RUTGERS
Center for Advanced Infrastructure and Transportation

Plan4Safety User Guide

Getting Started

Welcome to Plan4Safety! This short reference guide explores some of the most commonly used Plan4Safety tools to help you plan your safety initiatives. Before we get started, make sure you have your username and password handy. If you do not have a login, you can request one by visiting **plan4safety.rutgers.edu** to plan for safety today!

Enter your unique username and password on **plan4safety.rutgers.edu**, and the program will open to the Home Screen above. If you're logged in, you can return to this introductory page anytime by clicking [Home] at the top left of your screen.

Click on Filter Wizard and follow the prompts on the pop-up menu. This will "drill-down" all of the crashes in our database and only display what you choose. It's like going through mounds of crash form paperwork in seconds!

After you've found your crashes with the Filter Wizard or Filter Builder, you can look for patterns in the data that explain when, where, and why these crashes are happening. Click on [Analysis] to view analysis reports. The most common analysis reports are explained in more detail on the next page.

Using GIS mapping, put a face to your crash data by viewing these incidents on an actual map of New Jersey. You can zoom in, zoom out, view detailed map data, and more.

Home: Clicking here will bring you to the main screen (shown left).

Analysis: The options of this menu can analyze your filter data.

GIS (Geographic Information System): See your crashes on the map of New Jersey.

View: Administer your account settings and change your password.

Filter Wizard: "Drill-down" crashes with this step-by-step program aid.

New Filter: Create a filter/query using logic statements. Ex. (County = Mercer AND Severity = Fatal).

Shared Filters: See all user-created public filters in Plan4Safety. You can make your filter public or private when saving.

GIS Mapping: See your crashes on the map of New Jersey.

Active Filter Summary: View statistics on your active, open filter.

Analysis Reports

Cluster Finder is a tool that finds crash "hot spots" based on the area you define. First, navigate to the Analysis menu on the toolbar and select Cluster Finder from the drop-down menu.

Cross Tab creates a cross-section table of several pieces of data so you can see overlapping patterns.

Show All Clusters/Specify SRI: Search for clusters on all roads or on a specific road by State Route Identifier (SRI).

Minimum Number of Clusters: Specify the number of crashes you consider a cluster.

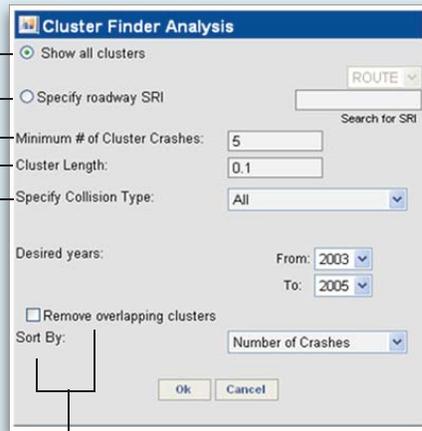**Cluster Length:** This is the road segment length in miles.

Specify Collision Type: You can choose to include only one type of crash in your cluster. If you'd like to see all crashes, select "All."

Remove Overlapping Clusters: Checking this box will display only unique cluster segments instead of overlapping segments
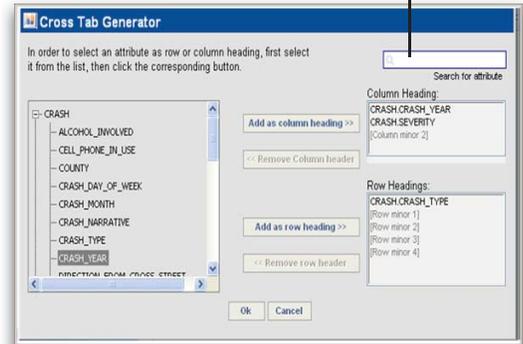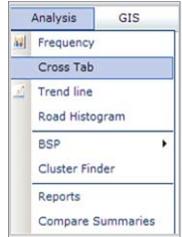
Sort By: Sort output by number of crashes or SRI and milepost.

Search Box

Variable   Column Headings

Choose Table Variables: Click on criteria from the left-hand table, then click "Add as Column Heading." Select another criteria and add is as a column or row by clicking the appropriate button. You can search for all data elements that can be used in Cross Tab in the search box.

Remove Table Variables: Highlight the variable in the Table Header and click "Remove Column Header" or "Remove Row Header."

**To Preview:** Once you've selected one column and one row, an automatic preview displays.

Cluster and Cross Tab Output:

Clusters for 'Middlesex_Crash'

SRI	Route	Milepost Start	Milepost End	Crashes In Segment
12000615	615	22.43	22.53	9
00000027	27	24.60	24.70	8
00000035	35	52.57	52.67	8
00000027	27	24.68	24.78	7

| CRASH.CRASH_TYPE Row Primary		Column Primary CRASH.CRASH_YEAR	
	2006	2007	2008
Unknown			
Same Direction - Rear End	877	827	813
Same Direction - Side Swipe	332	324	318
Right Angle	400	371	324

Frequency Analysis

evaluates your crash data and returns the frequency or distribution of a single data type, such as crash type, crash year, cell phone in use, or alcohol involvement.

1
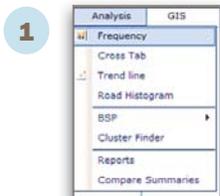
Click on the Analysis menu and select "Frequency."

2
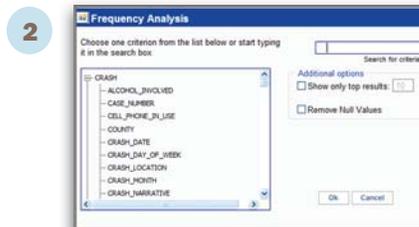
Select a single data element from the list. The data is organized into five tables of information. Use the search box if you are unsure where a data element lives. To see blank fields, check "Remove Null Values."

3
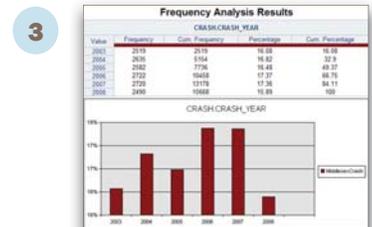
This bar graph is an example of the Frequency Analysis output.

GIS Mapping

GIS Menu Bar

Exit GIS   Alcohol_Involved

C M R

Side Bar   GIS Map
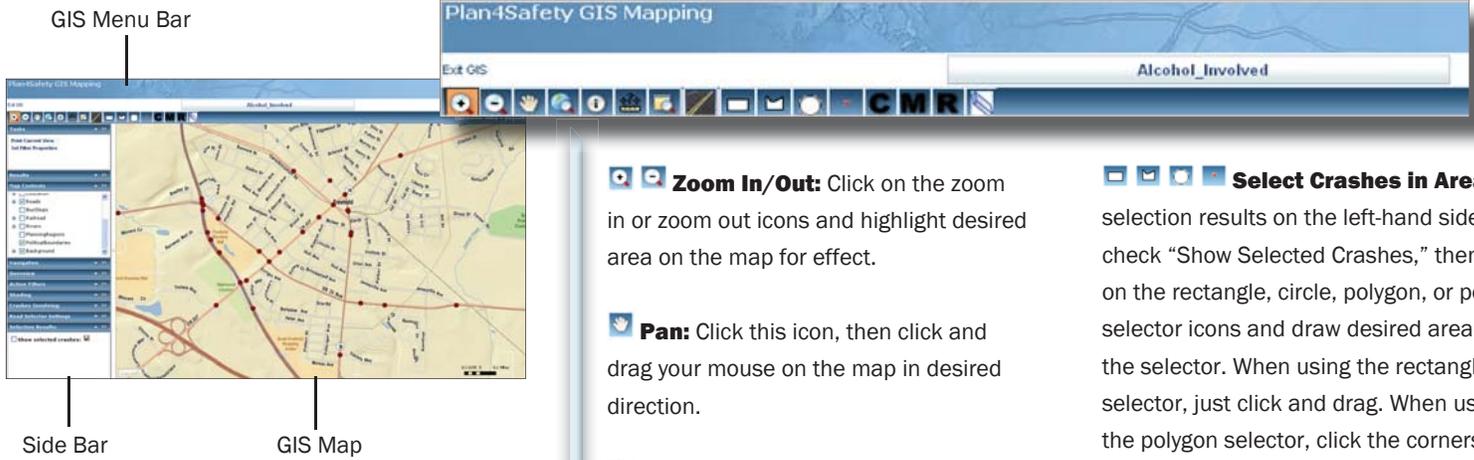
GIS Mapping

GIS Mapping creates a dynamic visual of filtered crashes. You can zoom in, zoom out, view roadway details, measure distances, and select areas for crash analysis. Useful for visualizing safety planning initiatives, the GIS mapping feature proves that a picture really is worth a thousand words. You can visualize crash "hot spots" and exact crash locations compiled over years of rigorous data collection. You can see physical features, including rivers, surrounding roads, schools, bus stops, and more.

Menu

Zoom In/Out: Click on the zoom in or zoom out icons and highlight desired area on the map for effect.

Pan: Click this icon, then click and drag your mouse on the map in desired direction.

Measure Distance: Click on the measure icon, then click and drag on the map to measure distance between points. Metric and U.S. are available.

View Roadway Details: Click on the roadway selector icon and select any road on the map. Expand the "Road Selector Settings" on the sidebar and specify road level (highway, county, or local) to view results.

Select Crashes in Area: In selection results on the left-hand sidebar, check "Show Selected Crashes," then click on the rectangle, circle, polygon, or point selector icons and draw desired area with the selector. When using the rectangle selector, just click and drag. When using the polygon selector, click the corners of your area. For the circle selector, navigate to the center of the desired area, then drag and click your mouse outward.

C M R View Municipality, County, or Road Data: Click on the road, municipality, or county icon and click desired area on map.
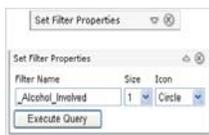
View Entire New Jersey Map: Click on the "Full Extent" map to return the map to the original view of the state of New Jersey.

Reset Selections: Use the eraser icon to clear all selections.

Sidebar

To Expand Sidebar Elements: Click on the down arrow.

Change Crash Icons: Expand the Set Filter item, select a new icon, then select "Execute Query."

Select Map Contents to Display: Expand Map Content and check off the layers you would like on your map.
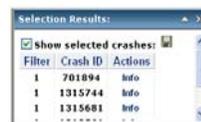
View Map Position: Expand Overview to view your position.

See Open Filters: Expand Active Filter to see the current filter(s) on the GIS Map.

View Road Details: Select highway, county or local road, and then select the road you'd like on the map. The road name and SRI will appear in the "Results."

See Selected Crash Information: The highlighted crashes will be listed here. Click "Info" for each individual crash.

Frequently Asked Questions

How can Plan4Safety help me do my job?

By identifying high-risk crash areas, safety professionals use the Plan4Safety application to analyze high-risk areas to make the necessary improvements and reduce vehicular incidents overall through engineering, enforcement, and education.

Is Plan4Safety right for me?

Plan4Safety receives an average of 300,000 crash records per year and integrates them into this program so that you don't have to go through piles of paperwork. If you plan safety initiatives or are looking to revamp your methods, Plan4Safety can help you do just that. The software outputs reports of areas and crash types you specify, as well as interactive GIS maps that help you really see the issues at stake.

Is Plan4Safety being updated?

Yes. We make frequent updates to improve the user experience by building new tools and features. The team is constantly working to make Plan4Safety easier to use!

My department works on a tight budget. How much does Plan4Safety cost?

Plan4Safety is free for all public agency employees, including police departments, safety officials, and traffic safety engineers.

How can I help promote Plan4Safety?

Easy. Just by doing your job—whether your're out on the field or analyzing data in-house. You help Plan4Safety by carefully filling out crash reports, submitting them in a timely manner, and making sure they are error free. Better data in equals better data out.

Developed by the Transportation Safety Resource Center (TSRC) at Rutgers' Center for Advanced Infrastructure and Technology (CAIT) and funded by the New Jersey Department of Transportation (NJDOT), Plan4Safety is a free, web-based comprehensive crash analysis software application that supports New Jersey safety professionals to accurately analyze and decide how best to focus on high-incident sites in their geographical areas.

Using common methodologies, Plan4Safety ranks high-risk areas so you can more accurately and consistently budget for most-needed improvements. A "must-have" tool for anyone determining traffic safety procedures, Plan4Safety offers 144 distinct pieces of data about any given crash, including:

- Crash Type
- Injury Level
- Type and Number of Vehicles
- Time and Location of Incident
- Cell Phone Use
- Alcohol Impairment
- Seatbelt Use
- Age and Gender

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