of a theme is shown by the checkbox to the left of each theme description. Any theme with a checkmark to the left is visible. Whether a theme is active or not is shown by an outline around the themes that are also active. On the map above, the Marshall Roads theme is active. Note the very faint outline. To change this, using ArcView, a user can click on another themes listed in the TOC. To select multiple themes, hold down the Shift key and click on multiple themes.

**Definition:** A feature is a mappable object (point, line, polygon) displayed within a Map window. Features are contained within themes.

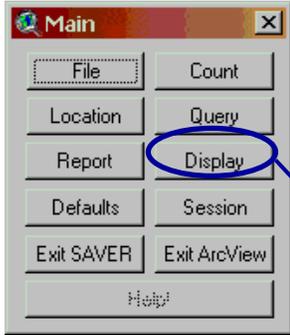
**Definition:** Themes contain many similar features (e.g., 1998 crashes). Themes are listed in the Table of Contents (TOC). The TOC could be viewed as a representation of a stack of overhead slides. Themes above another theme in the TOC overdraw those below. Those themes without a checkmark are pulled from the stack, though their positions in the stack are saved. FYI – some users will refer to themes as layers or coverages. These terms are interchangeable.

**Definition:** Visible refers to whether a theme is being displayed in the map window or not.

**Definition:** Active refers to whether the features of a theme can be selected, unselected, queried, counted, reported, or stacked within SAVER. SAVER only operates on active themes. Thus, for example, if a user wanted to query 3 years of crashes for two counties, the crash data for those two counties for those 3 years must be active.

# SAVER

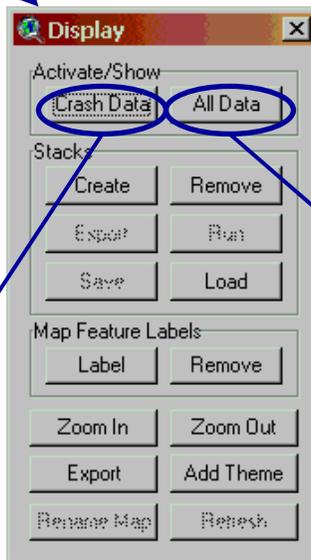
## Setting Themes Active or Visible:



Click the Display button.

To set themes active or visible within SAVER, there are two options. **First**, ArcView allows a user to click on themes within the TOC, as alluded to on the previous page. This option works well if only a couple themes need to be active. However, if many themes needed to be active, a user would have to click on each separate theme. **Second**, using SAVER, a user can set all themes of a particular type active simultaneously, across all regions (e.g., set all crash data across all counties active). This option works well if many themes need to be active. To begin, click the Display button on the Main dialog.

The Display dialog opens. Notice that the top Control Panel is titled Activate/Show. Two buttons are within this Control Panel: Crash Data and All Data. Click on either, they both contain crash data.

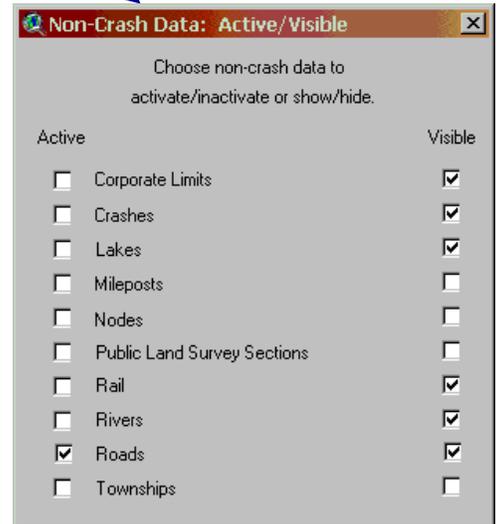


**Note:** The Display dialog contains three separate Control Panels: Activate/Show, Stacks, and Map Feature Labels.

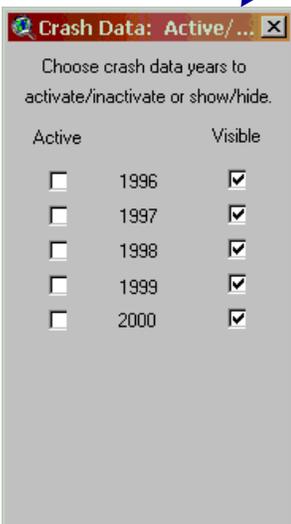
Click the All Data button.

Click the Crash Data button.

Display dialog → page 85.



The Non-Crash Data: Active/Visible Dialog opens. This dialog allows users to choose from all data types for setting themes active or visible.



The Crash Data: Active/Visible Dialog opens. This dialog allows the user to choose which years of crash data are active or visible.

This allows, for example, users to perform before/after studies without having to open multiple maps, one with the before data years, the other with the after data years.

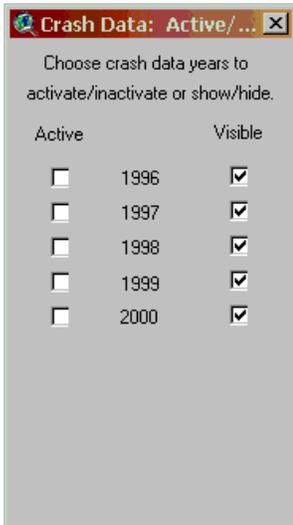
For example, to set all years of crashes active (and nothing else), click 35 on the crashes active box and click off the roads active box.

>> Next Page >>

# SAVER

## Setting Themes Active or Visible:

<< from Previous Page <<



If the Crash Data button on the Display dialog is clicked, the Crash Data: Active/Visible dialog opens. To set particular years of crash data (e.g., 1998-2000) active, click on the Active checkboxes for those years. To set certain years non-visible/undisplayed (e.g., 1996-1997), click off the Visible checkboxes. To set all years active and visible, either check them all or click the All button on the Answers dialog. To set all years inactive and non-visible/undisplayed, either uncheck them all or click the Clear button on the Answers dialog.

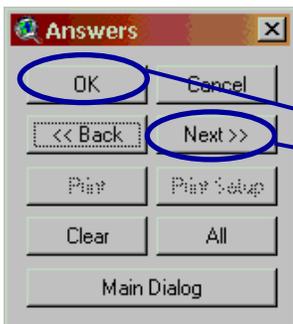
After setting the checkboxes as desired, click the Next or OK button on the Answers dialog.



If the All Data button on the Display dialog is clicked, the Non-Crash Data: Active/Visible dialog opens. All that applies to the Crash Data: Active/Visible dialog applies to this dialog. However, for example, if crashes were selected here, all that is selected for crashes will apply to all crash themes, regardless of year. Also, multiple types of themes can be set active or visible simultaneously. For example, both Roads and Crashes could be active.

Again, after setting the checkboxes as desired, click the Next or OK button on the Answers dialog.

**Note:** Again, for purposes of SAVER, only active themes are selectable, unselectable, countable, queryable, reportable, and stackable. The active themes that are to be queried on don't need to be visible, except for user visualization for selection purposes.



Click the  
OK or  
Next button.

>> Next Page >>

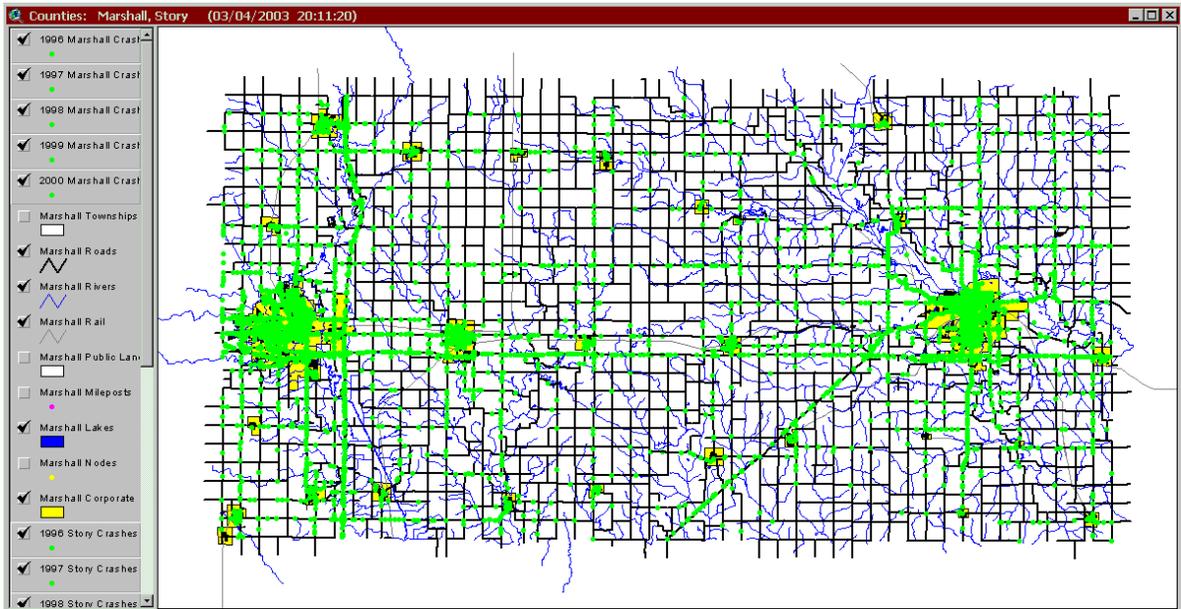
# SAVER

## Setting Themes Active or Visible:

<< from Previous Page <<



Assuming all years of crashes were set active and visible (using either Active/Visible dialog), the map changes to reflect this when the Next or OK button on the Answers dialog is clicked:



If the OK button is clicked, the Active/Visible dialog remains.

If the Next button is clicked, the Active/Visible dialog closes and the Display dialog opens.

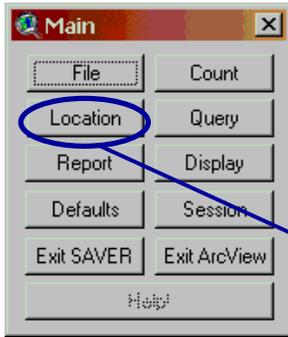
To return to the Main dialog, click the Main Dialog button on the Answers dialog or click the Back button until the Main dialog appears.

**Note:** For this map, there were two counties with 5 years of crash data. If a user would have used ArcView to set the crash data active, the user would have had to click one crash theme, hold down the Shift key, and then click the other 9 crash themes, scrolling the TOC as needed. Expand this to 10 counties with 5 years and the user is clicking 50 times. Conversely, using SAVER, the setting of the crash themes as active requires far less clicking.

**Note:** Because the all crash data years were selected, when a selection method is used, only crashes will be selected. Additionally, only crashes can be unselected. If a road were selected and a user wanted to unselect it, the user would first have to set the roads themes active. This concept, again, applies to counting, querying, reporting, and stacking. For example, if 5 years of crashes were active when selections were made but then 2 years were set inactive, then, when counting, querying, reporting, or stacking, only the remaining 3 years would apply.

# SAVER

## Location Selection:



Click the Location button.

For specifying the location for which data is needed, the Location operation exists. However, currently the Location operation is mostly inoperable and, instead, many ArcView tools exist for this purpose. (These will be explained shortly – see page 40.)

Opening the Location dialog, however, will display some of the future location options.

Within the Selection control panel, there are four buttons: Region, Point, Feature, and Polygon.

- Region: allows selections within regions (e.g., cities, counties, districts)
- Point: allows selections within distance of a user-defined point
- Feature: allows selections in association to a feature (e.g., along a road, within a township)
- Polygon: allows selection within a user-defined polygon

Each of these has a corresponding ArcView function.

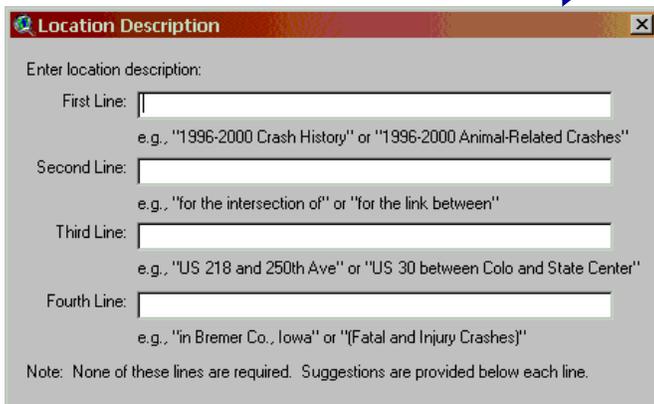
Currently, only the Count option functions. Click the Count button to explore this function.



Click the Location button.



At some point, users will be able to define areas for selection (using one of the previous methods) and save them for later loading and use. (The corresponding ArcView functions don't enable saving and loading.)

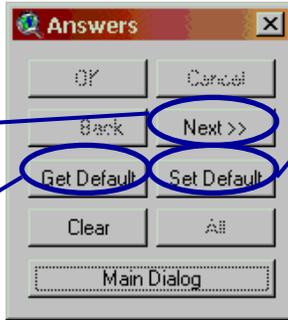


Enter a sufficient description for the location. This description will appear on the count report. The description will also be saved within the current SAVER session (i.e., until SAVER is closed). These descriptions can be saved as defaults also.

# SAVER

## Location Selection:

<< from Previous Page <<

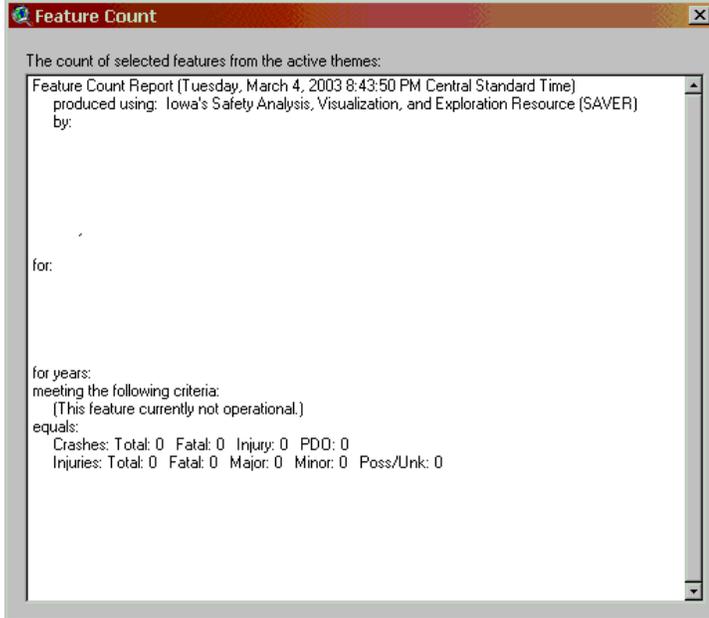


Retrieves the default location description.

Enter the description and click the Next button.

Sets the default location description.

Users can set defaults for particular lines of the description, leaving other lines blank. For example, if a user were always using 1996-2000 data, the first line could be defaulted to: "1996-2000 Crash History" and the other lines left blank for information that changes.



The count report details crash history by year, by region (i.e., city, county), and by crash and injury severity. A total for all years is also given.

For this example, no crashes were selected.

Additionally, the Count function is available on the Main dialog, within the Query dialog, and within the Report dialog. All of these Count functions operate the same and produce the same report. They are placed within each of the dialogs for user convenience.

Notice that the count report date and time stamps the report. It also reports that SAVER was used (as opposed to some other analysis software).

These details are useful for verifying numbers and checking software problems.

The blank area following the word "by" is for analyst and agency information.

The blank area following the word "for" is for location description.

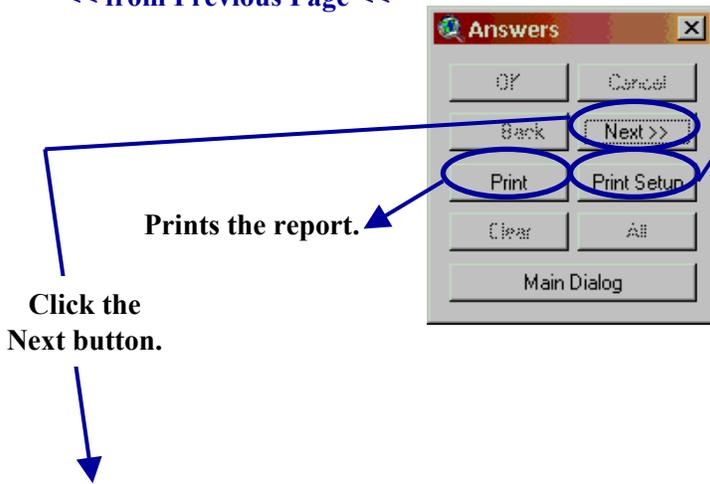


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# SAVER

## Location Selection:

<< from Previous Page <<



Prints the report.

Click the Next button.

The Count Report will close and the Location Display dialog will open.

Allows the user to set the printer and define printer properties.

Keep in mind that the print option from SAVER is currently affected by user screen resolution and size can be defined under Defaults > Print Font Size (page 28).

Future SAVER versions will allow saving this report as a text file as a Print option. Users could then open this text file within a wordprocessor (e.g., MicroSoft Word), reformat it, and print and save it.

Currently, a user can select (highlight) all of the text within the report, hold the CTRL key while simultaneously hitting the "C" key (copy), open a wordprocessor, paste it into that, and reformat, print, and save it.

As mentioned, other methods of selecting features (e.g., crashes) exist within ArcView itself. These methods mimic those that will be in SAVER, without the capability for saving the selection area. Explanations of these methods begin on the next page.

# SAVER

## Location Selection:

### Zoom Tools:

Within ArcView, a series for manipulating the map window exist. These tools may collectively be referred to as Zoom Tools, although not all of them “Zoom” the map. These tools include: Zoom to Full Extent, Zoom to Active Theme(s), Zoom to Selected, Zoom In, Zoom Out, Zoom Previous, and Pan. Most of these are available as View Menu options as well as buttons.



Zoom to Full Extent

Selecting the Zoom to Full Extent tool causes the Map to redraw, displaying the entirety of all themes within the Map. The Map displays the full extent of all the themes, regardless of whether they are being displayed or are active. Note that many of the themes extend beyond the borders of the region you have chosen. For example, many crashes are placed outside state boundaries. These are unlocateable crashes that had insufficient information for proper display on the map. Fortunately, over time the numbers of these crashes are going down.



Zoom to Active Theme(s)

The Zoom to Active Theme(s) tool functions in a similar fashion to the Zoom to Full Extent tool, except that this tool causes the Map to redraw, displaying the extent of the active themes.



Zoom to Selected

The Zoom to Selected tool functions in a similar fashion to the Zoom to Active Theme(s) tool, except that this tool displays a map extent sized for selected features within the active themes.



or Zoom In

The Zoom In tool must be selected as an option, which then provides a changed mouse icon that may be use in two manners: 1) a user may click on the map and the map will zoom in a certain percentage, centered on the tool location on the map and 2) a user may click, hold, and drag the mouse to draw a rectangle which, when the mouse is released, defines the area that the map zooms in to. Both Zoom In tool buttons function the same.



or Zoom Out

The Zoom Out tool functions much like the Zoom In tool, only it zooms the map out. One ArcView pitfall is that clicking on the Zoom Out tool multiple times in quick succession can cause the map to zoom out much beyond user desires. Slow and easy is best.



Zoom to Previous Extent

The Zoom to Previous Extent tool causes the Map to redraw to the previous display. This only applies to the immediately previous display. ArcView does not recall multiple displays.



Pan

The Pan tool must be selected as an option, which then provides a changed mouse icon that enables adjustments to the map display by sliding the map window around, based on user interaction.

# SAVER

## Location Selection:

### Query Builder Tool:



Query Builder

The Query Builder tool allows a user to construct a query, using “math operators” (e.g., +, -, =, and, or, (), etc.), to select features from the queried theme or table and display them in the project default selection color (e.g., for SAVER it is red).

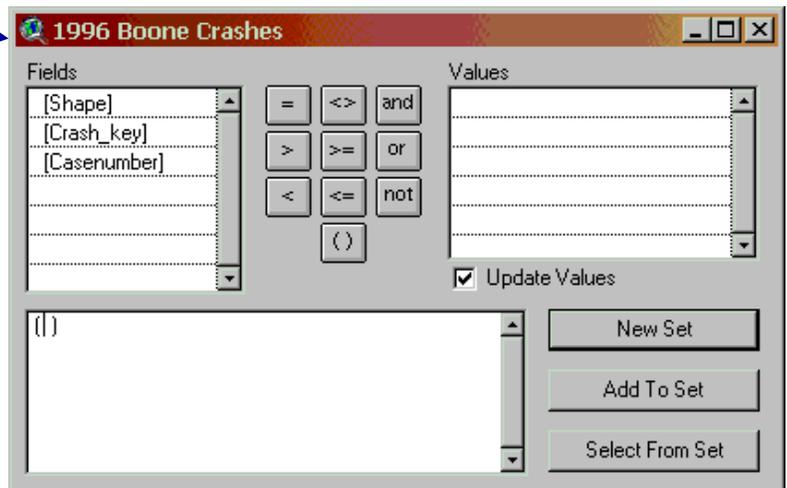
For the case of selecting the location of interest, the Query Builder will most often be used to query either the roads, corporate limits, rails, rivers, or milepost themes. However, it can be used to query any of the themes within a view or any of the tables in the project.

To use the Query Builder tool, a view or table must first be the active window. With a view active and at least one theme active within that view, the Query Builder button will be enabled.

For example, if a view containing Boone county crash data were active and the 1996 Boone Crash theme were active within that view, selecting the Query Builder tool would open the dialog as shown:



Click the Query Builder button.



However, more than likely the Query Builder tool, as mentioned previously, will be used to query one of the background themes (e.g., roads, corporate limits, rails, rivers, or milepost). To query one of these, rather than the crash database, the theme you want to query will have to be active.

**Note:** If multiple themes are active, the Query Builder tool will open a query building dialog for only the first available theme, as listed from the top to the bottom of the themes list to the left of the map. Thus, if crash data and road data themes were active, the Query Builder tool will only open one dialog for building queries. This one query building dialog will be for the theme which is further up the list of themes.



>> Next Page >>

# SAVER

## Location Selection:

<< from Previous Page <<

**Note:** When a map is first opened, the road themes for all counties will be set as the active themes. Therefore, if you want to query from the road themes, you must indicate which road theme you want to query from by setting only it active. Simply click on the theme listing for the theme to be queried (i.e., that road theme for which the road is likely to be in), then click on the Query Builder tool. If only one county has been opened in the map, just click on the Query Builder tool. For non-road themes, click on the theme to be queried in the same manner as the multi-county road theme option (i.e., click on the river, rail, or milepost theme for the county of interest).

From our original example map, notice that the road themes in the Table of Contents are the active themes. (All road themes are active, the Table of Contents is simply not displaying the Story Roads theme at the moment.)

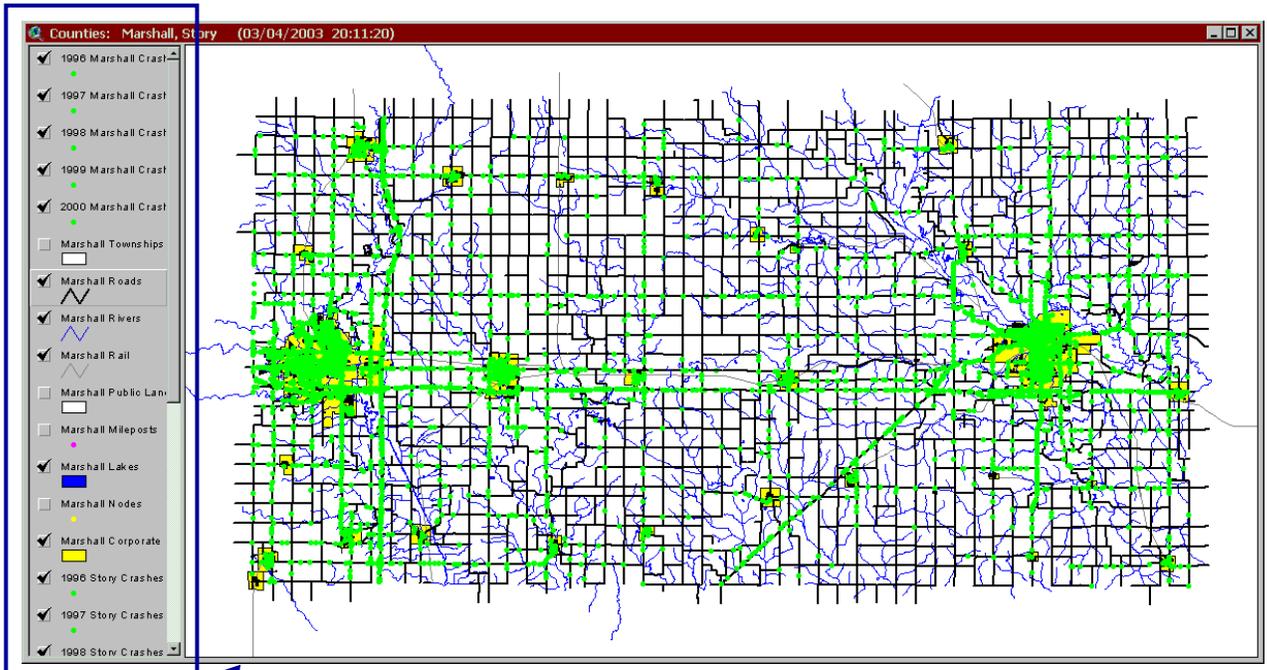


Table of Contents

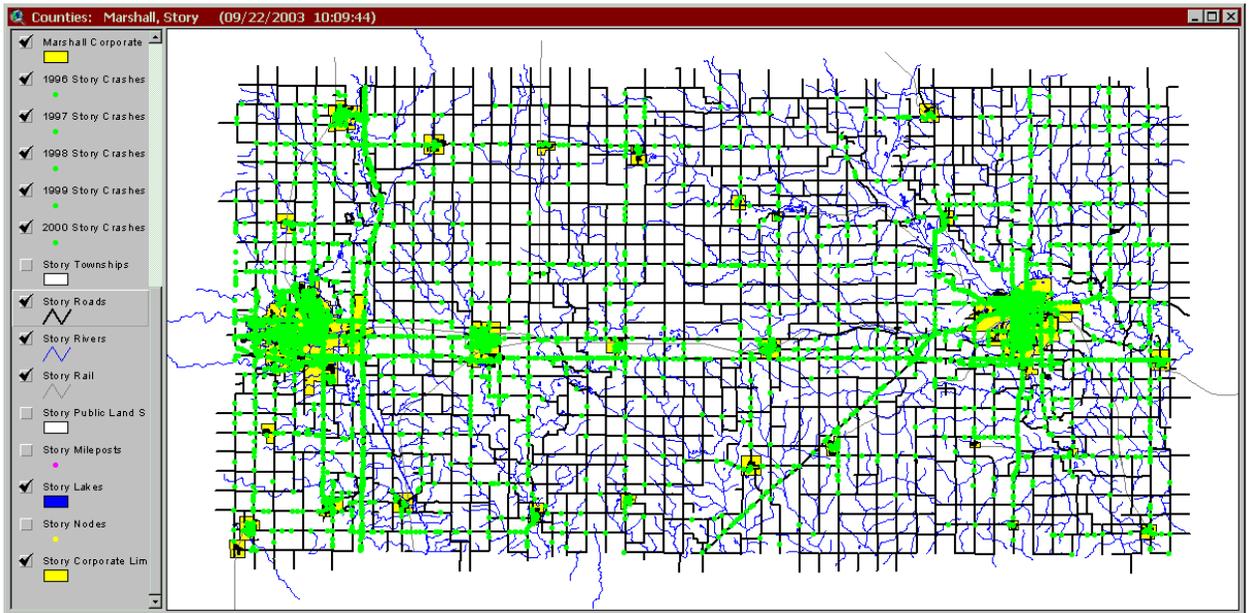
If you were to select the Query Builder tool now, a query building dialog for Marshall Roads would open. However, if you wanted to query the Story Roads, this would not work. To open a dialog for building a query based on Story Roads, scroll down in the Table of Contents to show the Story Roads theme and click on it, setting it active (as shown on the next page). Then select the Query Builder tool.

>> Next Page >>

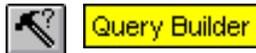
# SAVER

## Location Selection:

<< from Previous Page <<

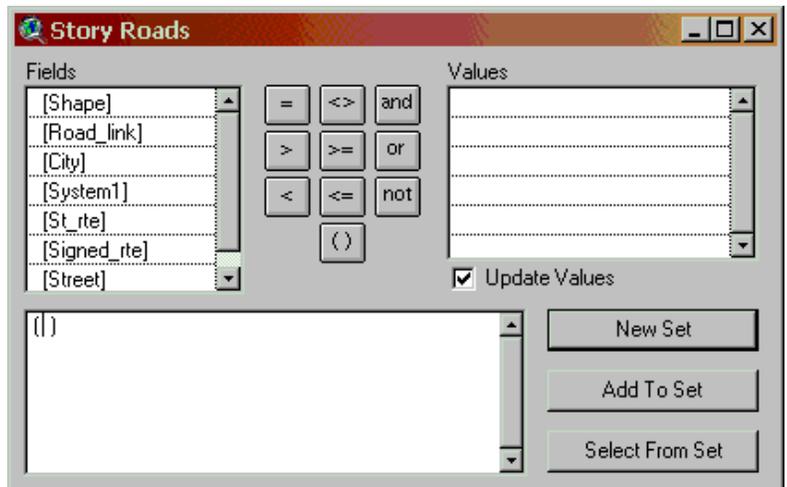


Select the Query Builder tool:



Using the query building dialog, for road themes, you can select roads within an area (e.g., county) using the Fields (or columns) within the database for the theme.

The query building process involves specifying a Field of interest, indicating a mathematical operator, specifying a value, and then choosing to create a New Set, to Add to an existing Set, or Selecting from an existing Set. The result will be highlighted features on the map.



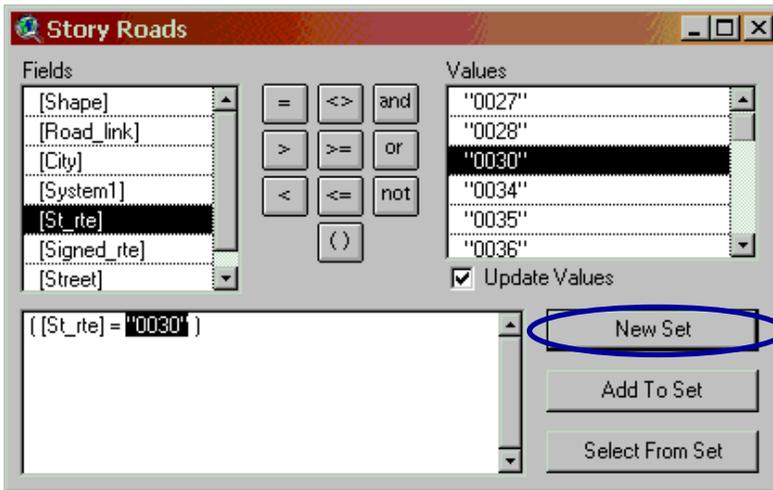
Essentially, you will be creating an equation which specifies your desired result, e.g., highlighted features on your map. For example, if you specified ([St\_Rte] = "0030") (e.g., querying for any value in the St\_Rte Field equal to "0030", which stands for US 30), the Story Roads query building dialog should be as shown on the next page.

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# SAVER

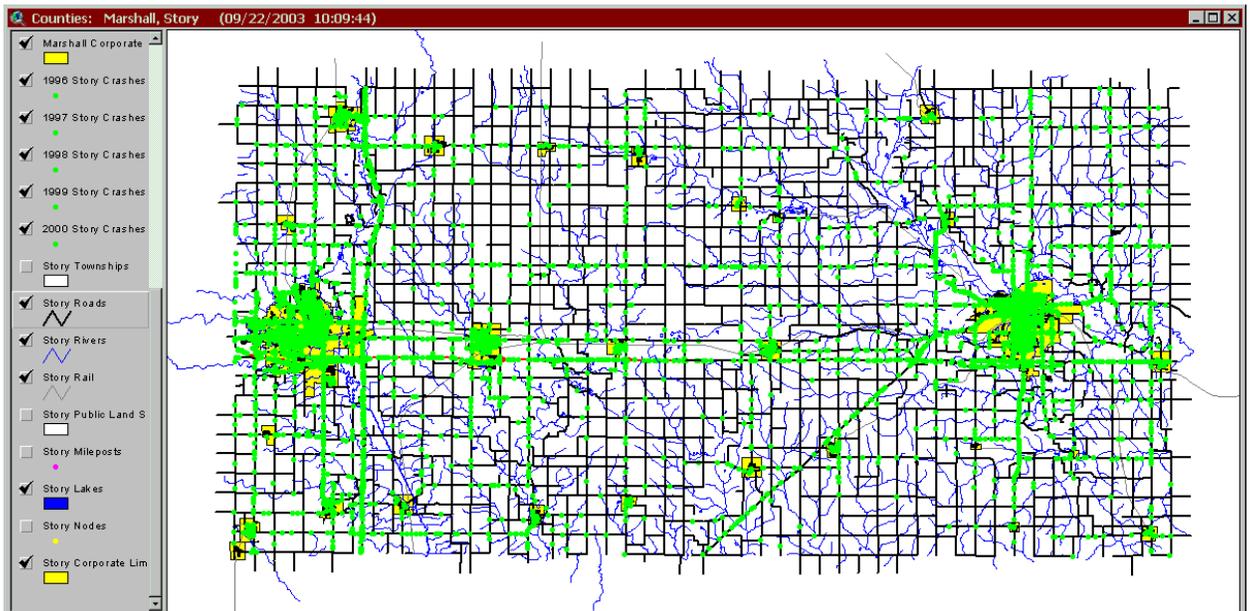
## Location Selection:

<< from Previous Page <<



To do this, first double-click on the “[St\_rte]” Field, single-click on the “=” button, and either type in “0030” or find the value “0030” in the Values portion of the dialog and double-click on it.

Click the  
New Set button.



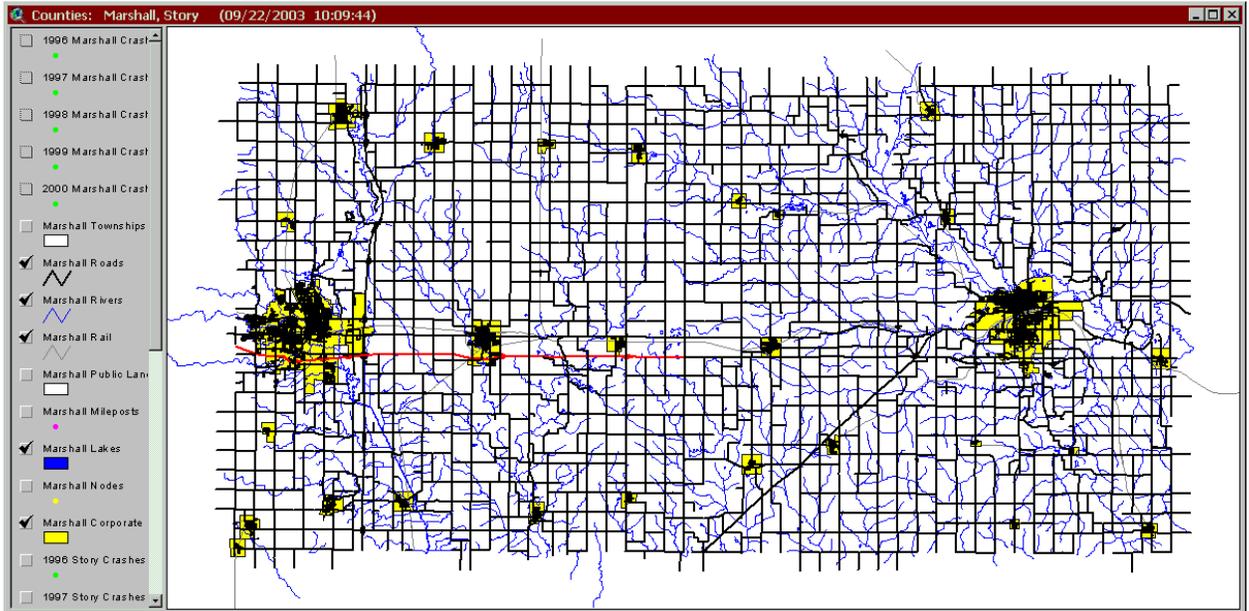
Unfortunately, the red line representing US 30 within Story County is obscured under the green crash dots along the roadway. Setting those dots temporarily invisible, you get:

>> Next Page >>

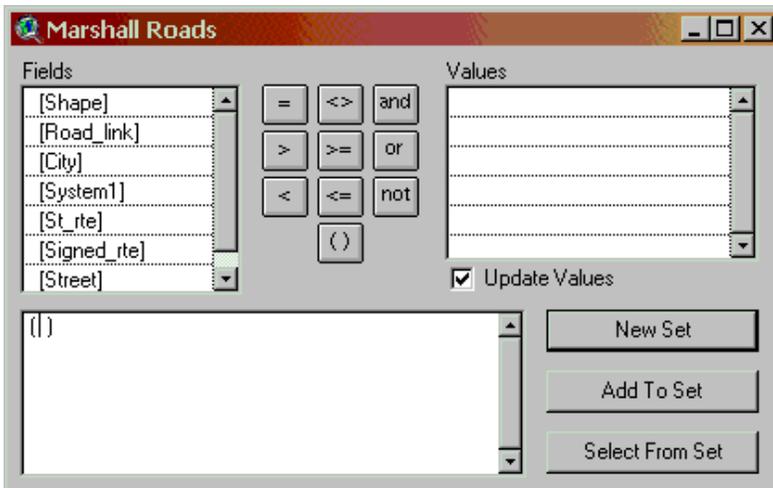
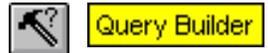
# SAVER

## Location Selection:

<< from Previous Page <<



Only the Story County portion of US 30 has been highlighted. To highlight US 30 within Marshall County, activate the Marshall Roads theme and select the Query Builder tool:



Using the query building dialog buttons, re-specify that same request: US 30, now within Marshall County.

To re-specify the query, you can either build the query again using the Fields, Buttons, and Values (as shown for Story Roads) or you can copy and paste the query from the Story Roads query building dialog (copy and pasting explained in the note at the bottom of the next page).

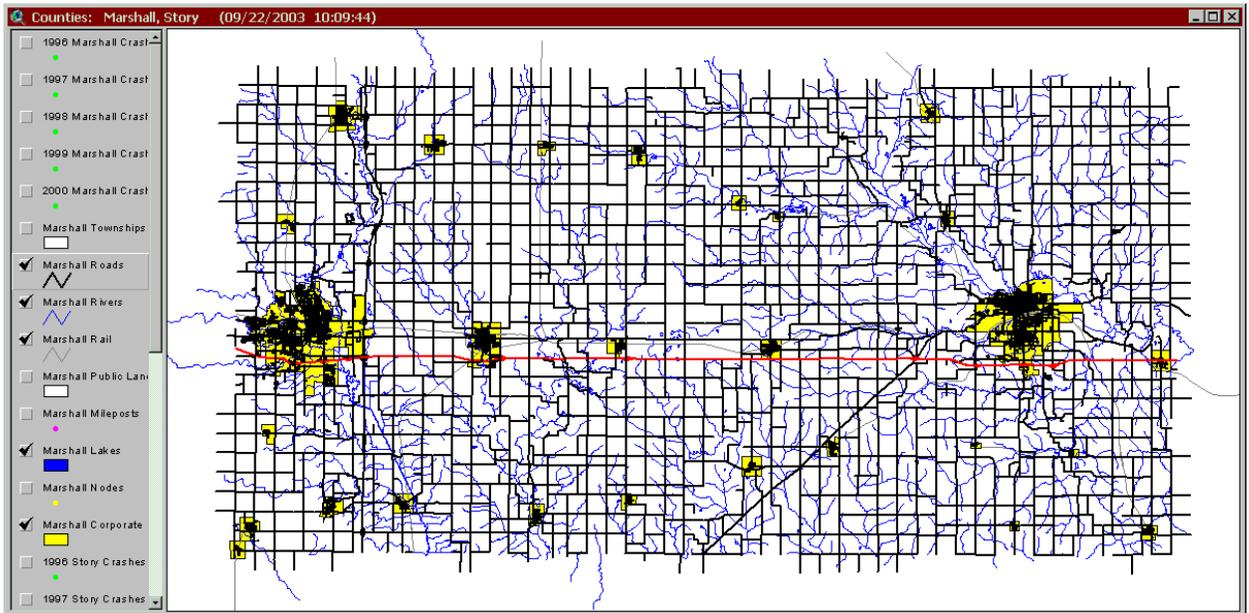
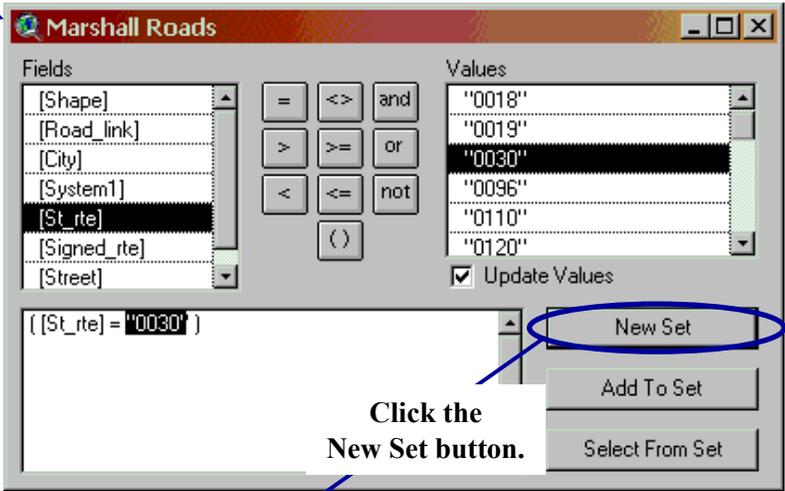
>> Next Page >>

# SAVER

## Location Selection:

<< from Previous Page <<

Once everything has been specified, click the **New Set** button. The portion of US 30 within Marshall County will be highlighted.



**Note:** To copy and paste the contents of one query building dialog from one to another, begin by highlighting the text within the “from” dialog. Then, on your keyboard, hold the “Ctrl” key (near either end of the space bar) down and depress the “C” key. This will copy the highlighted text as “Ctrl-C” is a Windows shortcut for “copy”. Then, open the “to” dialog or use your mouse to set it active (by clicking on it). Then, highlight the “( )” within the window and, while holding down the “Ctrl” key again, depress the “V” key. This will past the highlighted text as “Ctrl-V” is a Windows shortcut for “paste”. The pasted text should look exactly the same as the copied text. If not, edit it by treating it as a small wordprocessor. Then you may click on the New Set button.

>> Next Page >>

# SAVER

## Location Selection:

<< from Previous Page <<

### Notes on using ArcView's Query Builder within SAVER

**Note 1:** Within the road theme query building dialogs, [St\_rte] applies to Interstates, US routes, and Iowa routes, "Signed\_rte" applies to county routes, and "Street" applies to local road names (municipal or E911). These follow the Iowa DOT GIMS definitions and are subject to change as GIMS changes.

For [St\_Rte], each number designator is treated as a text value of width 4 with leading zeroes (e.g., US 30 = "0030", I-35 = "0035", IA 930 = "0930", etc.). An example [St\_rte] query would be ([St\_rte] = "0035"), which would capture all routes with "0035" as a designator.

Each county route designator is treated as a text value of width 4 with the letter designator first, a place-holding "0", and the number designator being last (e.g., E18 = "E018", S27 = "S027", etc.). An example [Signed\_rte] query would be ([Signed\_rte]="S014"), which would capture all county roads with "S014" as a designator.

"Street" values are treated as text values. However, due to spelling errors or inconsistencies in street designations, "Street" values are a little trickier. If the Values area contains information (for larger counties it might not), use the Values to find and specify your street, which results in a query of form ([Street] = "Main St."). If the Values area contains no information, consider use of the ".Contains" option. The form of the ".Contains" option is ([Street].Contains("Main")). This will capture any road that contains the word "Main" in the [Street] field. That means that it will capture "Main Ave.", "E. Main St.", "Main Street", and so forth.

**Note 2:** You can string query designations together by using the "and" and "or" button operators. For example, to capture any road with either [St\_rte] equal to US 30 or any road with [Signed\_rte] equal to S27, use the "or" designator: ([St\_rte] = "0030") or ([Signed\_rte]="S027"). To do this, construct the first portion (for US 30) first, then click on the "or" button, and follow this by constructing the second portion (for S27).

**Note 3:** To add to or select from an existing selection, use the Add to Set and Select from Set buttons, respectively. These will only Add to or Select from the active theme being queried.

**Note 4:** Other than the specific Field names and Values, everything detailed for road themes applies to corporate limits, river, rail, and milepost themes. The specific Fields within each of these themes will appear when the Query Builder tool is selected while these themes are active. For example, to select "Ames" within Story County, have the Story Corporate Limits theme active, select the Query Builder, double-click [Place\_name], single-click the "=" button, double-click on Ames in the Values area, then click on the New Set button.



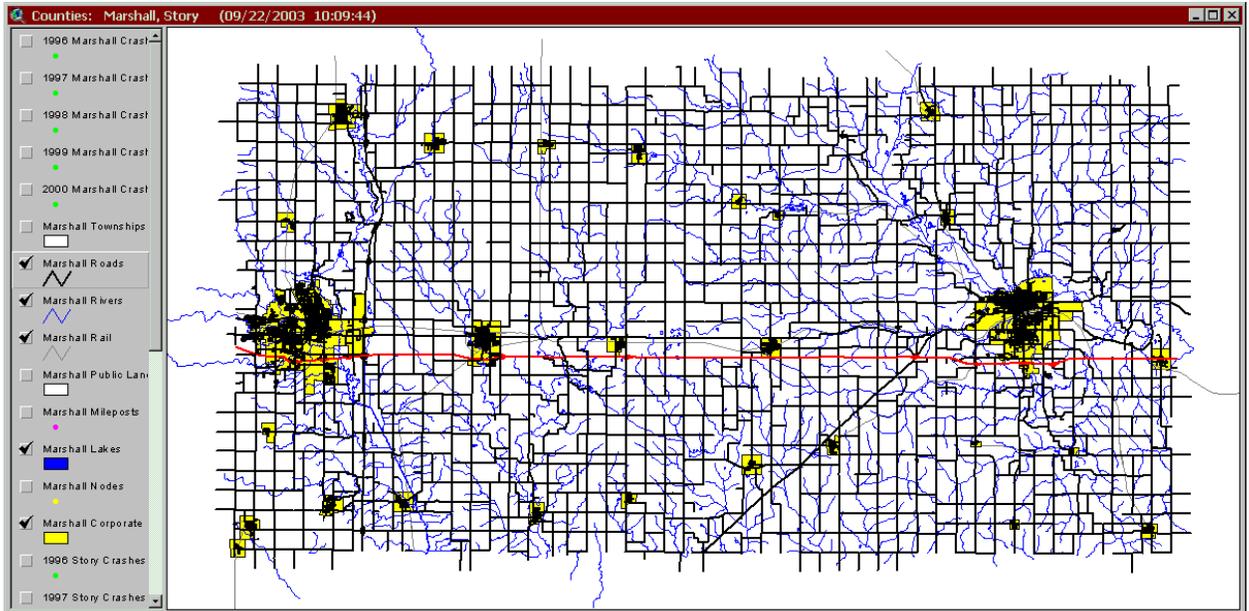
>> Next Page >>

# SAVER

## Location Selection:

<< from Previous Page <<

The result of this querying is a map with roads, cities, rivers, rail, or mileposts of interest highlighted:



From this, the Select Feature (“Fence”) tool or the Graphical Objects can be used to select crashes along the road, as covered in the following sections.

## Good News!

The non-simplistic process of specifying queries using ArcView will be replaced in future versions of SAVER! You will be doing the same operations but they will be packaged in a much more user-friendly graphical user interface (GUI). Additionally, alternate fields, such as roadway volumes, lane widths, pavement types, etc., will also be accessible, for querying and for calculations (e.g., rate).

# SAVER

## Location Selection:

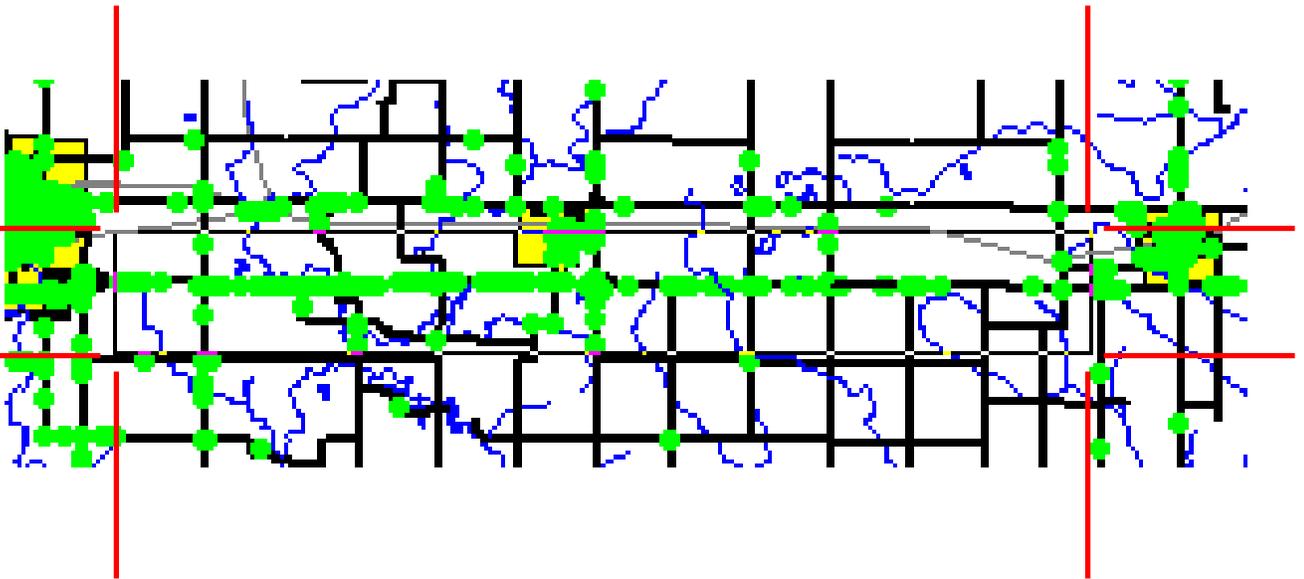
### Select Feature (“Fence”) Tool:



Select Feature

The Select Feature tool must be selected as an option, which then provides a changed mouse icon that may be use in two manners: 1) a user may click, hold, and drag the mouse to draw a rectangle which, when the mouse is released, causes all features of active themes to be selected and 2) a user may click on an individual feature within one of the active themes, causing that feature to toggle between selected and unselected. The Shift key, on the keyboard, may be used in combination with either of these options. For example, if a user had drawn a box and then wished to draw another box, while retaining the original selection, holding down the Shift key in combination with the Select Feature would accomplish this. Additionally, if the user wished to unselect a feature but retain all other selected features, holding down the Shift key while clicking on the feature to be unselected would accomplish this.

To use the Select Feature tool, first click on the Select Feature tool button. Then, on the map, click, hold, and drag, drawing a rectangle around the area of interest. (You may wish to zoom in to the area first for improved detail.) A depiction of this is shown:



Note that the extended lines do not appear within ArcView, they are merely aids for visualization as the rectangle produced by ArcView is only faintly displayed on the image above.

When the rectangle is defined and the mouse is subsequently released, the features within the rectangle extent that belong to active themes become selected and, for SAVER purposes, are displayed in red.

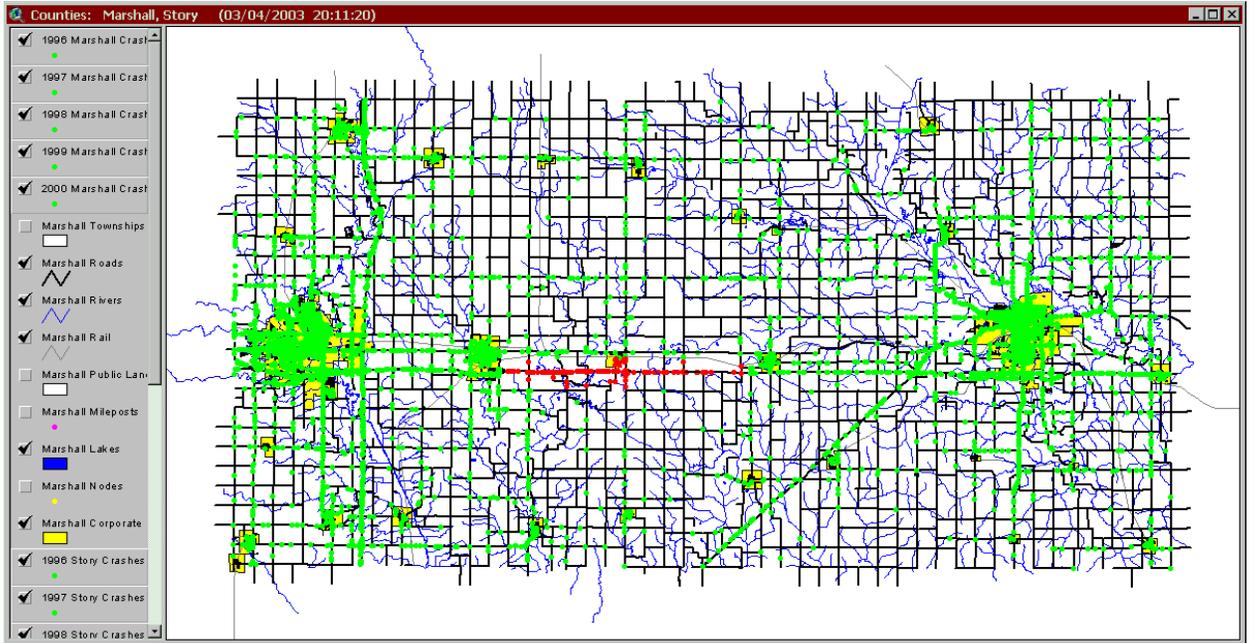


>> Next Page >>

# SAVER

## Location Selection:

The selected crashes from the previous selection are displayed in red (this may not display in black and white):



Subsequent queries, reports, stacks, etc. that are generated all are based upon this selection set.

The selection set may be saved with the project.

## Good News!

Alternative methods for selecting crashes will be developed in future versions of SAVER. Some of these are shown on the original Location Specification tool, displayed to the right. These include Region, Point, Feature, Polygon, Route, and more! The Select Feature tool is one of the most base methods of selecting crashes and is a standard tool within ArcView.



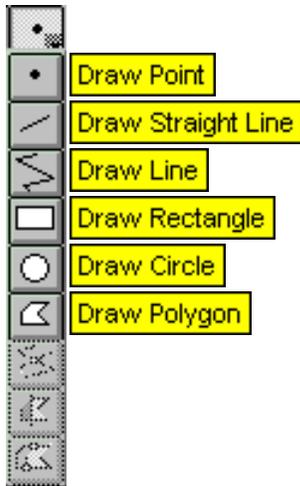
# SAVER

## Location Selection:

### Graphical Objects:



The Draw Point tool must be selected as an option, which then provides a changed mouse icon (a crosshair). However, the Draw Point tool may be changed to one of several other options.

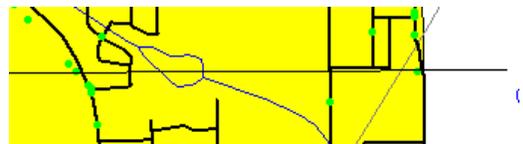
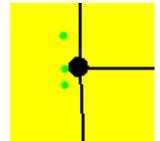


To list these options, click and hold the Draw Point button. Then, to select one of the options, click on the desired option. The button icon will change to reflect the selected option.

Each of these tools, based on their respective type, allow users to draw graphical objects on the Map. These graphical objects may be used to highlight particular features of the map visually and the polygonal or areal objects (rectangles, circles, polygons) may be used to select features of active themes. The use of each tool option and the use of these graphical objects is explained in the following:



The Draw Point tool option enables placement of a graphic point on the map. This graphic point may not be used to select features of active themes. Applications of the Draw Point tool include identification of intersections and calculations of distance of features from the center of the nearest graphic point. This latter application is a report option. To place a point, click the mouse while over the map. A point will appear with selection indication boxes around it. Using the pointer tool ( **Pointer**), a user can move the point. Other options are also available.



The Draw Straight Line tool option enables placement of a graphic line on the map. This graphic line may not be used to select features of active themes. An application of the Draw Straight Line tool is indication of cutlines for some planning and engineering purposes. To place a line, click, hold, and drag the mouse while over the map. A line will appear with selection indication boxes around it. The line can also be moved using the pointer tool.

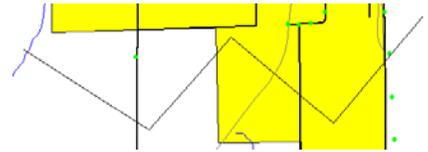
# SAVER

## Location Selection:

### Graphical Objects:



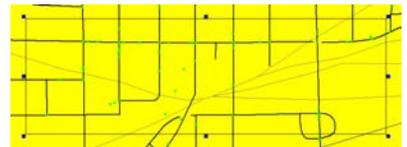
Draw Line



The Draw Line tool option functions and has application similar to the Draw Straight Line tool. To place a line, click and drag the mouse while over the map. Each time you want to change direction, click the mouse again. To end this, double-click. A line will appear with selection indication boxes around it. The line can also be moved using the pointer tool.



Draw Rectangle

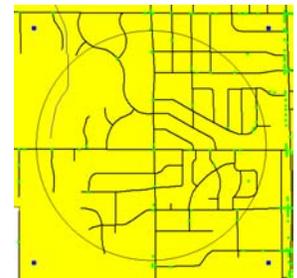


The Draw Rectangle tool option enables drawing a rectangular graphic on the map. The rectangle may be used to select features of active themes (explained under the Select Features Using Graphic tool description within the Graphical Objects section). Applications of the Draw Rectangle tool include identification of area of interest and selection of features. To draw a rectangle, click, hold, and drag the mouse while on the map. Start at one corner of the rectangle you want to create and drag to the opposite corner, releasing the mouse at that point. A rectangle will appear with selection indication boxes around it (at the corners and midpoints of the lines). The rectangle can also be moved using the pointer tool.



Draw Circle

The Draw Circle tool option enables drawing a circular graphic on the map. The circle may be used to select features of active themes (explained under the Select Features Using Graphic tool description within the Graphical Objects section). Applications of the Draw Circle tool include identification of area of interest and selection of features. To draw a circle, click, hold, and drag the mouse while on the map. Start at the center of the circle you want to create and drag out to the desired radius, releasing the mouse at that point. The current radius is indicated in the lower left corner of the ArcView window. A circle will appear with selection indication boxes around it (at the “corners”). The circle can also be moved using the pointer tool.



# SAVER

## Location Selection:



**Draw Polygon**

The Draw Polygon tool option enables drawing a polygon graphic on the map. The polygon may be used to select features of active themes (explained under the Select Features Using Graphic tool description within the Graphical Objects section). Applications of the Draw Polygon tool include identification of area of interest and selection of features. To draw a polygon, click drag the mouse while on the map. Start at one corner of the polygon, click, move the mouse to an adjacent corner, click, and continue this until the polygon is defined. At the last point on the polygon, double-click to end the process. A polygon will appear with selection indication boxes around it (at the “corners”). The polygon can also be moved using the pointer tool.



## Selection Using Graphical Objects:

Once a areal or polygonal graphic object (rectangle, circle, or polygon) has been drawn on the map, this object may be used to select features from the active themes.



**Select Features Using Graphic**

The Select Features Using Graphic tool selects features within the active themes of the active map window. The graphical objects that are currently selected are used for selection of the features from the active themes. To select multiple graphical objects, first select the pointer tool (  **Pointer** ), then hold the Shift key while clicking on each graphical object.

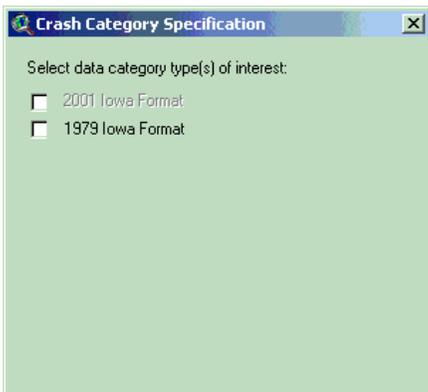
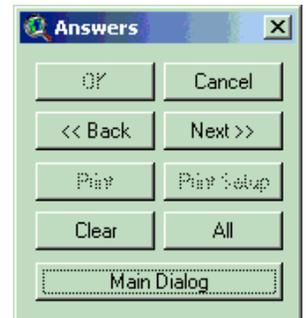
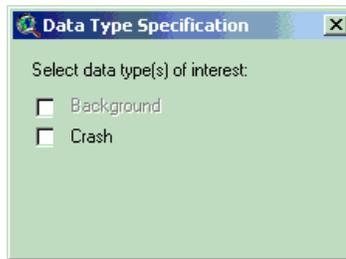
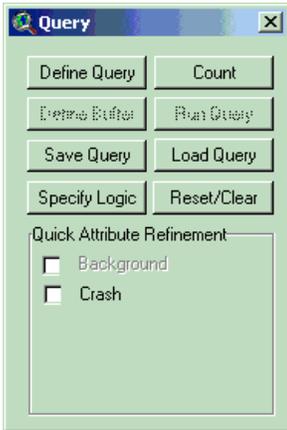
Selection of the Select Features Using Graphic tool results are as follows:

# SAVER

**Location Selection:**

# SAVER

## Querying:



# SAVER

## Querying:

1979 Iowa Format Query Ty... [X]

Select query type(s) of interest:

- General
- Location/Time
- Severity Level
- Environmental
- Driver
- Vehicle
- Roadway
- Injury
- Pedestrian
- Miscellaneous

Answers [X]

OK Cancel

<< Back Next >>

Print Print Setup

Clear All

Main Dialog

### General

General Query Categories [X]

Select category(-ies) of interest:

- Type of Accident
- Collision Type
- Major Cause
- Fixed Object Struck
- Location of Fixed Object
- Fire/Explosion
- Hit & Run

### Location/Time

Location/time Query Categori... [X]

Select category(-ies) of interest:

- Date of Crash
- Day of Week
- Time of Crash
- Rural/Urban
- Cardinal Travel Direction
- Route
- Location

### Severity Level

Severity Level Query Categori... [X]

Select category(-ies) of interest:

- Severity
- Fatalities
- Injuries
- Property Damage

### Environmental

Environmental Query Categori... [X]

Select category(-ies) of interest:

- Weather Conditions
- Light Conditions
- Locality
- Surface Conditions
- Vision Obscure

# SAVER

## Querying:

### Driver



Driver Query Categories

Select category(-ies) of interest:

- Driver Age
- Driver Gender
- Driver's License Restrictions
- Restrictions Complied With
- Driver Charged
- Sobriety Test Given
- Sobriety Test Results
- Driver Condition
- Driver's License Class Type
- Driver's License Endorsement:

### Vehicle

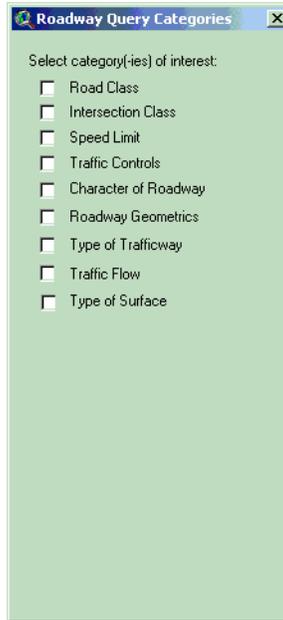


Vehicle Query Categories

Select category(-ies) of interest:

- Vehicles
- Vehicle Type
- Vehicle Year
- Special Use
- Occupants
- Attachment
- Vehicle Action
- Initial Direction of Travel
- Vehicle Defects
- Point of Initial Impact
- Damaged Areas
- Damaged Severity

### Roadway



Roadway Query Categories

Select category(-ies) of interest:

- Road Class
- Intersection Class
- Speed Limit
- Traffic Controls
- Character of Roadway
- Roadway Geometrics
- Type of Trafficway
- Traffic Flow
- Type of Surface

### Injury

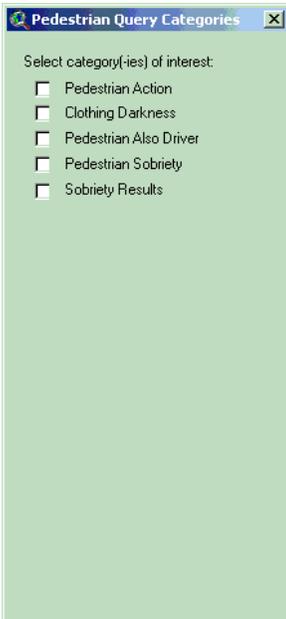


Injury Query Categories

Select category(-ies) of interest:

- Injured Age
- Injured Gender
- Injury Severity
- Injured Area
- Injured Position
- Protective Device
- Ejection Information

### Pedestrian

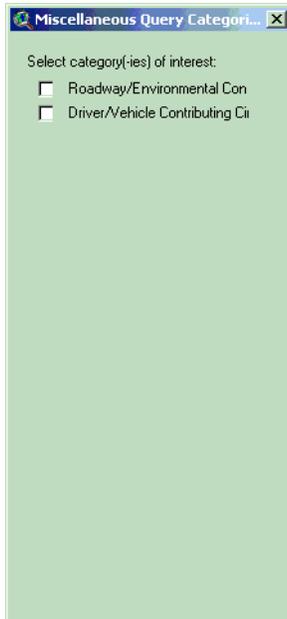


Pedestrian Query Categories

Select category(-ies) of interest:

- Pedestrian Action
- Clothing Darkness
- Pedestrian Also Driver
- Pedestrian Sobriety
- Sobriety Results

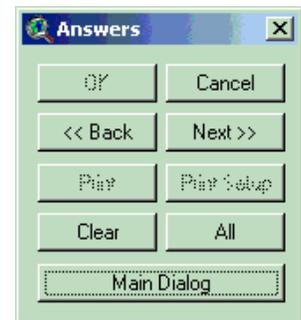
### Miscellaneous



Miscellaneous Query Categories

Select category(-ies) of interest:

- Roadway/Environmental Con
- Driver/Vehicle Contributing Cii



Answers

OK Cancel

<< Back Next >>

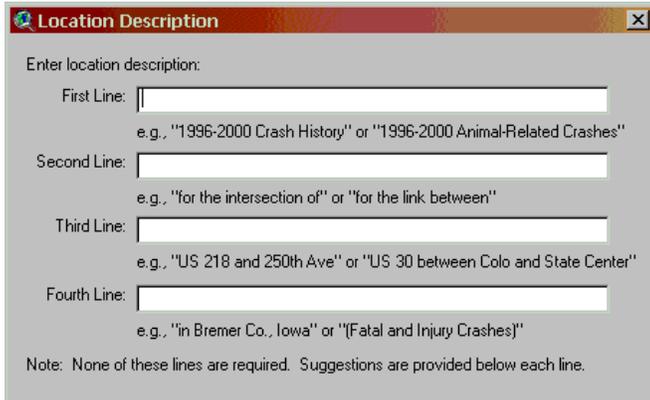
Print Print Setup

Clear All

Main Dialog

# SAVER

## Querying:



**Location Description**

Enter location description:

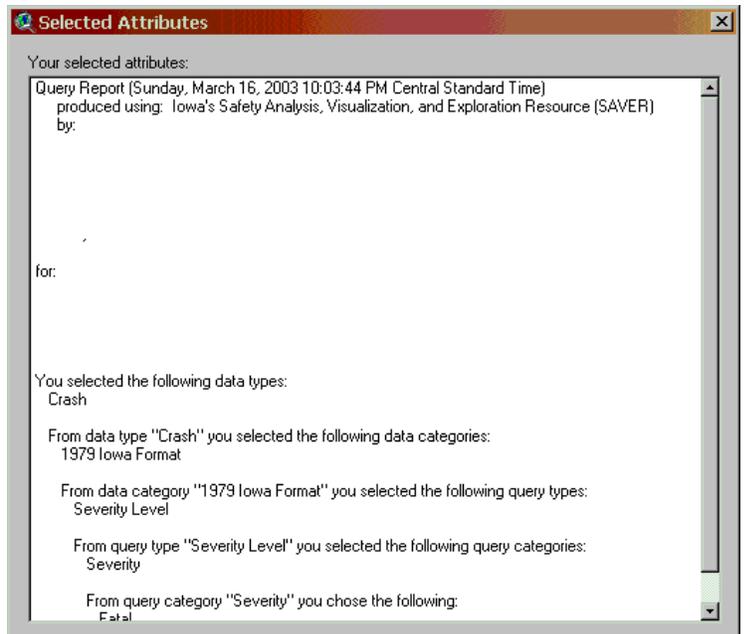
First Line:   
e.g., "1996-2000 Crash History" or "1996-2000 Animal-Related Crashes"

Second Line:   
e.g., "for the intersection of" or "for the link between"

Third Line:   
e.g., "US 218 and 250th Ave" or "US 30 between Colo and State Center"

Fourth Line:   
e.g., "in Bremer Co., Iowa" or "(Fatal and Injury Crashes)"

Note: None of these lines are required. Suggestions are provided below each line.



**Selected Attributes**

Your selected attributes:

Query Report (Sunday, March 16, 2003 10:03:44 PM Central Standard Time)  
produced using: Iowa's Safety Analysis, Visualization, and Exploration Resource (SAVER)  
by:

for:

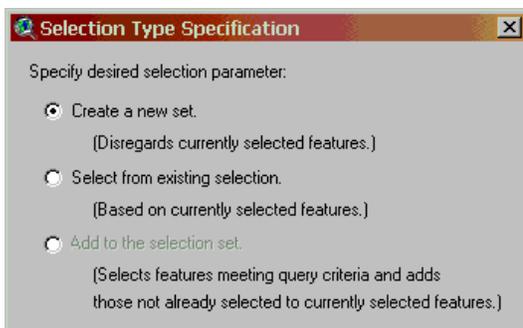
You selected the following data types:  
Crash

From data type "Crash" you selected the following data categories:  
1979 Iowa Format

From data category "1979 Iowa Format" you selected the following query types:  
Severity Level

From query type "Severity Level" you selected the following query categories:  
Severity

From query category "Severity" you chose the following:  
Fatal



**Selection Type Specification**

Specify desired selection parameter:

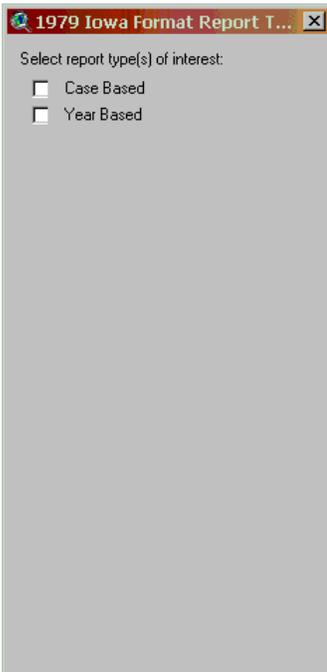
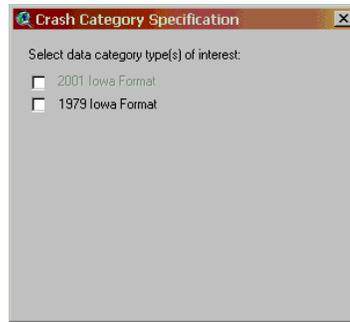
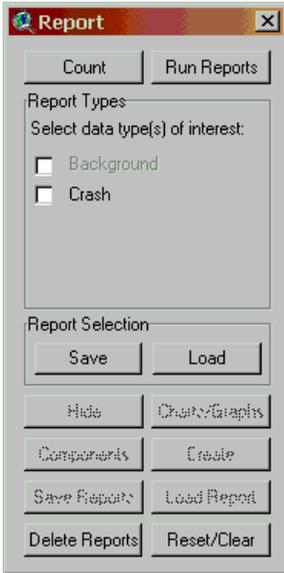
Create a new set.  
(Disregards currently selected features.)

Select from existing selection.  
(Based on currently selected features.)

Add to the selection set.  
(Selects features meeting query criteria and adds those not already selected to currently selected features.)

# SAVER

## Creating Reports:



# SAVER

## Creating Reports:

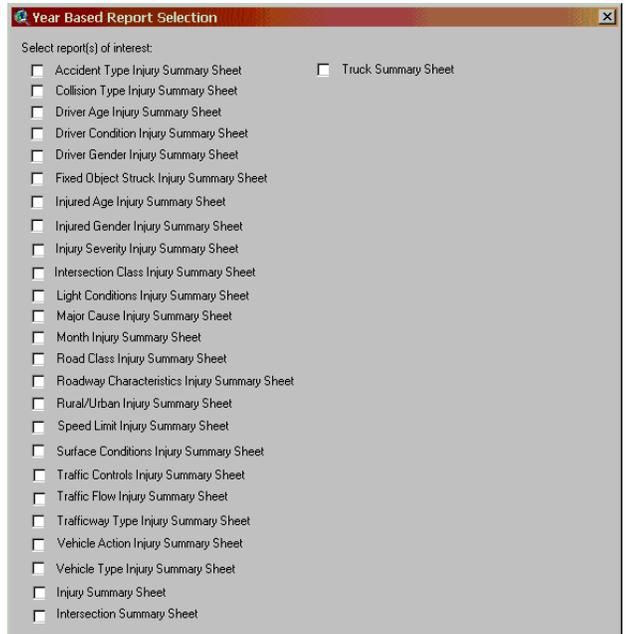
### Case Based Report



A screenshot of a software dialog box titled "Case Based Report Selection". The dialog box has a standard Windows-style title bar with a close button. Below the title bar, the text "Select report(s) of interest:" is followed by a list of seven report types, each with an unchecked checkbox:

- Accident Summary Sheet
- Minimal
- Brief
- Long
- Detailed
- Injured Person
- Vehicle Summary Sheet

### Year Based Report

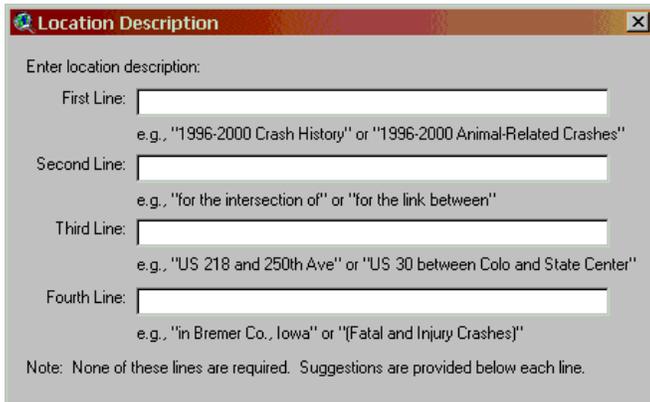


A screenshot of a software dialog box titled "Year Based Report Selection". The dialog box has a standard Windows-style title bar with a close button. Below the title bar, the text "Select report(s) of interest:" is followed by a list of 25 report types, each with an unchecked checkbox:

- Accident Type Injury Summary Sheet
- Collision Type Injury Summary Sheet
- Driver Age Injury Summary Sheet
- Driver Condition Injury Summary Sheet
- Driver Gender Injury Summary Sheet
- Fixed Object Struck Injury Summary Sheet
- Injured Age Injury Summary Sheet
- Injured Gender Injury Summary Sheet
- Injury Severity Injury Summary Sheet
- Intersection Class Injury Summary Sheet
- Light Conditions Injury Summary Sheet
- Major Cause Injury Summary Sheet
- Month Injury Summary Sheet
- Road Class Injury Summary Sheet
- Roadway Characteristics Injury Summary Sheet
- Rural/Urban Injury Summary Sheet
- Speed Limit Injury Summary Sheet
- Surface Conditions Injury Summary Sheet
- Traffic Controls Injury Summary Sheet
- Traffic Flow Injury Summary Sheet
- Trafficway Type Injury Summary Sheet
- Vehicle Action Injury Summary Sheet
- Vehicle Type Injury Summary Sheet
- Injury Summary Sheet
- Intersection Summary Sheet
- Truck Summary Sheet

# SAVER

## Creating Reports:



**Location Description**

Enter location description:

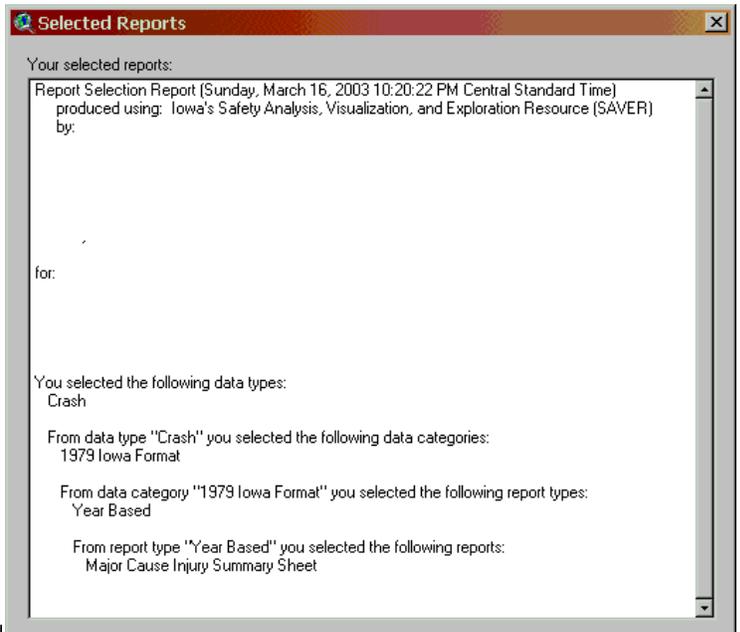
First Line:   
e.g., "1996-2000 Crash History" or "1996-2000 Animal-Related Crashes"

Second Line:   
e.g., "for the intersection of" or "for the link between"

Third Line:   
e.g., "US 218 and 250th Ave" or "US 30 between Colo and State Center"

Fourth Line:   
e.g., "in Bremer Co., Iowa" or "(Fatal and Injury Crashes)"

Note: None of these lines are required. Suggestions are provided below each line.



**Selected Reports**

Your selected reports:

Report Selection Report (Sunday, March 16, 2003 10:20:22 PM Central Standard Time)  
produced using: Iowa's Safety Analysis, Visualization, and Exploration Resource (SAVER)  
by:

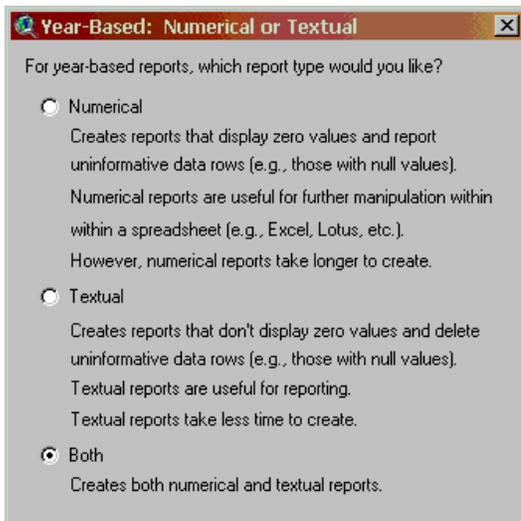
for:

You selected the following data types:  
Crash

From data type "Crash" you selected the following data categories:  
1979 Iowa Format

From data category "1979 Iowa Format" you selected the following report types:  
Year Based

From report type "Year Based" you selected the following reports:  
Major Cause Injury Summary Sheet



**Year-Based: Numerical or Textual**

For year-based reports, which report type would you like?

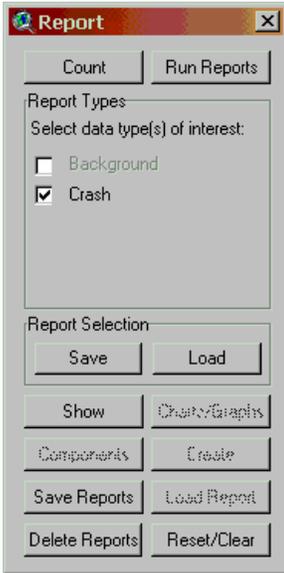
Numerical  
Creates reports that display zero values and report uninformative data rows (e.g., those with null values).  
Numerical reports are useful for further manipulation within a spreadsheet (e.g., Excel, Lotus, etc.).  
However, numerical reports take longer to create.

Textual  
Creates reports that don't display zero values and delete uninformative data rows (e.g., those with null values).  
Textual reports are useful for reporting.  
Textual reports take less time to create.

Both  
Creates both numerical and textual reports.

# SAVER

## Creating Reports:

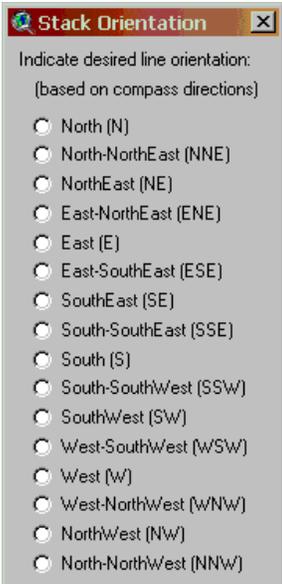
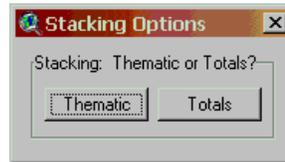
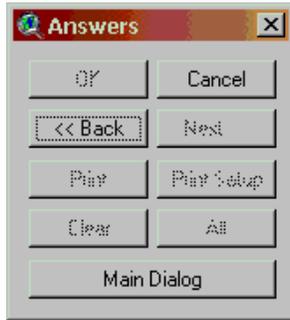


# SAVER

## Displaying Selections:

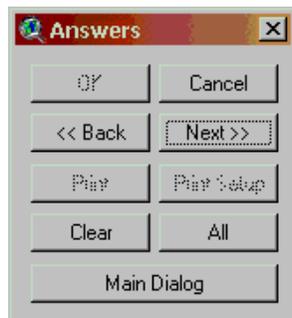
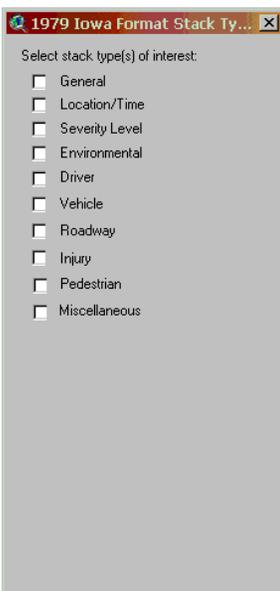
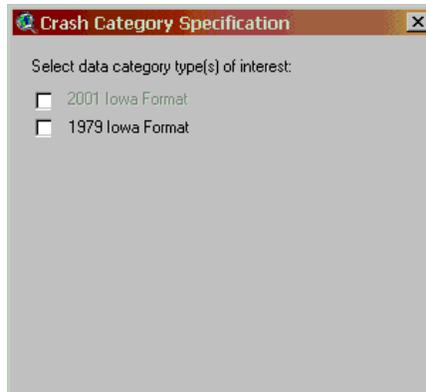
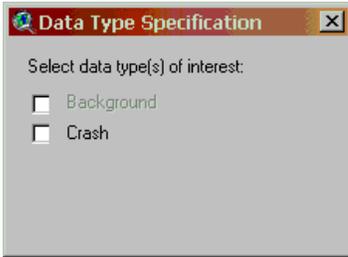


Stacks → Create



# SAVER

## Displaying Selections:



# SAVER Dialogs

**Answer Dialog:**

# SAVER Dialogs

**File Dialog:**

# SAVER Dialogs

**Main Dialog:**

# ArcView Buttons

 **Information Tool:**

 **Labelling Tool:**

 **Measuring Tool:**

 **Pan Tool:**

 **Pointer Tool**

 **Select Feature Tool**

 **Text Insert Tool**

 **Zoom In Tool**

 **Zoom Out Tool**

# General Elements

## Type of Accident

**Type Of Accident Parameter Selection**

Select parameter(s) of interest:

- Non-Collision: Overturned in Roadway
- Non-Collision: Jackknifed
- Non-Collision: Carbon Monoxide
- Non-Collision: Fire/Explosion
- Non-Collision: Immersion
- Non-Collision: Other
- Collision: Pedestrian
- Collision: Vehicle in Traffic
- Collision: Motorcycle in Traffic
- Collision: Vehicle in Other Roadway
- Collision: Parked Vehicle
- Collision: Train
- Collision: Pedalcycle
- Collision: Animal
- Collision: Fixed Object
- Collision: Other Object

## Collision Type

**Collision Type Parameter Selection**

Select parameter(s) of interest:

- Head-on
- Broadside/Left Turn
- Rear End
- Rear End/Right Turn
- Rear End/Left Turn
- Sideswipe/Opposite Direction
- Sideswipe/Same Direction
- Sideswipe/Right Turn
- Sideswipe/Left Turn
- Sideswipe/Dual Left Turn
- Sideswipe/Dual Right Turn
- Broadside/Right Angle
- Broadside/Right Entering
- Broadside/Left Entering
- Head-on/Left Entering
- Sideswipe/Both Left Turning
- Other
- Single
- Pedestrian
- Bicycle
- Parked

## Major Cause

**Major Cause Parameter Selection**

Select parameter(s) of interest:

<input type="checkbox"/> Animal	<input type="checkbox"/> Reckless Driving
<input type="checkbox"/> Ran Traffic Signal	<input type="checkbox"/> Improper Backing
<input type="checkbox"/> Ran Stop Sign	<input type="checkbox"/> Illegal/Improper Parking
<input type="checkbox"/> Passed Stopped School Bus	<input type="checkbox"/> Failure to Have Control
<input type="checkbox"/> Passing Where Prohibited	<input type="checkbox"/> Headlights Not On
<input type="checkbox"/> Passing - Interfered with Other Vehicle	<input type="checkbox"/> Inattentive/Distracted
<input type="checkbox"/> Left of Center - Not Passing	<input type="checkbox"/> Driver Confused
<input type="checkbox"/> FTYROW at Uncontrolled Intersection	<input type="checkbox"/> Vision Obscured
<input type="checkbox"/> FTYROW from Stop Sign	<input type="checkbox"/> Oversized Vehicle
<input type="checkbox"/> FTYROW from Yield Sign	<input type="checkbox"/> Overloaded with Passengers/Cargo
<input type="checkbox"/> FTYROW Making Left Turn	<input type="checkbox"/> Inexperienced Driver
<input type="checkbox"/> FTYROW from Driveway	<input type="checkbox"/> Other
<input type="checkbox"/> FTYROW from Parked Position	<input type="checkbox"/> Unknown
<input type="checkbox"/> FTYROW to Pedestrian	<input type="checkbox"/> None Apparent
<input type="checkbox"/> FTYROW Other	
<input type="checkbox"/> Wrong Way on One Way Road	
<input type="checkbox"/> Speed Too Fast for Conditions	
<input type="checkbox"/> Exceeding Speed Limit	
<input type="checkbox"/> Drag Racing	
<input type="checkbox"/> Improper Turn	
<input type="checkbox"/> Improper Lane Change	
<input type="checkbox"/> Following Too Close	
<input type="checkbox"/> No Signal/Improper Signal	
<input type="checkbox"/> Disregarded RR Signal	
<input type="checkbox"/> Disregarded Warning Signal	

## Fixed Object Struck

**Fixed Object Struck Parameter Selection**

Select parameter(s) of interest:

- None
- Bridge/Overpass
- Underpass/Bridge Supports
- Building
- Culvert
- Curb
- Ditch
- Island/Raised Median
- Embankment/Retaining Wall
- Fence
- Guardrail
- Light Pole
- Sign Post
- Tree/Shrubbery
- Utility Pole
- Other Pole/Support
- Mailbox
- Impact Attenuator
- Other
- Unknown

# General Elements

## Location of Fixed Object

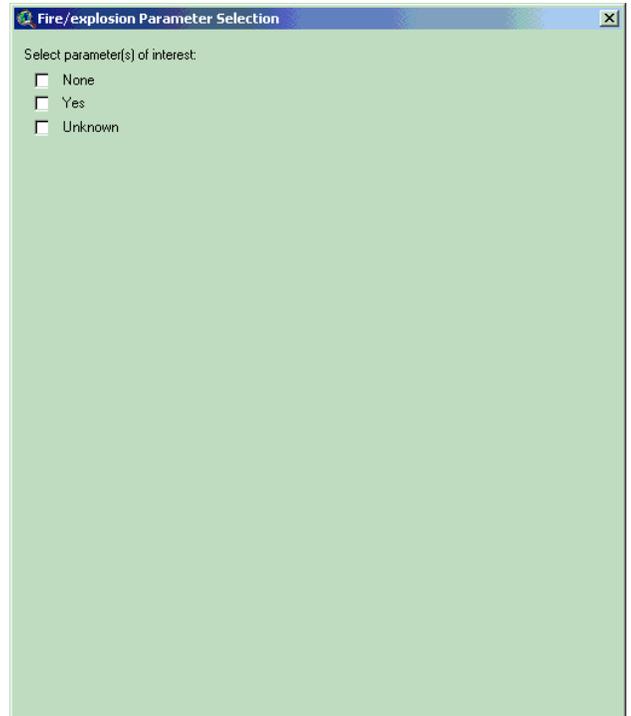


Location Of Fixed Object Parameter Selection

Select parameter(s) of interest:

- On Roadway
- Shoulder
- Median
- Roadside/Ditch
- Outside Right-of-Way
- Unknown

## Fire/Explosion



Fire/explosion Parameter Selection

Select parameter(s) of interest:

- None
- Yes
- Unknown

## Hit & Run



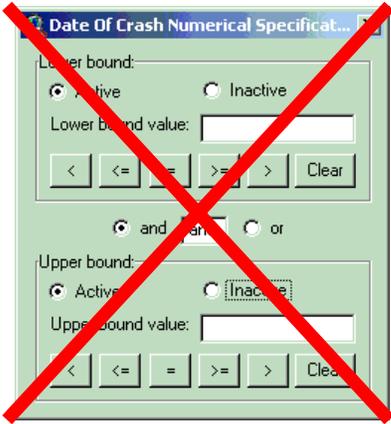
Hit & Run Parameter Selection

Select parameter(s) of interest:

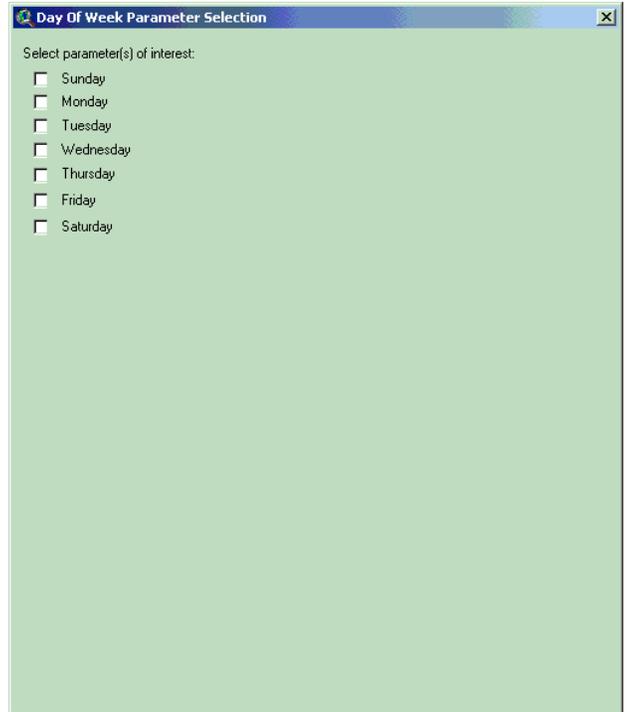
- None
- With Motor Vehicle
- With Non-Occupant
- Driver Left Scene
- Unknown

# Location/Time Elements

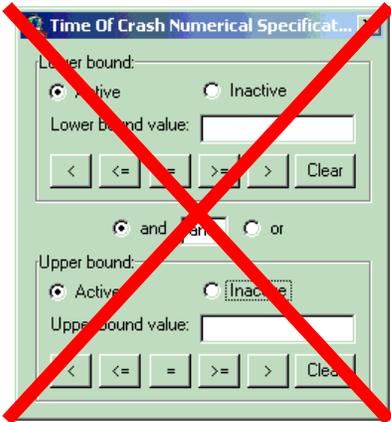
**Date of Crash**



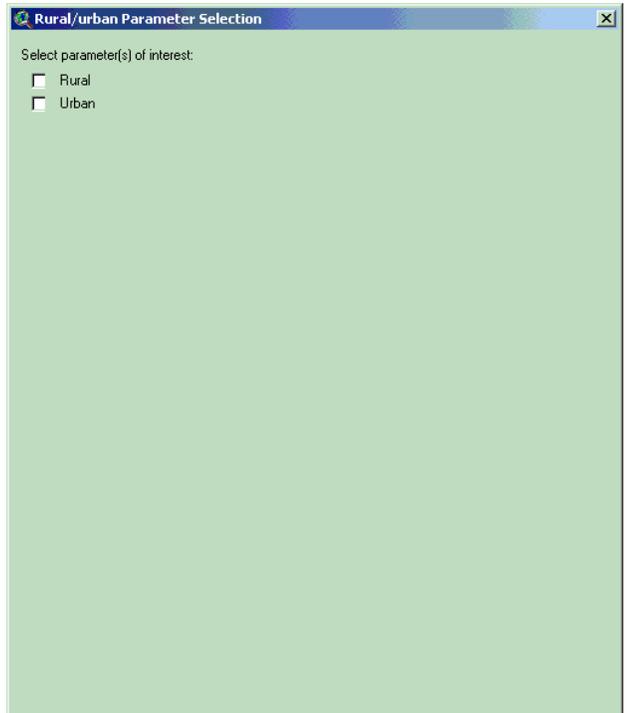
**Day of Week**



**Time of Crash**



**Rural/Urban**



# Location/Time Elements

## Cardinal Travel Direction

Cardinal Travel Direction Parameter Selection

Select parameter(s) of interest:

- North
- East
- South
- West
- Unknown

## Route

Route Parameter Selection

Select parameter(s) of interest:

<input type="checkbox"/> Iowa 1	<input type="checkbox"/> Interstate 29
<input type="checkbox"/> Iowa 2	<input type="checkbox"/> US 30
<input type="checkbox"/> Iowa 3	<input type="checkbox"/> Iowa 31
<input type="checkbox"/> Iowa 4	<input type="checkbox"/> Iowa 32
<input type="checkbox"/> Iowa 5	<input type="checkbox"/> US 34
<input type="checkbox"/> US 6	<input type="checkbox"/> Interstate 35
<input type="checkbox"/> Iowa 7	<input type="checkbox"/> Iowa 36
<input type="checkbox"/> Iowa 8	<input type="checkbox"/> Iowa 37
<input type="checkbox"/> Iowa 9	<input type="checkbox"/> Iowa 38
<input type="checkbox"/> Iowa 10	<input type="checkbox"/> Iowa 39
<input type="checkbox"/> Iowa 12	<input type="checkbox"/> Iowa 40
<input type="checkbox"/> Iowa 13	<input type="checkbox"/> Iowa 41
<input type="checkbox"/> Iowa 14	<input type="checkbox"/> Iowa 44
<input type="checkbox"/> Iowa 15	<input type="checkbox"/> Iowa 45
<input type="checkbox"/> Iowa 16	<input type="checkbox"/> Iowa 48
<input type="checkbox"/> Iowa 17	<input type="checkbox"/> Iowa 49
<input type="checkbox"/> US 18	<input type="checkbox"/> Iowa 50
<input type="checkbox"/> US 20	<input type="checkbox"/> Iowa 51
<input type="checkbox"/> Iowa 21	<input type="checkbox"/> US 52
<input type="checkbox"/> Iowa 22	<input type="checkbox"/> Iowa 55
<input type="checkbox"/> Iowa 23	<input type="checkbox"/> Iowa 56
<input type="checkbox"/> Iowa 24	<input type="checkbox"/> Iowa 57
<input type="checkbox"/> Iowa 25	<input type="checkbox"/> Iowa 58
<input type="checkbox"/> Iowa 26	<input type="checkbox"/> US 59
<input type="checkbox"/> Iowa 28	<input type="checkbox"/> Iowa 60

## Location

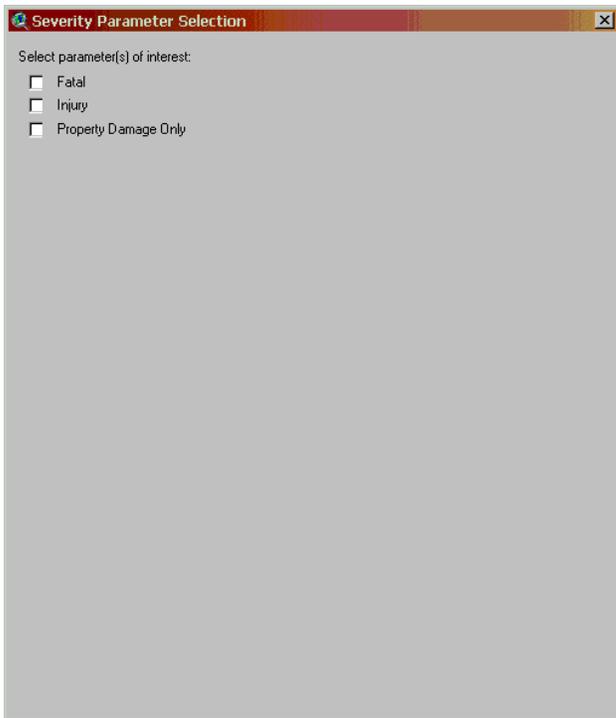
Location Parameter Selection

Select parameter(s) of interest:

- On Roadway
- Shoulder
- Median
- Roadside/Ditch
- Outside Right of Way
- Unknown

# Severity Level Elements

## Severity (Crash)

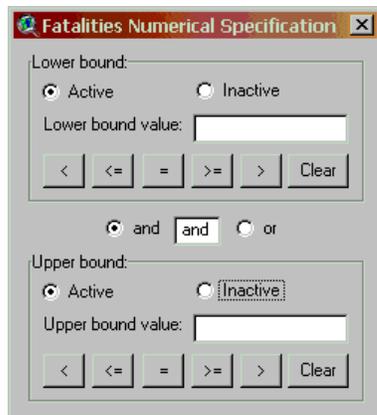


Severity Parameter Selection

Select parameter(s) of interest:

- Fatal
- Injury
- Property Damage Only

## Fatalities



Fatalities Numerical Specification

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

## Injuries



Injuries Numerical Specification

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

## Property Damage



Property Damage Numerical Sp...

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

# Environmental Elements

## Weather Conditions

**Weather Conditions Parameter Selection**

Select parameter(s) of interest:

- Snow
- Sleet/Hail
- Rain
- Mist
- Fog
- Strong Wind
- Cloudy
- Clear
- Other
- Unknown

## Light Conditions

**Light Conditions Parameter Selection**

Select parameter(s) of interest:

- Day
- Dusk
- Dawn
- Dark - Lighted Roadway
- Dark - Roadway not Lighted
- Unknown

## Locality

**Locality Parameter Selection**

Select parameter(s) of interest:

- Business District (Central)
- Manufacturing District
- Residential District
- Business District (Outlying)
- School/Playground Zone
- Recreational Area
- Open Country (Rural)
- Other
- Parking Lot/Private Property
- Unknown

## Surface Conditions

**Surface Conditions Parameter Selection**

Select parameter(s) of interest:

- Ice
- Snow
- Wet
- Mud
- Dry
- Loose Gravel
- Debris
- Other
- Unknown

# Environmental Elements

## Vision Obscurement

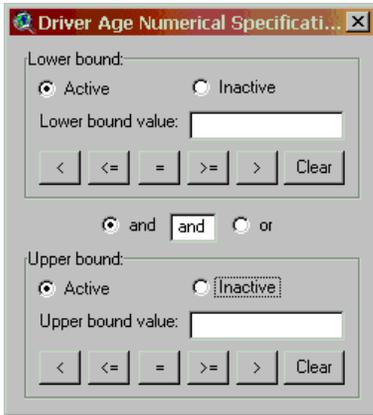
Selection

Select parameter(s) of interest:

- Not Obstructed
- Trees/Crops
- Buildings
- Embankments
- Sign/Billboards
- Hillcrest
- Parked Vehicles
- Moving Vehicles
- Person/Object In or On Vehicle
- Blinded by Sun/Headlights
- Frosted Windows/Windshield
- Blowing Snow
- Fog/Smoke/Dust
- Other
- Unknown

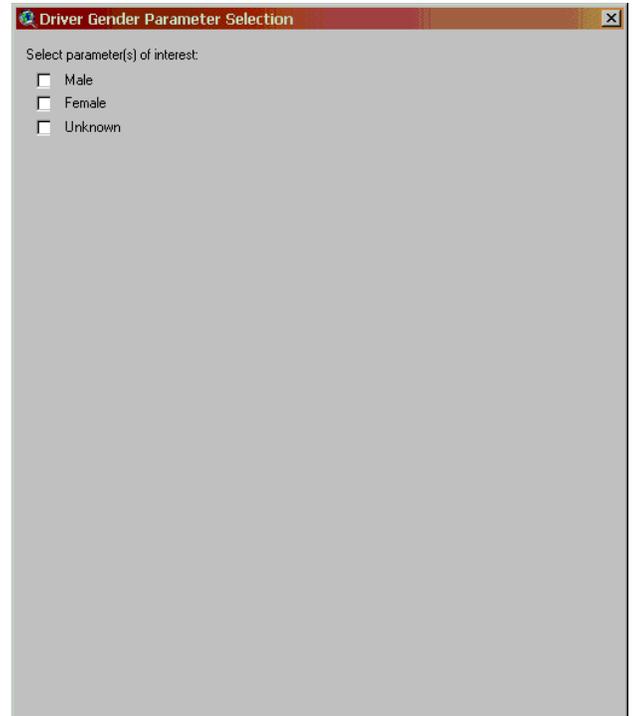
# Driver Elements

## Driver Age



Driver Age Numerical Specification dialog box. It features two sections: Lower bound and Upper bound. Each section has radio buttons for 'Active' and 'Inactive', a text input field for the value, and a set of comparison operators (<, <=, =, >=, >) and a 'Clear' button. Below the upper bound section, there are radio buttons for 'and' and 'or'.

## Driver Gender



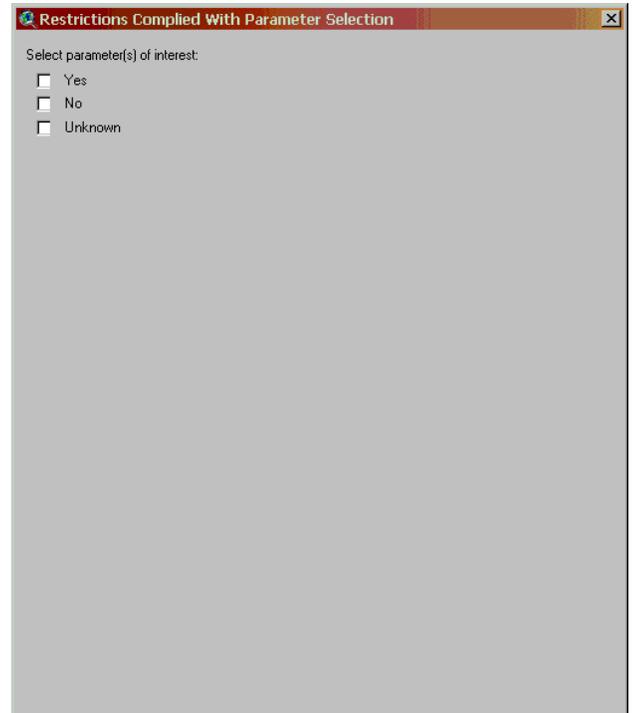
Driver Gender Parameter Selection dialog box. It contains a section titled 'Select parameter(s) of interest:' with three radio button options: Male, Female, and Unknown.

## Driver's License Restrictions



Driver's License Restrictions Parameter Selection dialog box. It contains a section titled 'Select parameter(s) of interest:' followed by a list of 35 checkboxes representing various license restrictions, such as 'None', 'Corrective Lenses', 'Maximum Speed of 35 MPH', 'SR Required', etc.

## Restrictions Complied With



Restrictions Complied With Parameter Selection dialog box. It contains a section titled 'Select parameter(s) of interest:' with three radio button options: Yes, No, and Unknown.

# Driver Elements

## Driver Charged

Driver Charged Parameter Selection

Select parameter(s) of interest:

- No
- Yes

## Sobriety Test Given

Sobriety Test Given Parameter Selection

Select parameter(s) of interest:

- None
- Breath
- Blood
- Urine
- Refused
- Unknown

## Sobriety Test Results

Sobriety Test Results Numerical...

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

## Driver Condition

Driver Condition Parameter Selection

Select parameter(s) of interest:

- Apparently Normal
- Physical Defect
- Fatigued
- Apparently Asleep
- Ill
- Under Medication
- Infirmities of Age
- Drinking (Not Impaired)
- Drinking (Impaired)
- Drugs
- Other
- Unknown

# Driver Elements

## Driver's License Class Type

Driver's License Class Type Parameter Selection

Select parameter(s) of interest:

- Vehicle 26001 GVWR+/Towed GVWR 10001
- Vehicle 26001 GVWR+/Towed LT 10001
- Vehicle 26000- GVWR & Either 16 Pass. Desig
- Chauffeur
- Motorcycle
- Invalid with 0 Supplement

## Driver's License Endorsements

Driver's License Endorsements Parameter Selection

Select parameter(s) of interest:

- Hazmat
- Passenger
- Tank
- Hazmat and Tank
- Double or Triple Trailer
- Truck Tractor Semi-Trailer Combination
- 16001 GVWR+ (Not Valid for Truck Trailer Ser
- Passenger Vehicle < 16 Passenger Design

# Vehicle Elements

## Vehicles

**Vehicles Numerical Specification**

Lower bound:

Active     Inactive

Lower bound value:

< <= = >= > Clear

and    and     or

Upper bound:

Active     Inactive

Upper bound value:

< <= = >= > Clear

## Vehicle Type

**Vehicle Type Parameter Selection**

Select parameter(s) of interest:

- Passenger Car
- Car/Trailer
- Panel Truck/Utility/No Rider
- Pickup Truck
- Pickup/Trailer
- Pickup/Camper
- Straight Truck
- Truck Tractor
- Truck Tractor/Semi
- Double Bottom Truck
- Tow Truck/Wrecker
- Motor Home
- Bus
- School Bus
- Farm Vehicle/Equipment
- Motorcycle
- Bicycle/Pedacycle
- Rec. Vehicle: ATV/non-hwy w/ motor and no
- Maintenance/Construction Vehicle
- Train
- Other: mower/golf cart/dunebuggy/snowmobi
- Moped
- Multipurpose: on/offroad/Blazer/Caravan/Mir
- Unknown

## Vehicle Year

**Vehicle Year Numerical Specification**

Lower bound:

Active     Inactive

Lower bound value:

< <= = >= > Clear

and    and     or

Upper bound:

Active     Inactive

Upper bound value:

< <= = >= > Clear

## Special Use

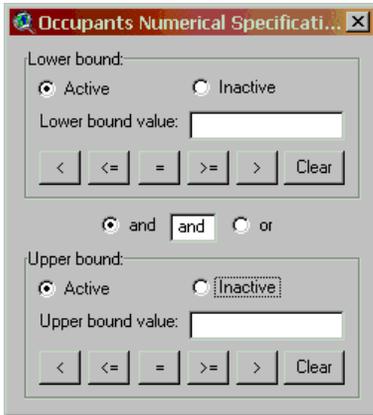
**Special Use Parameter Selection**

Select parameter(s) of interest:

- None
- Police
- Fire
- Taxi
- Government
- Ambulance
- Towing
- Driver Training
- Other
- Unknown

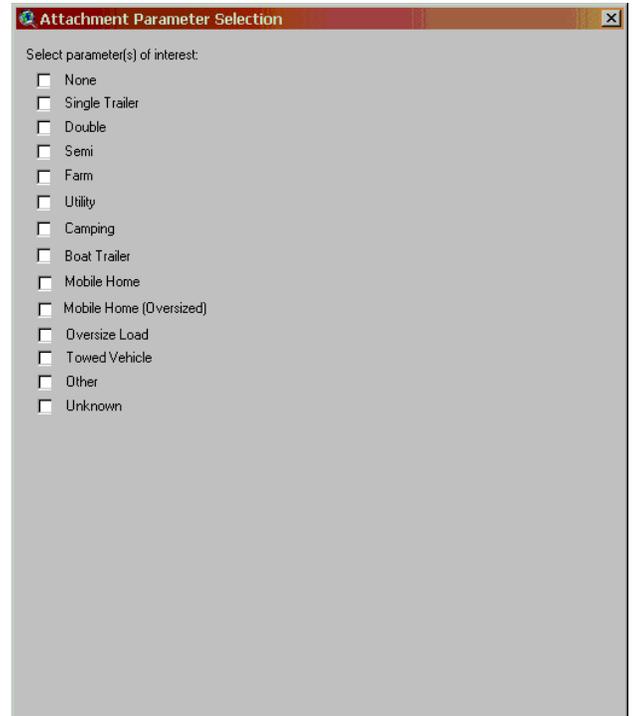
# Vehicle Elements

## Occupants



Occupants Numerical Specification dialog box. It features two sections: 'Lower bound' and 'Upper bound'. Each section has radio buttons for 'Active' and 'Inactive', a text input for 'value', and buttons for '<', '<=', '=', '>=', '>', and 'Clear'. Between the sections are radio buttons for 'and' and 'or'.

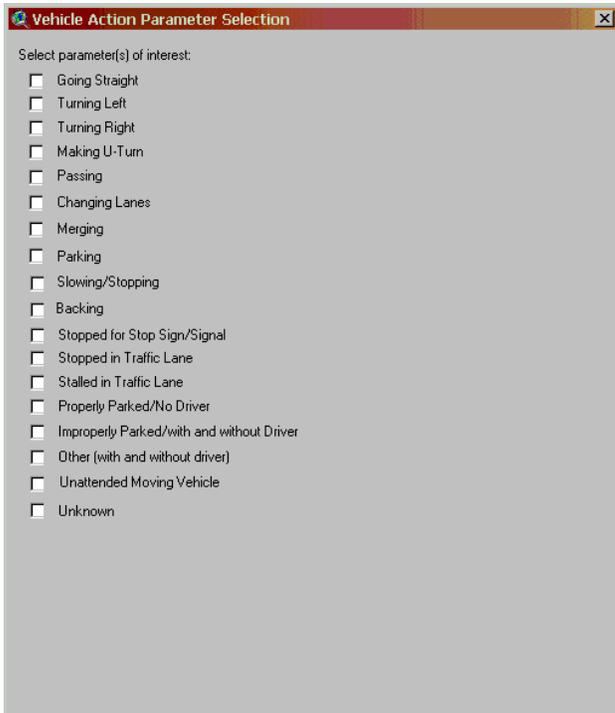
## Attachment



Attachment Parameter Selection dialog box. It contains a list of checkboxes under the heading 'Select parameter(s) of interest':

- None
- Single Trailer
- Double
- Semi
- Farm
- Utility
- Camping
- Boat Trailer
- Mobile Home
- Mobile Home (Oversized)
- Oversize Load
- Towed Vehicle
- Other
- Unknown

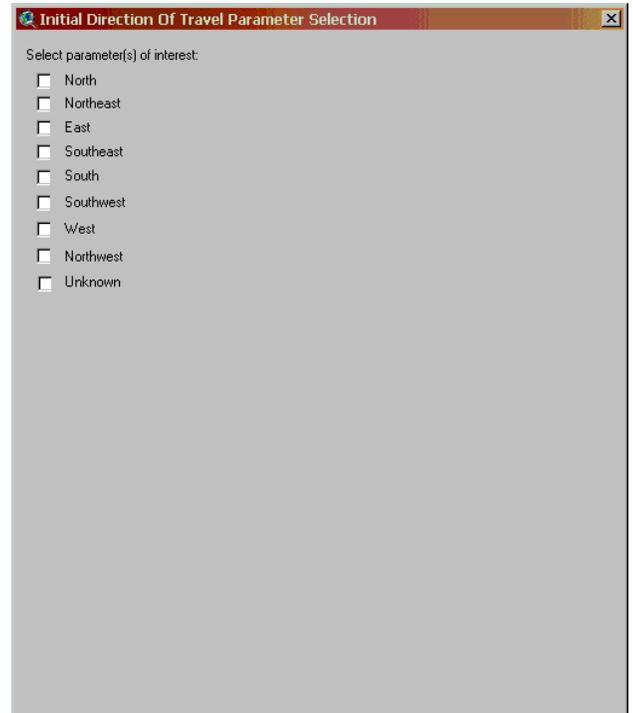
## Vehicle Action



Vehicle Action Parameter Selection dialog box. It contains a list of checkboxes under the heading 'Select parameter(s) of interest':

- Going Straight
- Turning Left
- Turning Right
- Making U-Turn
- Passing
- Changing Lanes
- Merging
- Parking
- Slowing/Stopping
- Backing
- Stopped for Stop Sign/Signal
- Stopped in Traffic Lane
- Stalled in Traffic Lane
- Properly Parked/No Driver
- Improperly Parked/with and without Driver
- Other (with and without driver)
- Unattended Moving Vehicle
- Unknown

## Initial Direction of Travel



Initial Direction Of Travel Parameter Selection dialog box. It contains a list of checkboxes under the heading 'Select parameter(s) of interest':

- North
- Northeast
- East
- Southeast
- South
- Southwest
- West
- Northwest
- Unknown

# Vehicle Elements

## Vehicle Defects

**Vehicle Defects Parameter Selection**

Select parameter(s) of interest:

- None
- Brakes
- Steering
- Blowout
- Smooth Tires
- Other Tire Defect
- Wipers
- Trailer Hitch
- Exhaust
- Headlights
- Taillights
- Turn Signal
- Suspension
- Other
- Glass
- Unknown

## Point of Initial Impact

**Point Of Initial Impact Parameter Selection**

Select parameter(s) of interest:

- Front
- Right Front
- Right Side
- Right Rear
- Rear
- Left Rear
- Left Side
- Left Front
- Top
- Undercarriage
- Unknown

## Damaged Areas

**Damaged Areas Parameter Selection**

Select parameter(s) of interest:

- Front
- Right Front
- Right Side
- Right Rear
- Rear
- Left Rear
- Left Side
- Left Front
- Top
- Undercarriage
- Unknown

## Damaged Severity

**Damaged Severity Numerical Sp...**

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

# Roadway Elements

## Weather Conditions

**Road Class Parameter Selection**

Select parameter(s) of interest:

- Interstate
- US or State Highway
- County Road
- City Street
- Other
- Unknown

## Light Conditions

**Intersection Class Parameter Selection**

Select parameter(s) of interest:

- Not an Intersection (Unknown)
- Interstate/Interstate
- Interstate/US or State Highway
- Interstate/City or County Road
- US or State Highway/US or State Highway
- US or State Highway/County Road or City Street
- US or State Highway/Other
- County Road or City Street/County Road or City Street
- County Road or City Street/Other

## Locality

**Speed Limit Numerical Specification**

Lower bound:

Active     Inactive

Lower bound value:

<   <=   =   >=   >   Clear

and    or

Upper bound:

Active     Inactive

Upper bound value:

<   <=   =   >=   >   Clear

## Surface Conditions

**Traffic Controls Parameter Selection**

Select parameter(s) of interest:

- No Controls Present
- Traffic Signals
- Stop Signs
- Yield Signs
- Warning Signs
- School Signs
- No Passing Zone (Marked)
- School Stop Sign
- Stop Arm on School Bus
- RR Warning Sign
- RR Automatic Signal
- RR Crossing Gate
- Peace Officer
- Other Traffic Director
- Other Control
- Control Not Functioning/Not In Place

# Roadway Elements

## Character of Roadway

**Character Of Roadway Parameter Selection**

Select parameter(s) of interest:

- Non-Intersection: No Special Features
- Non-Intersection: Bridge/Overpass/Underpas
- Non-Intersection: Railroad Crossing
- Non-Intersection: Business Drive
- Non-Intersection: Farm/Residential Driver
- Non-Intersection: Other
- Intersection: Within Intersection
- Intersection: Not Within Intersection but Inters
- Intersection: Alley Intersection
- Intersection: Other
- Interchange: Intersection of Ramp and Minor f
- Interchange: Ramp
- Interchange: On Major Road between Ramps
- Interchange: On Minor Road between Ramps
- Interchange: Entrance Ramp at Major Road
- Interchange: Major Road at Exit Ramp
- Interchange: Bridge/Overpass/Underpass
- Interchange: Not Within Interchange bu Interc
- Interchange: Other
- Unknown

## Roadway Geometrics

**Roadway Geometrics Parameter Selection**

Select parameter(s) of interest:

- Straight and Level
- Straight and Up/Downgrade
- Straight and Hillcrest
- Curve and Level
- Curve and Up/Downgrade
- Curve and Hillcrest
- Intersection and Level
- Intersection and Up/Downgrade
- Intersection and Hillcrest
- Unknown

## Type of Trafficway

**Type Of Trafficway Parameter Selection**

Select parameter(s) of interest:

- One Lane or Ramp
- Two Lanes
- Three Lanes
- Four or More/Undivided
- Four or More/Divided
- Alley
- Driveway
- Other
- Unknown

## Traffic Flow

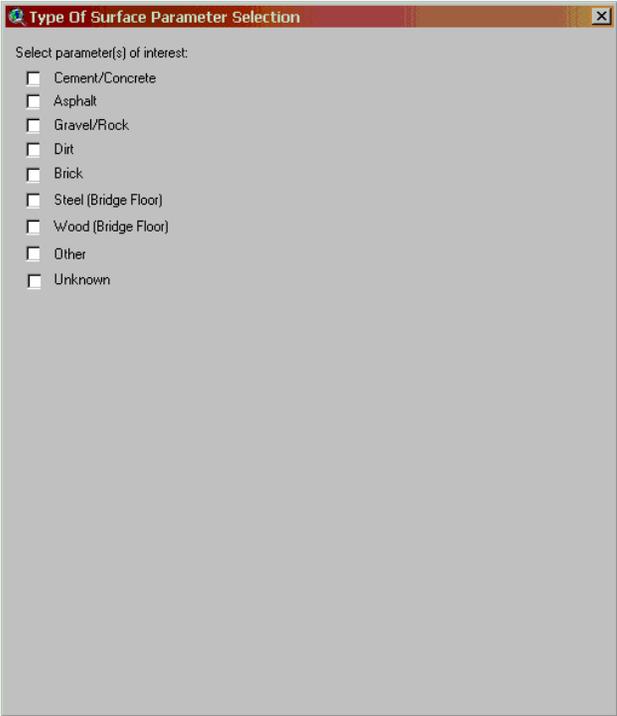
**Traffic Flow Parameter Selection**

Select parameter(s) of interest:

- One-Way Traffic
- Two-Way Traffic
- Unknown

# Roadway Elements

## Type of Surface



The image shows a software dialog box titled "Type Of Surface Parameter Selection". It contains a list of surface types, each with an unchecked checkbox to its left. The list items are: Cement/Concrete, Asphalt, Gravel/Rock, Dirt, Brick, Steel (Bridge Floor), Wood (Bridge Floor), Other, and Unknown.

Surface Type	Selected
Cement/Concrete	<input type="checkbox"/>
Asphalt	<input type="checkbox"/>
Gravel/Rock	<input type="checkbox"/>
Dirt	<input type="checkbox"/>
Brick	<input type="checkbox"/>
Steel (Bridge Floor)	<input type="checkbox"/>
Wood (Bridge Floor)	<input type="checkbox"/>
Other	<input type="checkbox"/>
Unknown	<input type="checkbox"/>

# Injury Elements

## Injured Age

**Injured Age Numerical Specifica...**

Lower bound:

Active  Inactive

Lower bound value:

< <= = >= > Clear

and  or

Upper bound:

Active  Inactive

Upper bound value:

< <= = >= > Clear

## Injured Gender

**Injured Gender Parameter Selection**

Select parameter(s) of interest:

Male

Female

Unknown

## Injury Severity

**Injury Severity Parameter Selection**

Select parameter(s) of interest:

Fatal

Major (Incapacitating)

Minor (Bruises/Abrasions)

Possible (Complaint of Pain)

Unknown

## Injured Area

**Injured Area Parameter Selection**

Select parameter(s) of interest:

Upper Torso

Lower Torso

Internal

Head

Arms

Legs

Multiple

Unknown

# Injury Elements

## Injured Position

**Injured Position Parameter Selection**

Select parameter(s) of interest:

- Driver
- Front Seat Middle
- Front Seat Passenger Side
- Rear Seat Driver Side
- Rear Seat Middle
- Rear Seat Passenger Side
- Third Seat Driver Side
- Third Seat Middle
- Third Seat Passenger Side
- Motorcycle/Moped Driver
- Motorcycle/Moped Passenger
- Bus Passenger
- Bicyclist
- Pedestrian
- Riding on Exterior
- Other
- Unknown

## Protective Device

**Protective Device Parameter Selection**

Select parameter(s) of interest:

- None On Old IASP Only
- None or Pedestrian
- Lap Belt Used
- Lap and Shoulder Belt
- Air Bag Deployed
- Child Restraint
- Motorcycle Helmet
- Passive Belt
- Other
- Unknown

## Ejection Information

**Ejection Information Parameter Selection**

Select parameter(s) of interest:

- Not Ejected or Pedestrian
- Partially Ejected
- Totally Ejected
- Extricated
- Unknown

# Pedestrian Elements

## Pedestrian Action

**Pedestrian Action Parameter Selection**

Select parameter(s) of interest:

- Crossing - Against Signal
- Crossing - Not at Crosswalk
- Walking - Improper Position on Roadway
- Soliciting Rides on Road
- Walking With Traffic
- Walking Against Traffic
- Crossing - With Signal
- Crossing - In Crosswalk
- Onto Road Between Parked Cars
- Ran Onto Roadway
- Directing Traffic
- Playing
- Lying or Sitting on Roadway
- Pushing/Working on Vehicle
- Getting On or Off Vehicle
- Maintenance/Construction Project
- Walking/Off Roadway
- Unknown

## Clothing Darkness

**Clothing Darkness Parameter Selection**

Select parameter(s) of interest:

- Generally Light
- Generally Dark
- Unknown

## Pedestrian Also Driver

**Pedestrian Also Driver Parameter Selection**

Select parameter(s) of interest:

- No
- Yes
- Not Stated

## Pedestrian Sobriety

**Pedestrian Sobriety Parameter Selection**

Select parameter(s) of interest:

- Had Not Been Drinking
- Drinking (Not Impaired)
- Drinking (Impaired)
- Drugs
- Unknown

# Pedestrian Elements

## Sobriety Results

The image shows a software dialog box titled "Sobriety Results Numerical Spe...". It contains two main sections: "Lower bound:" and "Upper bound:". Each section has a radio button for "Active" and "Inactive". Below each section is a text input field for the bound value and a set of buttons: "<", "<=", "=", ">=", ">", and "Clear". Between the two sections, there are radio buttons for "and" and "or".

Lower bound:

Active     Inactive

Lower bound value:

<   <=   =   >=   >   Clear

and    or

Upper bound:

Active     Inactive

Upper bound value:

<   <=   =   >=   >   Clear

# Miscellaneous Elements

## Roadway/Environmental Contributing Circumstances

Roadway/environmental Contributing Circumstances Parameter Selection

Select parameter(s) of interest:

- None
- Weather Conditions
- Surface Conditions
- Roadway Defect
- Pedestrian Action
- Pedestrian Drinking
- Previous Accident
- Animal in Roadway
- Frost Covered Bridge Floor (only)
- Traffic Control Not in Place or Not Functioning
- Non-Contact Vehicle
- Road Under Construction
- Other
- Unknown

## Driver/Vehicle Contributing Circumstances

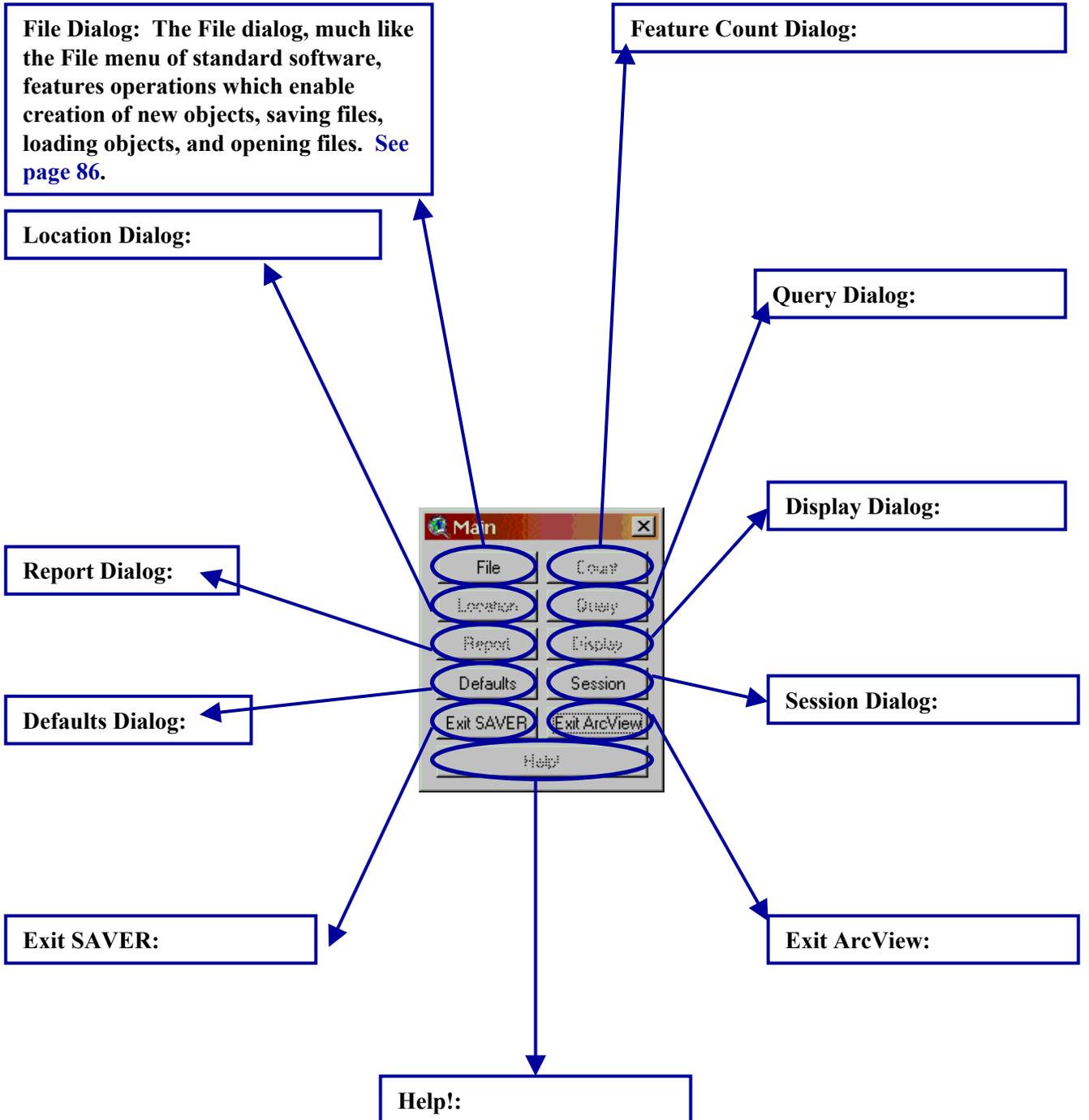
Driver/vehicle Contributing Circumstances Parameter Selection

Select parameter(s) of interest:

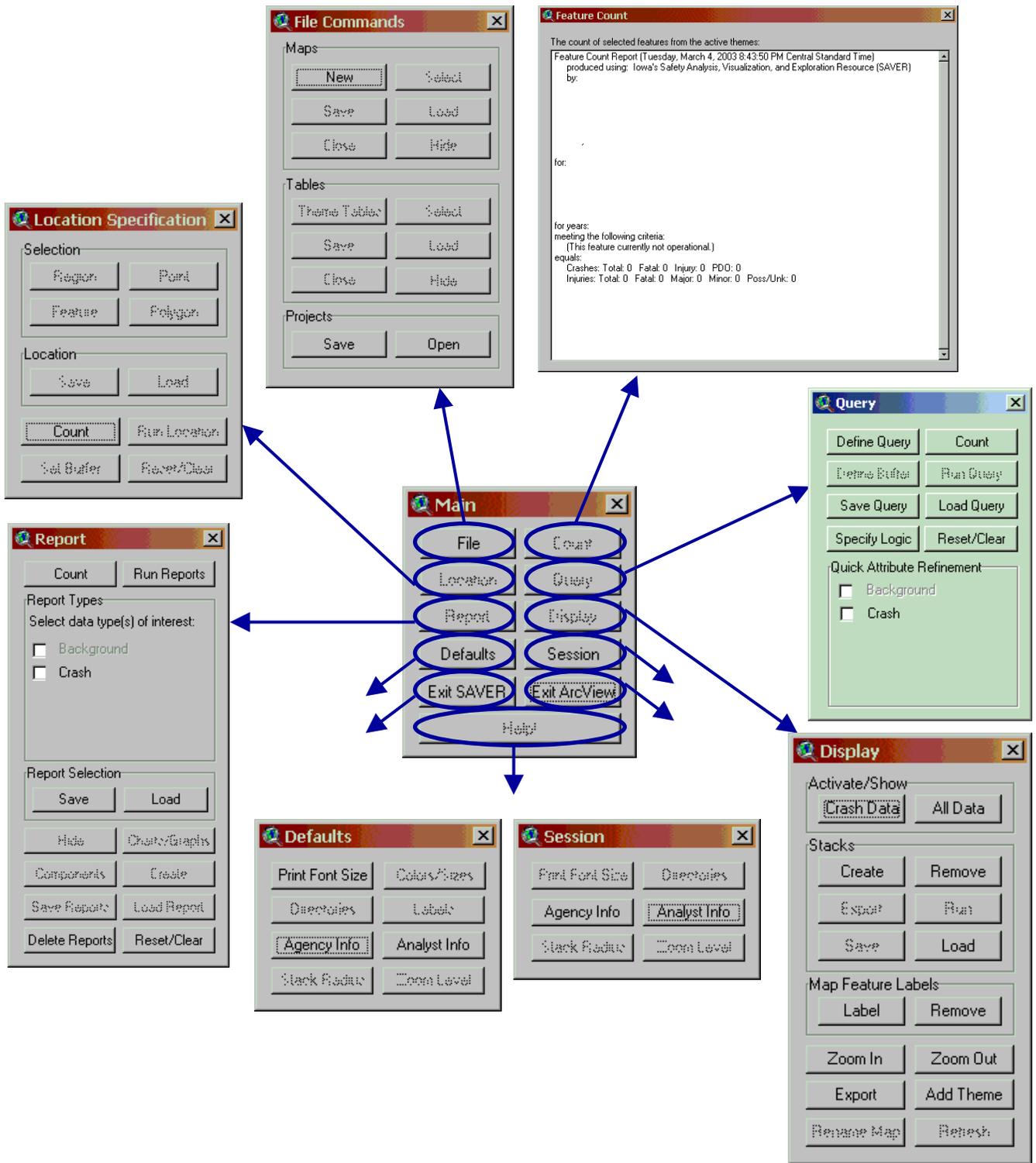
<input type="checkbox"/> Ran Traffic Signal	<input type="checkbox"/> Improper Backing
<input type="checkbox"/> Ran Stop Sign	<input type="checkbox"/> Illegal/Improper Parking
<input type="checkbox"/> Passed Stopped School Bus	<input type="checkbox"/> Failure to Have Control
<input type="checkbox"/> Passing Where Prohibited	<input type="checkbox"/> Headlights Not On
<input type="checkbox"/> Passing - Interfered with Other Vehicle	<input type="checkbox"/> Inattentive/Distracted
<input type="checkbox"/> Left of Center - Not Passing	<input type="checkbox"/> Driver Confused
<input type="checkbox"/> FTYROW at Uncontrolled Intersection	<input type="checkbox"/> Vision Obscured
<input type="checkbox"/> FTYROW from Stop Sign	<input type="checkbox"/> Oversized Vehicle
<input type="checkbox"/> FTYROW from Yield Sign	<input type="checkbox"/> Overloaded with Passengers/Cargo
<input type="checkbox"/> FTYROW Making Left Turn	<input type="checkbox"/> Inexperienced Driver
<input type="checkbox"/> FTYROW from Driveway	<input type="checkbox"/> Other
<input type="checkbox"/> FTYROW from Parked Position	<input type="checkbox"/> Unknown
<input type="checkbox"/> FTYROW to Pedestrian	<input type="checkbox"/> None Apparent
<input type="checkbox"/> FTYROW Other	
<input type="checkbox"/> Wrong Way on One Way Road	
<input type="checkbox"/> Speed Too Fast for Conditions	
<input type="checkbox"/> Exceeding Speed Limit	
<input type="checkbox"/> Drag Racing	
<input type="checkbox"/> Improper Turn	
<input type="checkbox"/> Improper Lane Change	
<input type="checkbox"/> Following Too Close	
<input type="checkbox"/> No Signal/Improper Signal	
<input type="checkbox"/> Disregarded RR Signal	
<input type="checkbox"/> Disregarded Warning Signal	
<input type="checkbox"/> Reckless Driving	

<insert subject>

# Main Dialog



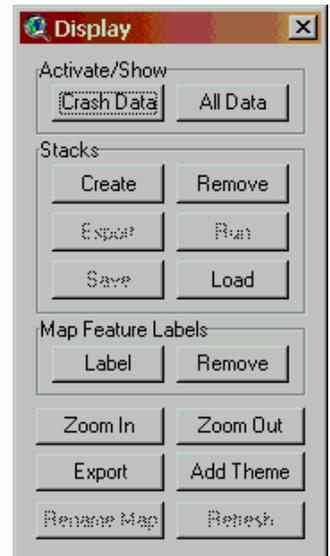
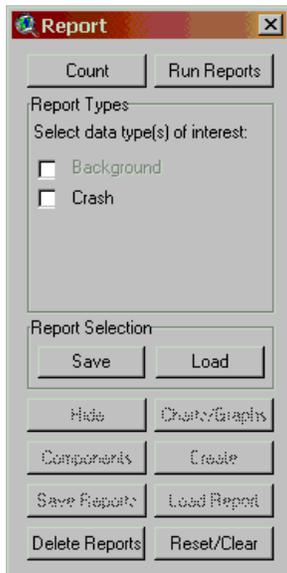
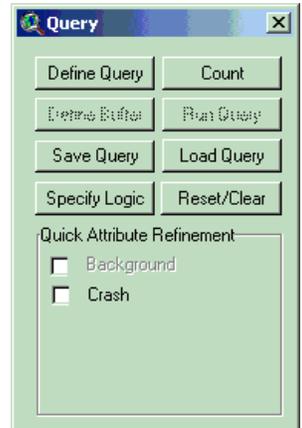
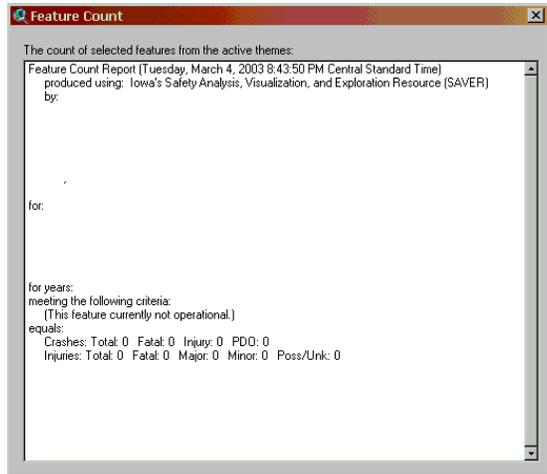
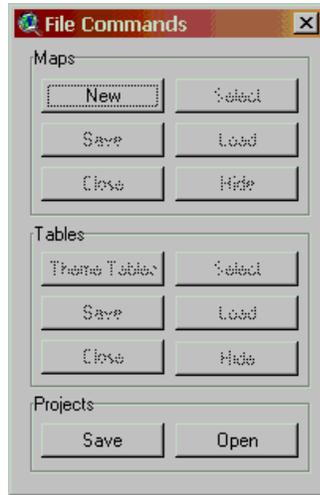
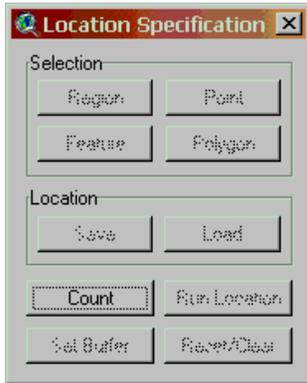
# <possible> Main Dialog



>> Next Page >>

**Thus far, you've only opened ArcView GIS and the SAVER Project. Now you need to initialize SAVER operation. To do this:**

<insert topic>



>> Next Page >>

Thus far, you've only opened ArcView GIS and the SAVER Project. Now you need to initialize SAVER operation. To do this:

<insert topic>

