Perspective™

by PPM 2000

Incident management from every angle.™

Analysis Expert User Training Guide

Perspective by PPM 2000™

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Welcome to Perspective's Analysis Expert

Welcome to Analysis Expert (AE), an integral analytical component of Perspective by PPM 2000™. Analysis Expert is an internal search engine that scans the data in all Activity, Incident, Case (Perspective Premium only), Item, Person, Organization, and Vehicle records, and returns results that meet defined search requirements. Use Analysis Expert to create a query, and then turn your query's results into a spreadsheet, a chart, a printed grid, or a report.

Note: Only users with access to Analysis Expert can view and use this component. Search results reflect assigned user access rights and privileges.

To access Analysis Expert, log on to Perspective and click **Analysis Expert** in the Navigation pane.

Using This Guide

Using this guide is straightforward; however, there may be some terms included that you are not familiar with. There are a few helpful tips you should know about before beginning the Perspective Analysis Expert Training Guide.

This chapter is designed to help you in the following ways:

- Get you familiar with this guide and how it is structured.
- Learn how to access Perspective's Analysis Expert.
- Know where to look for help if you are confused by anything you come across while working with this guide.
- Teach you how to navigate the different sections of Analysis Expert.

What to Know Before You Begin This Guide

1. To access Analysis Expert, log on to Perspective and click Analysis Expert in the Navigation pane.
2. Understanding Boolean logic statements will help you significantly when working in AE. Information about Boolean logic statements can be found beginning on page 38.
3. You can find a variety of task-oriented examples in Appendix C, beginning on page 41.
4. Many of the bolded words found throughout this guide can be found in the Glossary, beginning on page 71.

Navigating the User Interface

Analysis Expert's interface transforms according to the stages of query building, by which it evolves in two separate screens: the initial **query designer** window and the subsequent **query results** window.

The query designer window of Analysis Expert enables you to set specific query criteria, grouping, and search options, and is aimed at producing optimal query results. It is divided into the following six sections (Figure 1.1):

1. **Ribbon:** In Analysis Expert, the Ribbon contains an additional set of buttons that perform saving, adding, cloning, deletion, sharing, and the execution of queries.
2. **Navigation pane:** Arranges queries that you create according to their access options (i.e., Shared Queries or Private Queries) and the various record entities (i.e., Case, Incident, Item, Organization, Person, and Vehicle). By default, all new queries are Private Queries,

and they are only available to the user who created them. In order to make a saved query available to users across your organization, you must share it.

3. **Form(s) pane:** The forms available for querying depends on the record entity selected in the Navigation pane. Once you select a form in the Form(s) pane, the corresponding fields will be checked in the Field(s) pane and recorded in the Selection(s) pane.

4. **Field(s) pane:** The specific fields that can be selected for display in the query results depends on the form selected in the Form(s) pane. The selected fields will automatically populate the Selection(s) pane under Display. This enables sorting and grouping of the query results into the Selection(s) pane and Criteria Designer.

5. **Selection(s) pane:** Displays the selected query criteria, as well as grouping and display options for the query results.

6. **Criteria Designer:** Contains three tabs (Criteria, Properties, and Audit) that control the process of query building.

    - The Criteria tab displays the fields that were selected as search criteria from the Field(s) pane and enables settings of their search values.
    - The Properties tab displays the text expression of the criteria selected under the Criteria tab.
    - The Audit tab tracks the history of the runs of the query.

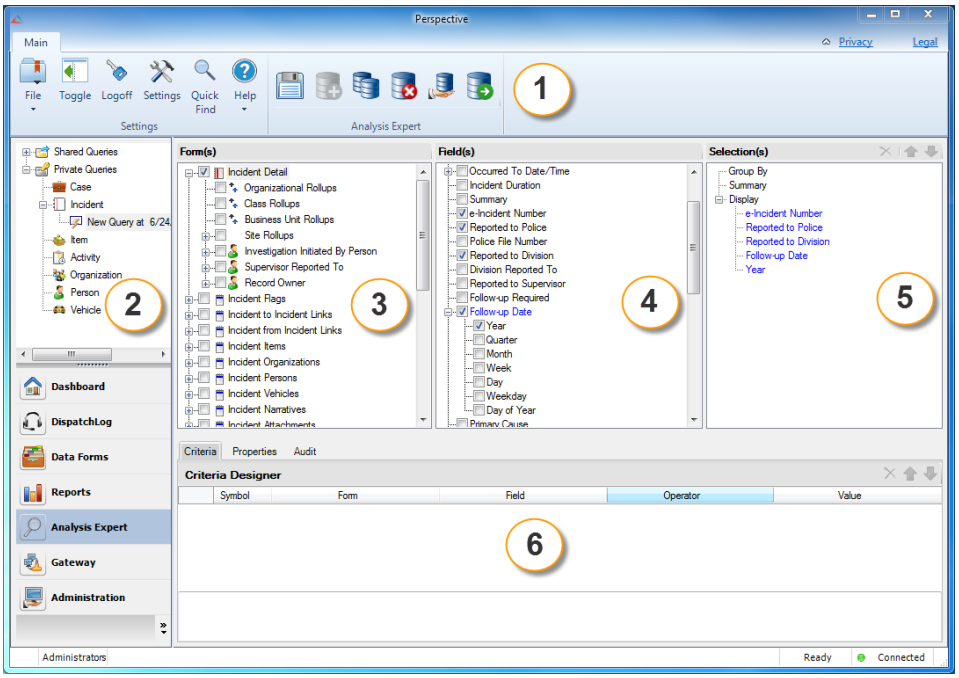


Figure 1.1: The six sections of Perspective's Analysis Expert

Some functions of the Ribbon are accessible directly from the right-click menu of a record entry or a query. Specifically, you may **add**, **clone**, **share**, **remove**, and **execute** a query by right-clicking a record entry or a query, and selecting the relevant option in the menu.

Design and Process a Query

Plan Your Query

Analysis Expert has the ability to search almost any field inside Perspective's database. It is important to plan your query before you run it, as Perspective has so much information to sift through. Planning your query is essential to best determine what fields to select and analyze, which will give you the narrowest results possible.

Consider the following questions when designing a query:

1. What information do I want to analyze?
2. What is the purpose of analyzing this information? In other words, am I determining *if* some data exists, *how many* entities of the data exist, or do I want a *list* of the data?
3. How do I intend to process the information once it has been collected? Do I plan to chart it, compare it, or leave it raw?
4. Am I trying to put too much information in my query? Do I need to break it up into two (or more) queries?
5. Am I trying to compare information with two different dates? If so, will I need to create two different queries?

Moving forward in this guide, it is important to understand the difference between **parent records** and **child records**:

- A **parent record** refers to the basic data that are recorded on Perspective's main forms, or that correspond to only one referent. Examples of parent data include, but are not limited to, an incident's Class, Site, Business Unit, Reported Date/Time, Status, Created by User, etc.
- A **child record** refers to data that are recorded on Perspective's subforms, or that could potentially correspond to more than one referent. Examples of child data include information about involved Persons, involved Vehicles, and so on. The majority of queries built in AE will be based on the data contained within parent records.

Add a New Query

Please refer to Figure 2.1 for an example of the following steps.

1. Click the **Add** button  on the Ribbon. A Create New Query dialog box will open.
2. From the **Type** lookup list, choose the record entity you would like AE to search (e.g., Incident, Person).
3. Enter a title for the query in the **Name** field.

- By default, the system will name the new query according to the template <New Query at [current date] [current time]> (e.g., <New Query at 15/12/2010 2:23:42 PM>).

4. In the **Description** text box, identify the type of query and/or its purpose.

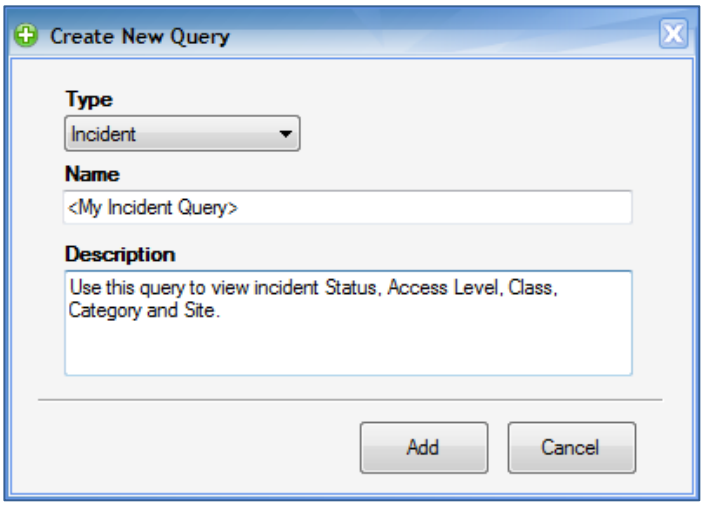


Figure 2.1: Create New Query box

5. Click **Add**. The Form(s) pane will automatically populate with the names of the selected record entity's respective forms (e.g., Incident Details, Incident Flags, Incident Losses).

   - By default, the first form will be highlighted and its associated fields will be displayed in the Field(s) pane.

Select Fields

1. Expand the nodes in the Form(s) pane, by clicking the plus sign ⊞, to see all of the contained subforms.

2. To view a form or subform's available fields in the Field(s) pane, click once on the form or subform in the Form(s) pane.

3. Check the boxes of the fields you want to have displayed in your query's results. The field names will automatically populate the **Selection(s)** pane under **Display** (Figure 2.2).

   - To select all the fields in a particular form or subform, click the form or subform's checkbox in the Form(s) pane.

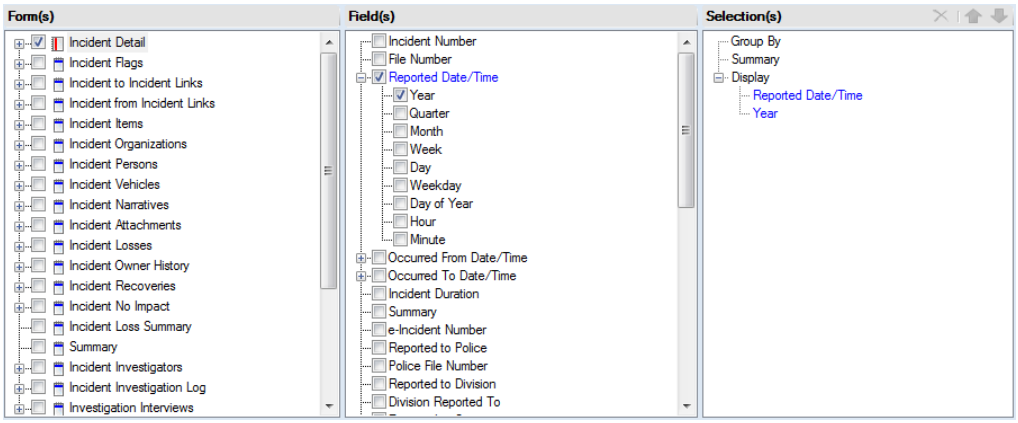


Figure 2.2: Incident Details form expanded, showing the contained subform fields

Example:

Build a query to look at the **Total** and **Net losses** of Incidents by **Year**, **Class**, **Category**, and **Site**.

a. In the **Form(s)** pane, click on the **Incident Detail** form (Figure 2.3).

b. In the **Field(s)** pane, check **Incident Number**.

c. In the **Field(s)** pane, expand **Reported Date/Time** and check **Year**.

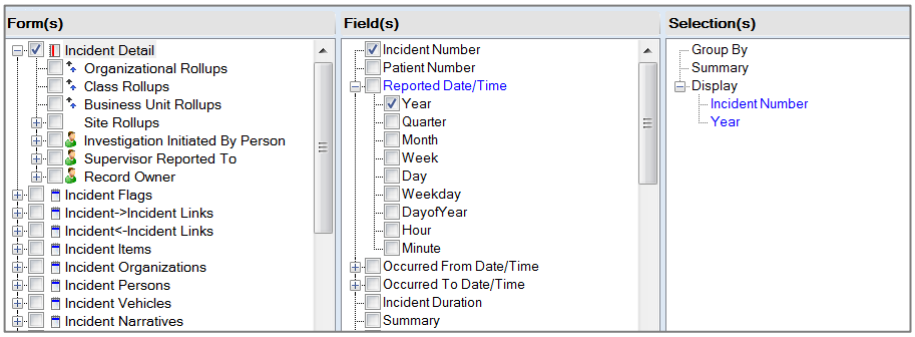


Figure 2.3: Query—Incident Number and Reported Date/Time

d. In the **Form(s)** pane, expand **Incident Detail** and click on the **Class Rollups** form (Figure 2.4).

e. In the **Field(s)** pane, check **Class** and **Category**.

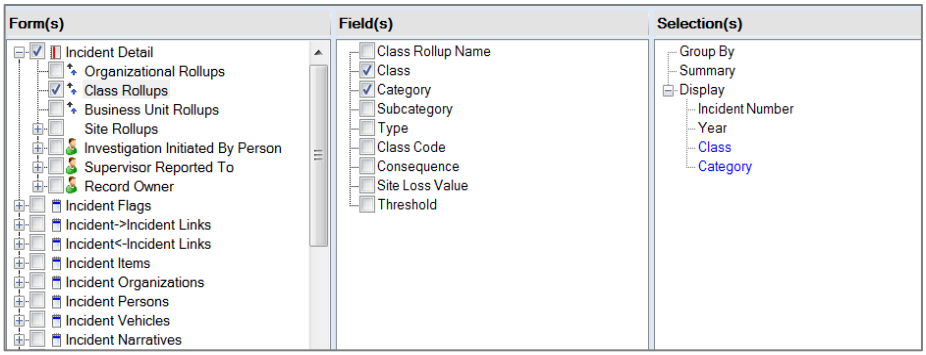


Figure 2.4: Query—Class and Category

f. In the **Form(s)** pane, click on the **Site Rollups** form (Figure 2.5).

g. In the **Field(s)** pane, check **Site**.

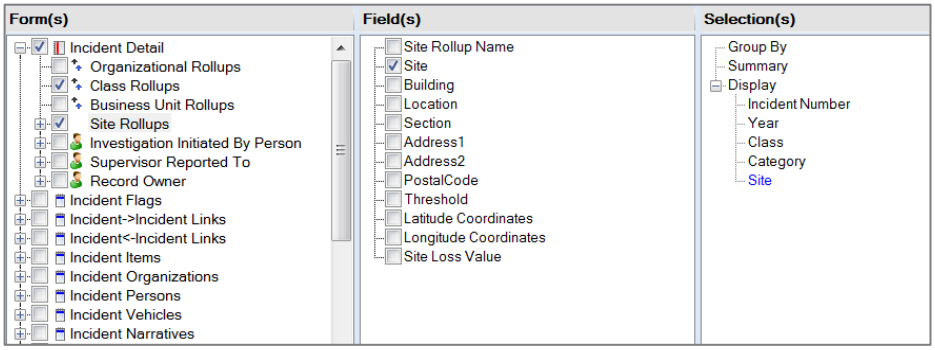


Figure 2.5: Query—Site

h. In the **Form(s)** pane, click on the **Incident Loss Summary** form (Figure 2.6).

i. In the **Field(s)** pane, check **Total Loss** and **Net Loss**.

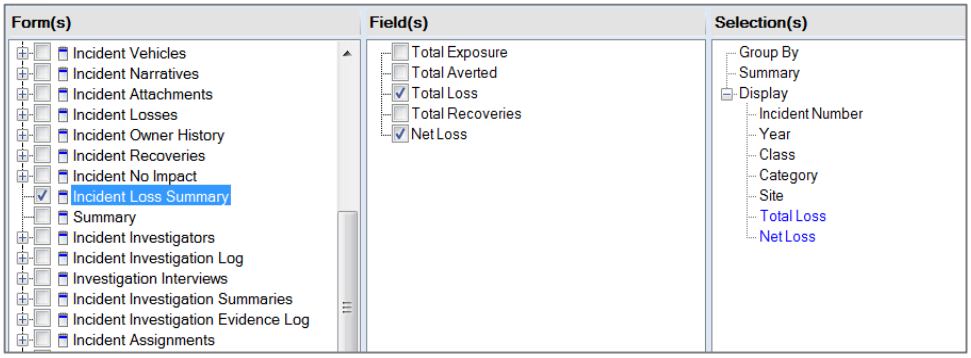


Figure 2.6: Query—Total Loss and Net Loss

4. Click **Save** on the Ribbon to store the query for access at a later date, or click Execute to run the query immediately.

   - Executing the query at this point gives you a list of all corresponding records in Perspective that you have access to. The query results open in a separate window.

Add Criteria

1. If you want to search within a portion of data, set the parameters of your search by right-clicking the parameters' fields in the **Field(s)** pane, and selecting the **Search By** option (Figure 2.7).

   - The selected field will appear in the Criteria Designer pane below. (If you do not want the field to be displayed in the query's results, do not select the checkbox beside the field's name in the Field(s) pane.)

2. To specify a **comparison value** for the selected parameter, select the relevant **Operator** from the lookup list (Figure 2.8).

   - Depending on the type of parameter, you will have an option of either entering the comparison value in the Value field, or selecting it from the lookup list. Add as many parameters for your data sample as you need.

   Note: Available operators and their functions are listed in Appendix A: Criteria Operators (pg. 38).

   If you would like to search between two values (e.g., a date range), you will need to create two criteria—one using the operator *"greater than or equal to" (>=)*, and the other using *"less than or equal to" (<=) (Figure 2.8)*.

   Example:

   Adjust the search criteria so that the query results display only the incidents with a net loss **over $100** that took place between **2011** and **2012**.

   Please refer to Figure 2.7 and 2.8 for an example of the following steps.

   a. Right-click **Year** in the **Field(s)** pane and select **Search By**.

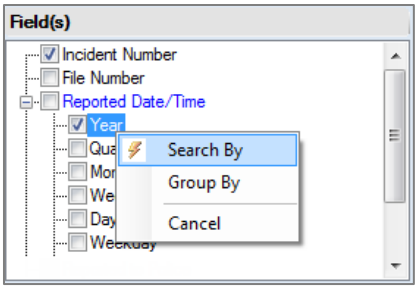


Figure 2.7: Search within a portion of data by right-clicking and selecting Search By

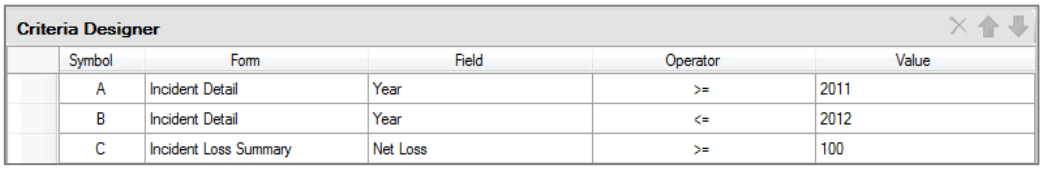
b. In the **Criteria Designer** pane, against the **Year** parameter (**A**), select the *"greater than or equal to" (>=)* **Operator** and set its **Value** to 2011.

c. Right-click the **Year** field in the **Field(s)** pane again and select **Search By**.

d. In the **Criteria Designer** pane, against the **Year** parameter (**B**), select the *"less than or equal to" (<=)* **Operator** and set its **Value** to 2012.

e. Right-click the **Net Loss** field in the **Field(s)** pane and select **Search By**.

f. In the **Criteria Designer** pane, against the **Net Loss** parameter (**C**), select the *"greater than or equal to" (>=)* **Operator** and set its **Value** to 100.



Symbol	Form	Field	Operator	Value
A	Incident Detail	Year	>=	2011
B	Incident Detail	Year	<=	2012
C	Incident Loss Summary	Net Loss	>=	100

Figure 2.8: Criteria Designer, where you set your Form and Field Operators and Values

3. As you continue to specify the parameters, the system will edit the corresponding **Boolean logic statement** at the bottom of the **Criteria Designer** pane.

   - By default, Perspective searches for data that meets both criteria A AND criteria B, and so on. If you want to only generate results that meet either criteria A OR criteria B, or some variation thereof, you must manually modify the statement (in the bottom of the Criteria Designer) to reflect this. It is best to modify the statement after you have entered all your data parameters first.

Note: Deleting a parameter symbol (e.g., A, B, C, etc.) from the statement will not remove the corresponding parameter from the list. However, if a parameter is deleted from the statement, it will not appear in the executed query results. Ultimately, the Boolean logic statement contains the defining formula for your data sample, while the list of parameters provides the parameters you may search by, and serves as a reference point for the statement.

Example:

In addition to the previous criteria, adjust the Boolean logic statement so that the query results display only the incidents from **Central Campus** *or* **Valley Center** locations.

a. Right-click the **Site** field in the **Field(s)** pane and select **Search By**.

b. In the **Criteria Designer** pane, against the **Site** parameter (**D**), select the *"equal" (=)* **Operator** and set its **Value** to Central.

c. Right-click the **Site** field in the **Field(s)** pane again, and select **Search By**.

d. In the **Criteria Designer** pane, against the **Site** parameter (**E**), select the *"equal" (=)* **Operator** and set its **Value** to West Valley.

e. In the Boolean logic statement text field (bottom of the Criteria Designer), edit the displayed statement to read as "((A AND B AND C) AND (**D OR E**))".

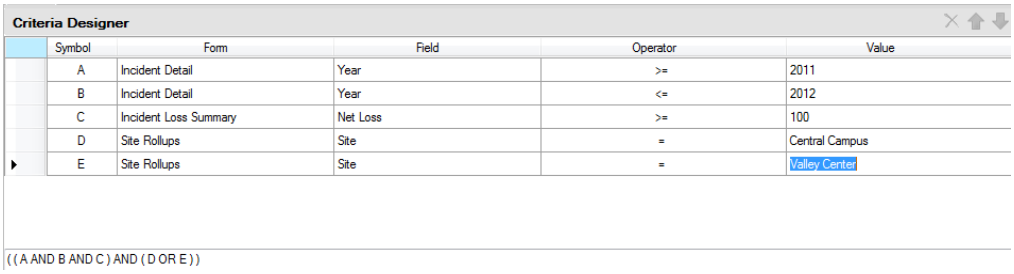
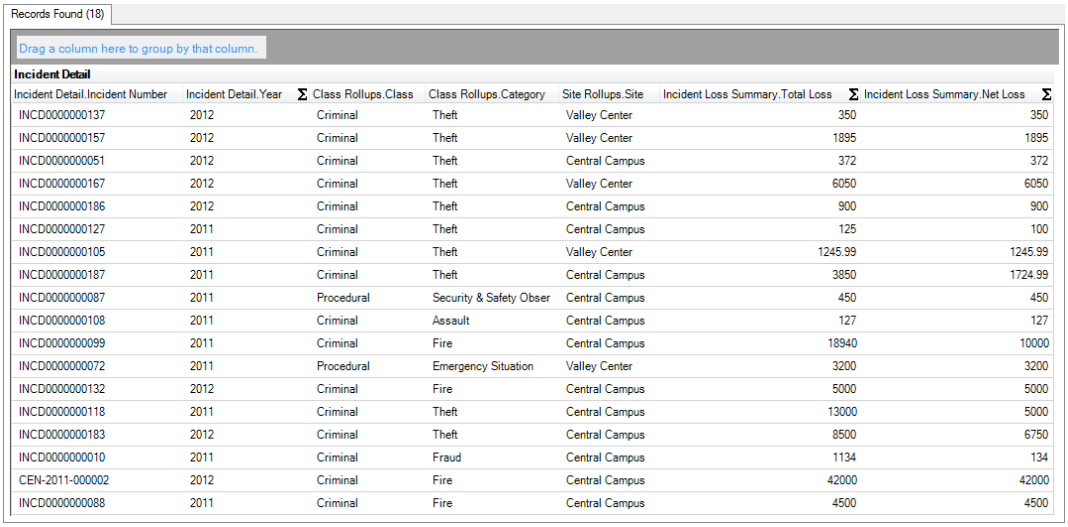


Figure 2.9: Criteria Designer and the Boolean logic statement (bottom left)

4. Click **Save** on the Ribbon to store the query for access at a later date, or click **Execute** to run the query immediately. The query results will open in a separate window (Figure 2.10).


Records Found (18)

Drag a column here to group by that column.

Incident Detail

Incident Detail.Incident Number	Incident Detail.Year	Σ	Class Rollups.Class	Class Rollups.Category	Site Rollups.Site	Incident Loss Summary.Total Loss	Σ	Incident Loss Summary.Net Loss	Σ
INCD0000000137	2012		Criminal	Theft	Valley Center	350		350	
INCD0000000157	2012		Criminal	Theft	Valley Center	1895		1895	
INCD0000000051	2012		Criminal	Theft	Central Campus	372		372	
INCD0000000167	2012		Criminal	Theft	Valley Center	6050		6050	
INCD0000000186	2012		Criminal	Theft	Central Campus	900		900	
INCD0000000127	2011		Criminal	Theft	Central Campus	125		100	
INCD0000000105	2011		Criminal	Theft	Valley Center	1245.99		1245.99	
INCD0000000187	2011		Criminal	Theft	Central Campus	3850		1724.99	
INCD0000000087	2011		Procedural	Security & Safety Obser	Central Campus	450		450	
INCD0000000108	2011		Criminal	Assault	Central Campus	127		127	
INCD0000000099	2011		Criminal	Fire	Central Campus	18940		10000	
INCD0000000072	2011		Procedural	Emergency Situation	Valley Center	3200		3200	
INCD0000000132	2012		Criminal	Fire	Central Campus	5000		5000	
INCD0000000118	2011		Criminal	Theft	Central Campus	13000		5000	
INCD0000000183	2012		Criminal	Theft	Central Campus	8500		6750	
INCD0000000010	2011		Criminal	Fraud	Central Campus	1134		134	
CEN-2011-000002	2012		Criminal	Fire	Central Campus	42000		42000	
INCD0000000088	2011		Criminal	Fire	Central Campus	4500		4500	

Figure 2.10: Results of an executed query

Work with Query Results

View Query Results

To execute a query, select the query you want to run from the query list in the Navigation pane, and click **Execute** on the Ribbon. Once the query is executed, a new window will open with the results of the query, displayed in the form of a grid. The number of returned records will be displayed at the bottom of the screen (Figure 3.1).

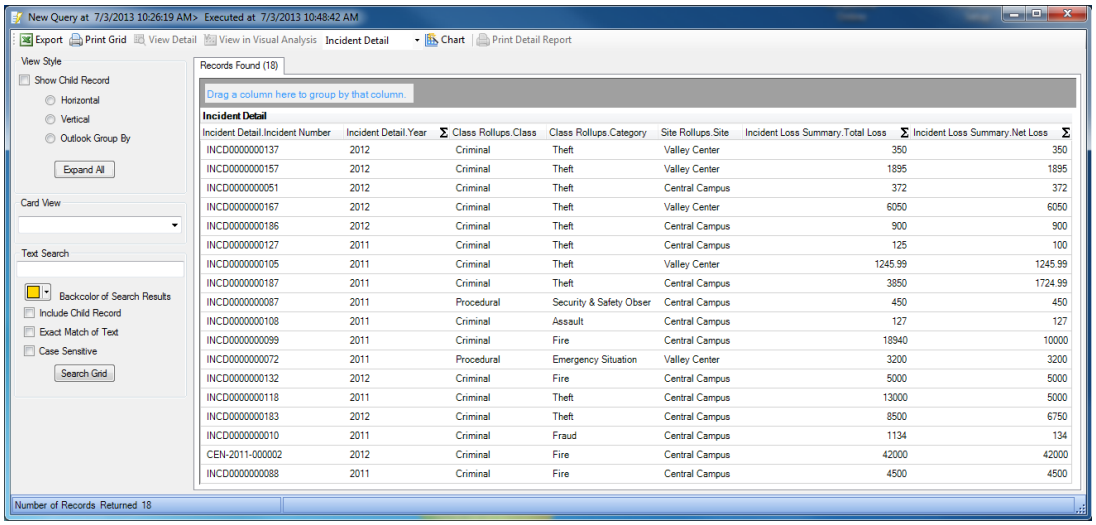


Figure 3.1: Executed query, with the number of returned records in the bottom left corner

From this view, you can reorder the columns by dragging and dropping the column header. You can put the list of records in ascending or descending order by clicking on the relevant column headers. Moreover, you can make columns larger or smaller by grabbing the edge of the column header and adjusting appropriately.

Use the Card View option to invert the columns and rows in your query results for an alternative display option. If your query results contain child data, you may choose to display either parent records (e.g., Incident Detail) or child records (e.g., Incident Investigators) as cards, by selecting the appropriate data label under the Card View lookup list. Select <None> to reset the view back to the list mode (Figure 3.2).

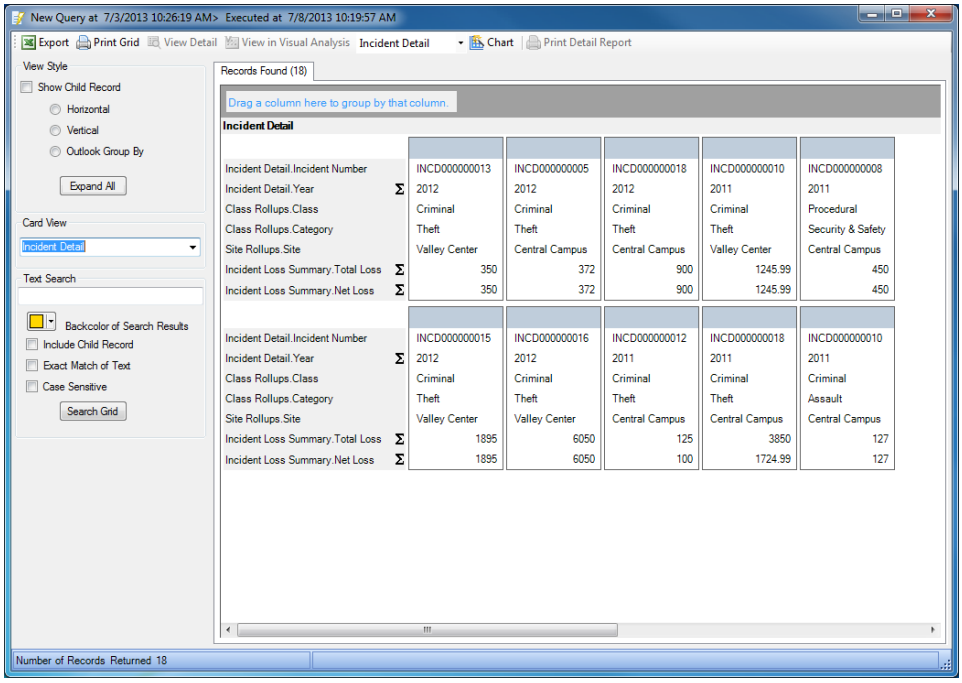


Figure 3.2: Query shown in Card View

Search for Specific Data in Query Results

To search for specific data in your query results, use the **Text Search** function. Type a keyword in the Text Search field, and click **Search Grid** (Figure 3.3).

- The color of the highlighted search text can be modified using the **Backcolor of Search Results** lookup list.
- Check **Include Child Record** to search all records in the query results.
- Check **Exact Match of Text** to search only for text that corresponds exactly to the text entered in the Text Search field.
- Check **Case Sensitive** to search only for text containing the correct uppercase or lowercase characters specified in the search text.

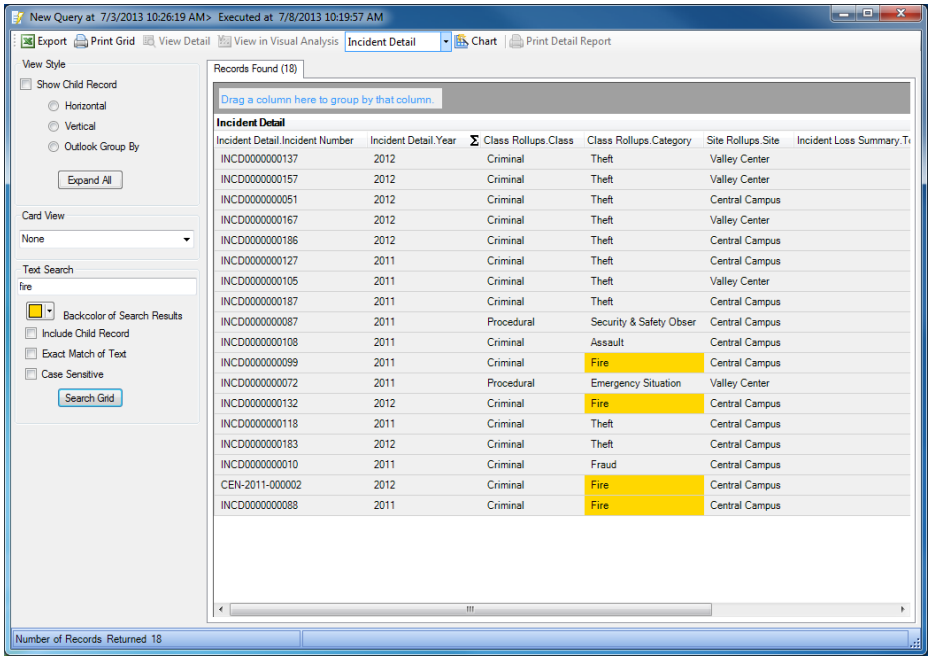


Figure 3.3: Using Text Search to highlight specific data

Group Query Results by a Field

To **group the results by a field**, drag the column heading to the gray box above the grid and drop it.

- All query results will automatically collapse; grouped by the column heading you just selected (Figure 3.4).

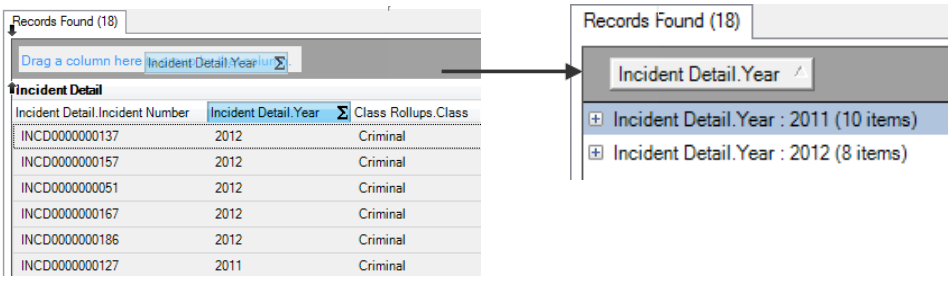


Figure 3.4: Grouping query results by year

To **add another tier** to the grouping, first expand one of the nodes to view its data in grid format. Then, click and drag a different column heading to the gray box. The query results will once again collapse, grouped first by your initial selection, and then by your second selection. You may continue to add tiers to your grouping using the same method.

To **reorder the tiers** in your grouping, click and drag the column headings in the gray bar (Figure 3.5).

To **remove a field** from your grouping, drag the column heading in the top gray bar and place it anywhere in the query results screen.

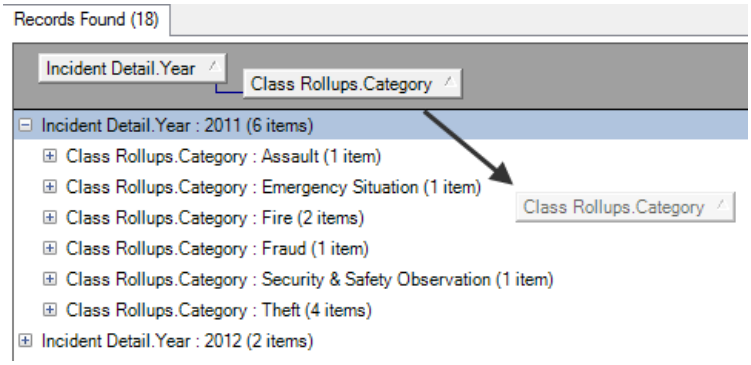


Figure 3.5: Reorder tiers

Perform Calculations on Query Results

1. To perform calculations on data in query results that were created using the Group By option, select the **Outlook Group By** radio box in the View Style section. The **Sigma** symbol (**Σ**) will appear on all column headings. (If the Group By function was used to build the query, Sigma will automatically appear on column headings.)

2. To perform data calculation on a column of data, click the **Σ** button at the top of the respective column. The Select Summaries dialog box will open (Figure 3.6).

3. Select the type of calculation that is required for the column (Average, Count, Maximum, Minimum, and/or Sum). You can select more than one calculation option (Figure 3.6).

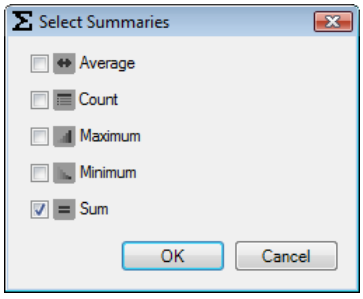


Figure 3.6: Calculation options available via the Sigma (Σ) button

4. Click **OK**.

   - The calculation results will be displayed below the appropriate columns at the bottom of the query results. If your results were grouped by a field within the query results window, then the calculations will apply and be displayed for each group (Figure 3.7).

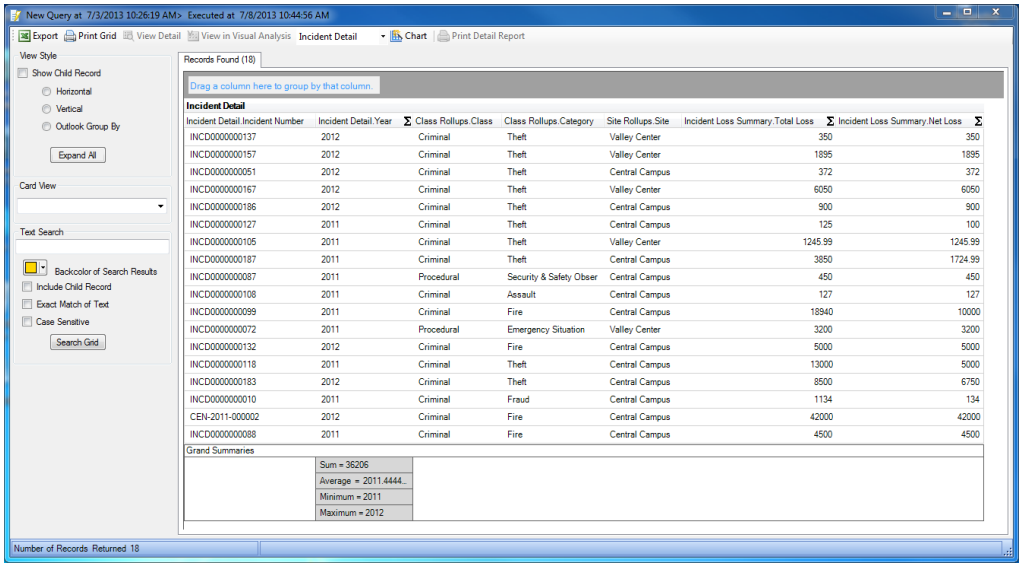


Figure 3.7: Calculation results in bottom right corner

View Details Regarding a Record

You can look at more details regarding a record in the following two ways:

1. Click View Details to open a read only view of the selected record.
2. Click View in Visual Analysis to open the record details in Visual Analysis.

Print Query Results

1. To print the query results, first estimate the layout of your grid in relation to the **portrait layout**.
   - If necessary, scale the query results window to fit one portrait page.
2. Click **Print Grid** on the top toolbar. A Print Preview window will open (Figure 3.8).
3. Review the layout of the grid using the toolbar at the top of the screen.
4. Click the **Print** icon to print the grid.

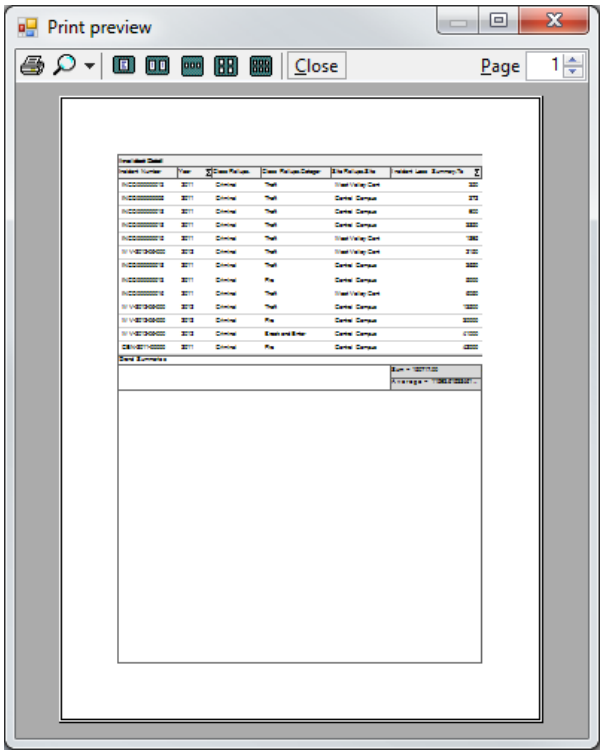


Figure 3.8: Print preview

Export Query Results to Excel

1. To export query results, click **Export** on the top toolbar. A Windows Explorer window will open.
2. Choose the location for the new file, and name the file. Indicate the file type, choosing from Excel-Flat Format (*.xls), Excel-Data (*.xls), and Extensible Markup Language (*.xml).
3. Click **Save**. You will receive a confirmation message stating that the export was successful.
4. Click **OK**.

Chart Query Results

Note: If your query results contain child data, you may choose to chart either parent records or child records, by selecting the appropriate data label under the attached lookup. To learn how to analyze and chart child data, see the Analyze and Chart Child Data chapter (pg. 30).

1. To begin charting your query results, click **Chart** (Figure 3.9).

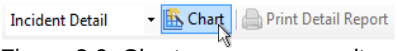


Figure 3.9: Chart your query results

2. A charting window will open with a blank Viewing pane, with a list of variables available for charting listed in the **Data pane** on the left, and a grid with raw chart data listed in the bottom **Data** tab.

3. In the left Data pane, select an **X-Field** and a **Y-Field** (or multiple Y-Fields) for your chart from the available options (Figure 3.10).

   - The X-Field data will appear on the horizontal x-axis of your chart. The Y-Field data will appear on the vertical y-axis of your chart. If you select more than one Y-Field, ensure that they have the same unit of value (e.g., dollars, items).

     Note: Y-Fields are always charted as numerical values. Generally, text fields are counted (e.g., quantity of Incident Numbers or Last Names), while numerical fields are summed (e.g., amounts of Incident Losses).

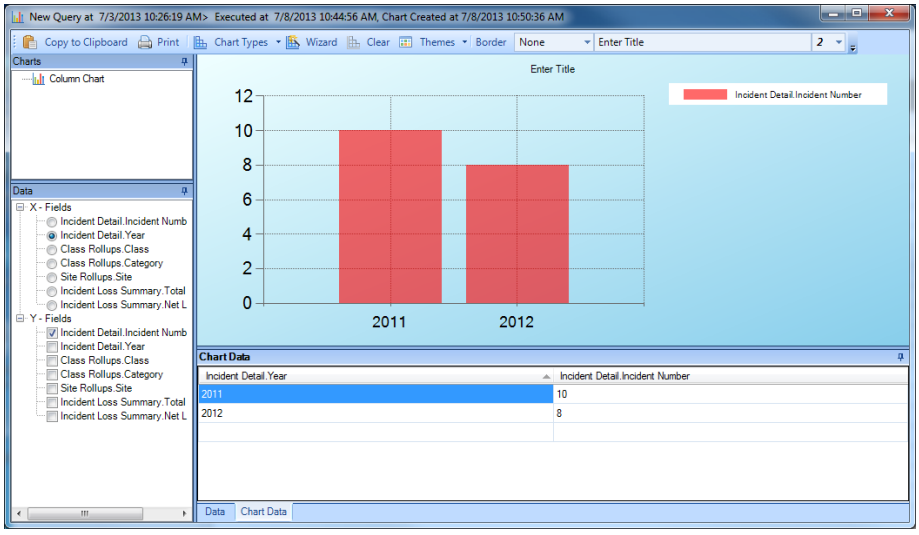


Figure 3.10: Charting your data

Example:

Build an Incident query with the following criteria: Incident Number, Year, Category, Site, and Total Loss. Run the query and chart the query results to show incidents' **Total Loss** by **Site**.

a. In the Analysis Expert query building screen, select the Incident Number, Year, Category, Site, and Total Loss fields. In our example, using the Search By function and the Criteria Designer pane, we will limit the query results to only reflect incidents that occurred at Central and West Valley locations, and their involved losses (Figure 3.11)

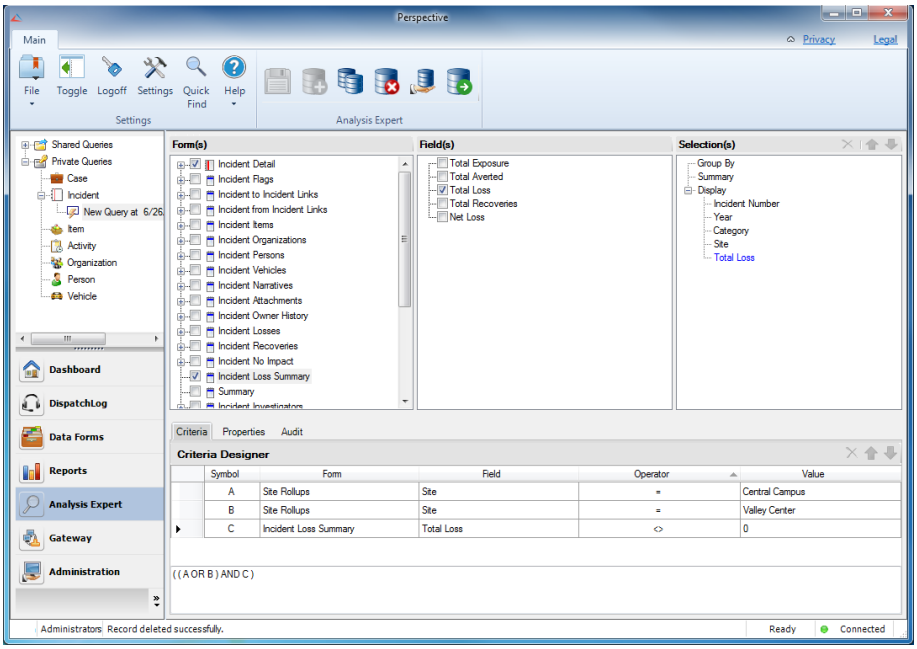


Figure 3.11: Query and Criteria Designer (and the corresponding Boolean logic statement)

Click **Execute** on the Ribbon to run the query (Figure 3.12).

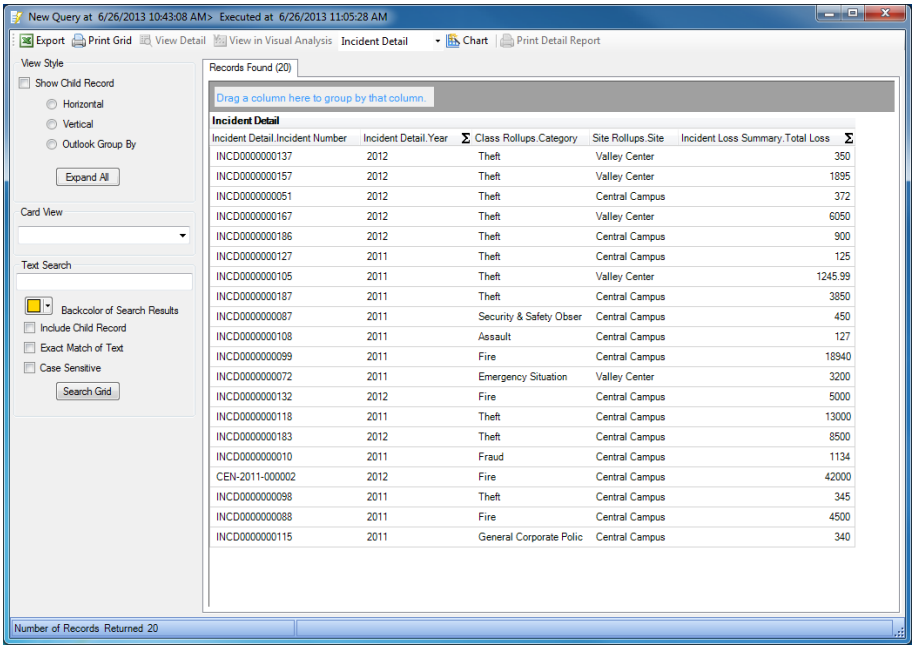


Figure 3.12: Executed query

b. Click the **Chart** icon on the query results screen. The charting window will open.

c. In the Data pane, Set the X-Field to **Site Rollups.Site**, and the Y-Field to **Incident Loss Summary.Total Loss** (Figure 3.13). Your chart will appear in the Viewing pane.

   - By default, your initial chart will be formatted as a Column chart. The bottom pane will display your selected Chart Data.

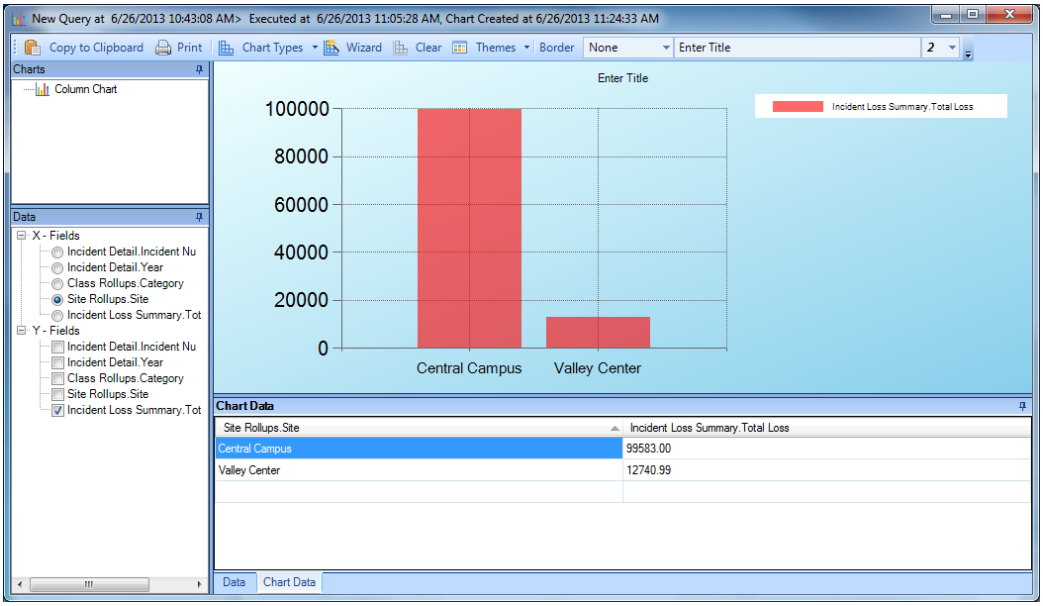


Figure 3.13: Charting your data

4. You may copy data from the Chart Data pane into Excel by highlighting the relevant cells and then using the <Ctrl>+<C> and <Ctrl>+<V> keyboard commands.

5. If you want to select an additional variable for your chart to see the distribution of one of your variables by another, click on the name of the variable, right-click it, and select **Add Series**.

   - The chart type will switch to a pivot chart.
   - The new variable will be added to the chart and will be explained in the legend.

   Note: Once a Series variable is incorporated into your chart, only one Y-Field will be charted. Additional Y-Fields will be automatically dropped from your chart.

Example:

Modify the previous chart to be able to see the distribution of **total loss** by **incident categories** in each **site**.

a. In the Data pane, click on the name of the **Class Rollups.Category**, right-click it, and select **Add Series** (Figure 3.14).

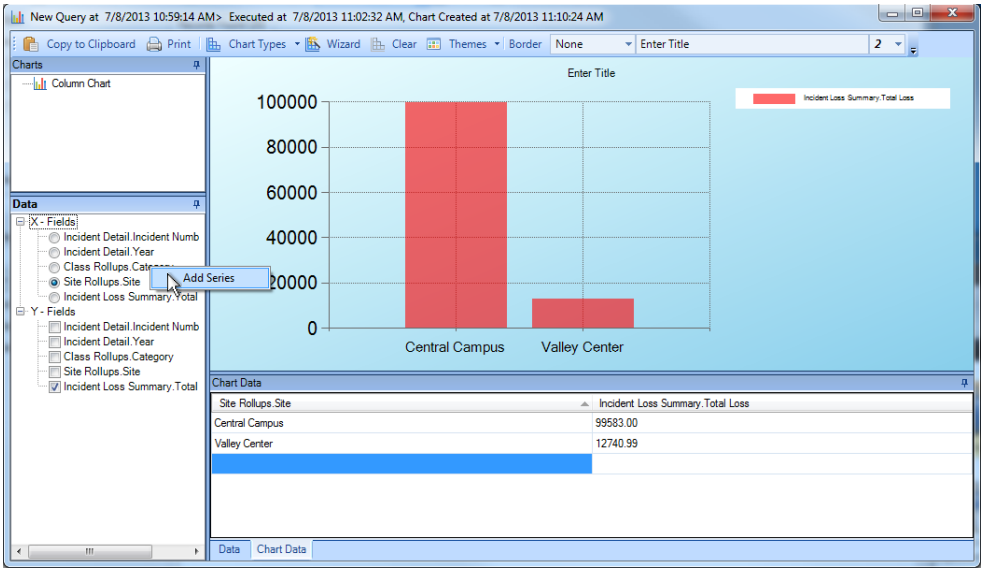


Figure 3.14: Adding a series to your chart

b. The Chart Data pane, the chart itself, and the legend will change to include the new criterion (Figure 3.15).

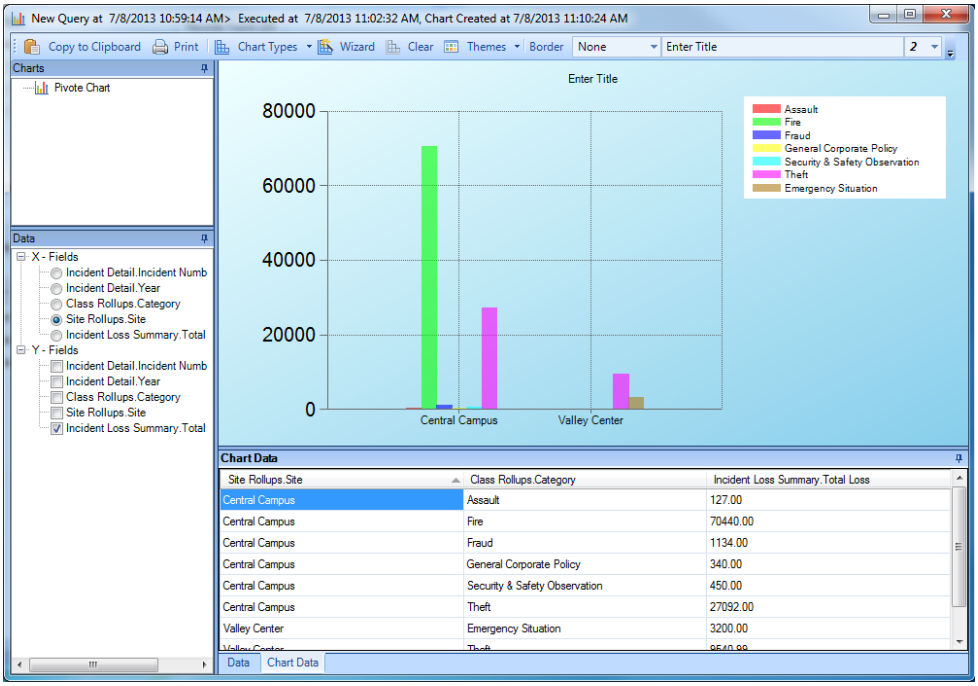


Figure 3.15: Charted data with additional criterion and a legend

6. Once you have the necessary information in your chart, you can modify its appearance with the toolbar at the top of the window (Figure 3.16). To rotate the chart, adjusting its perspective, click and drag the chart on the Viewing pane. For more elaborate designs, you can also refer to the **Wizard** feature.

   Note: To learn about the functions of the Wizard feature, consult the Chart Wizard section (pg. 22).

Modify Your Charts

Chart Types	To change the default Column chart to a different chart type, choose an option from the **Chart Types** lookup list (e.g., Pie, Bar, Area). The Charts pane will automatically populate with the name of the selected chart. *Note: If your chart includes series, changing the chart type will remove the series. The **Wizard** must be used in order to change the chart type for a chart with a series.*
Themes	In the **Themes** lookup list, select a color theme for your chart.
Border	From the **Border** lookup list, select a border or frame style for the chart.
[Title]	Enter a title for the chart in the wide blank text box.
[Format]	To change the chart's default format from 2D (two-dimensional) to 3D (three-dimensional), choose 3D in the right drop-down menu.

Table 3.1: Various ways to modify your chart

7. To copy your chart to **clipboard** or to **print** it, click the appropriate icon on the toolbar. If you want to **erase** the chart and construct a new chart of the query results, click **Clear** on the toolbar or right-click in the chart area and select **Clear**.

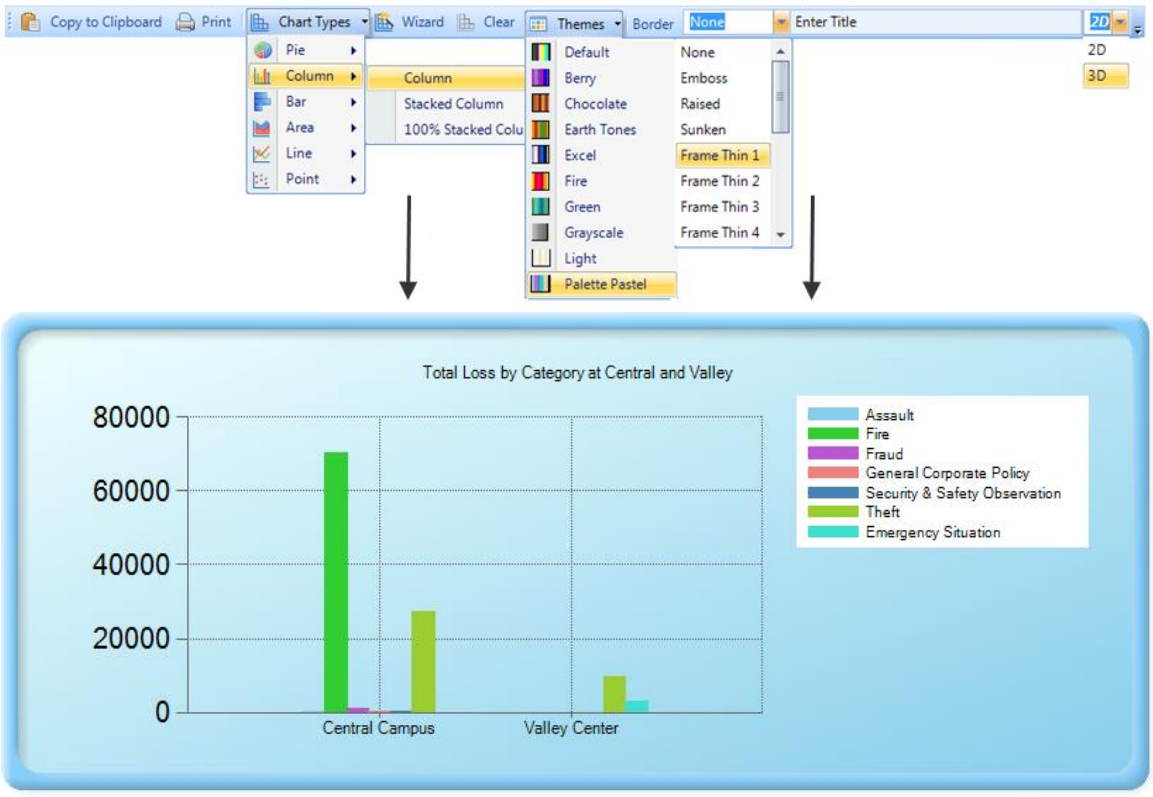


Figure 3.16: Changing the appearance of your chart

Chart Wizard

1. To adjust the chart's appearance, click the **Wizard** icon on the toolbar. The Chart Wizard contains a number of options that allow you to fully customize your chart (Figure 3.17).

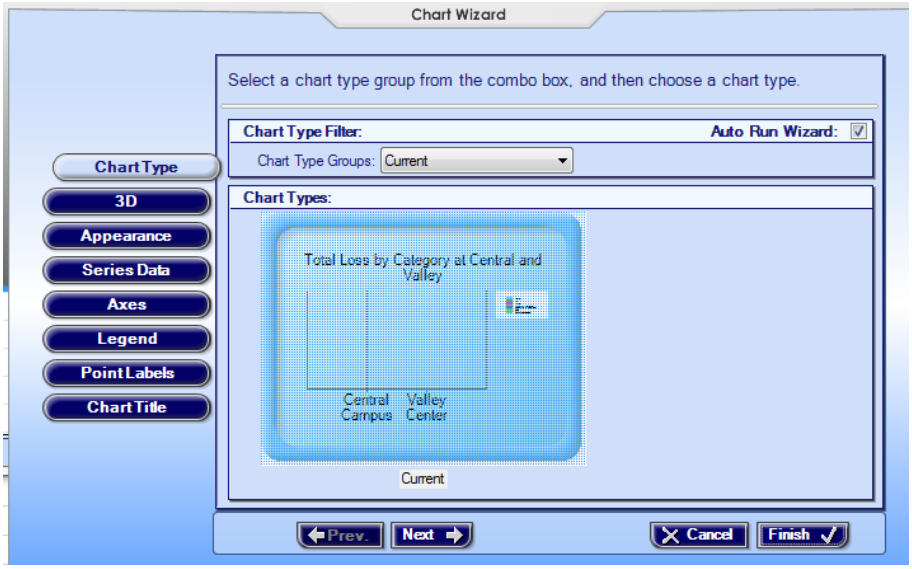


Figure 3.17: Adjusting your chart's appearance with the Chart Wizard

2. Specify your chart options by selecting the appropriate modes from the toolbar on the left. Click **Previous** and **Next** to navigate between the modes.

Example:

Modify the appearance of the previously designed column chart by adding the Total Loss **unit**, **point values**, and names of the **axes**. Experiment with the chart's design, trying to achieve an optimal three dimensional (3D) appearance.

Chart Type

a. Choose the general **Chart Type Group**, and then select the specific chart type. For the purposes of optimal visualization, we will select the Column type.

b. Click the **Show 3D Types** box to see the chart type images in 3D.

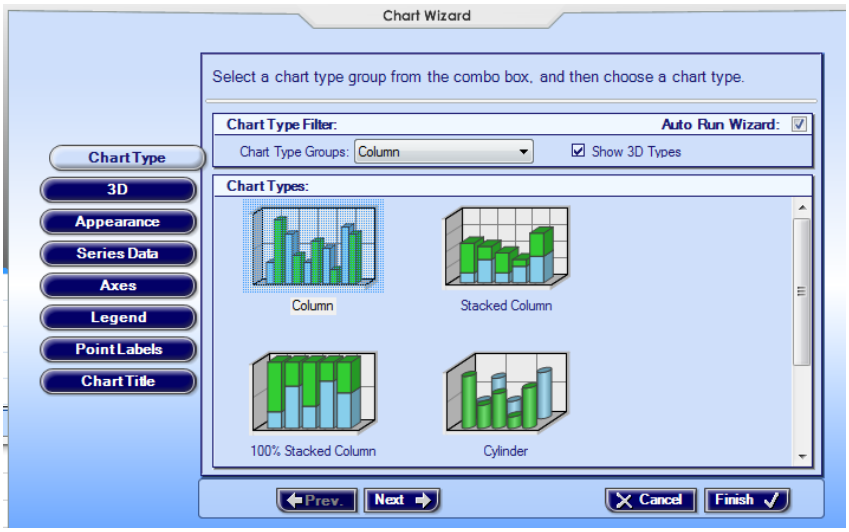


Figure 3.18: Enabling the 3D Column

Three-Dimensional (3D)

Please refer to Figure 3.19 for an example of the following steps.

a. To start editing three-dimensional properties of your chart, ensure the **3D Enabled** box is checked.

b. Check the **Right Angle Axes (Oblique)** box to make your X and Y axes perpendicular to each other. Uncheck the box to set them at an angle other than 90 degrees.

c. Drag the chart or alter the numbers in the X and Y **Rotation** fields to change the viewpoint of the chart.

d. Adjust the degree of **Perspective** that corresponds to the distance and spatial relationship of the image in relation to you.

e. Adjust the degree of the **Light** or shading applied to the chart.

f. Adjust the width between marked values on the X and Y axes under **Area Wall Width**.

g. If your chart includes a series variable, check the **Clustered Series** box if you want to cluster the variables separately.

Note: Some 3D settings may be disabled depending on the chart type. For example, the Clustered Series option is only available for charts that contain a series variable.

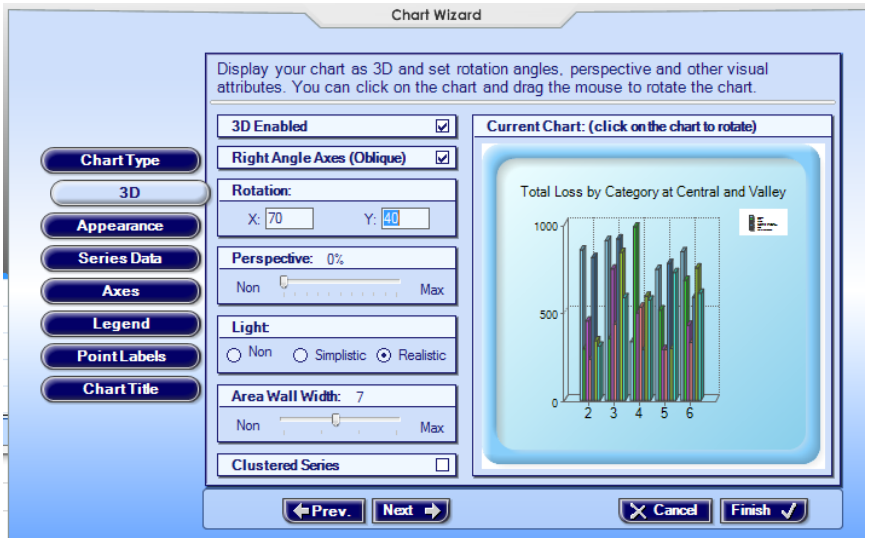


Figure 3.19: Modifying your chart with 3D properties

Appearance

In the Appearance module, there are three tabs that are located at the top of the Chart Wizard window—Style List, Border, and Advance.

a. Under the **Style List** tab, indicate what color scheme you would like to apply to your chart. Unlike the Themes function from the basic charting screen, the Style List also changes the background appearance (Figure 3.20).

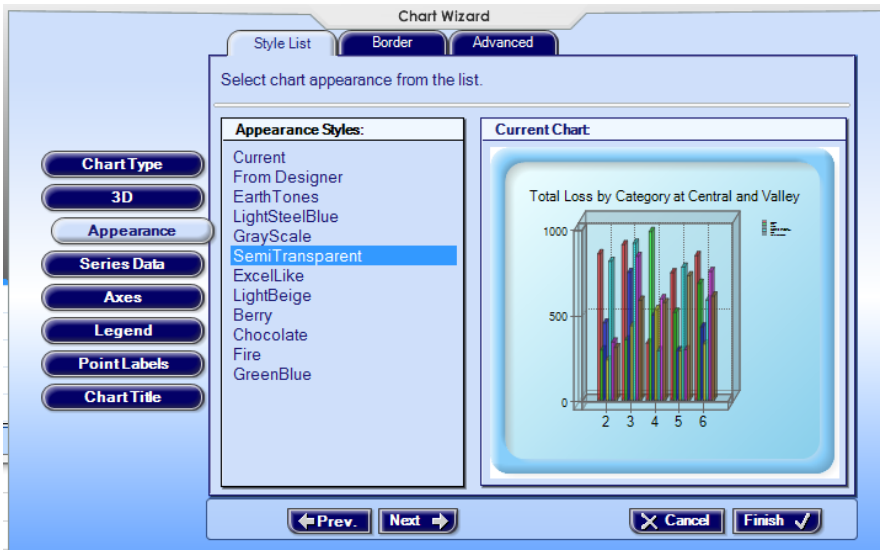


Figure 3.20: Changing the color scheme of your chart

b. Under the **Border** tab, choose a **Border Style** and, if applicable, **Border Color** and **Fill** (Figure 3.21).

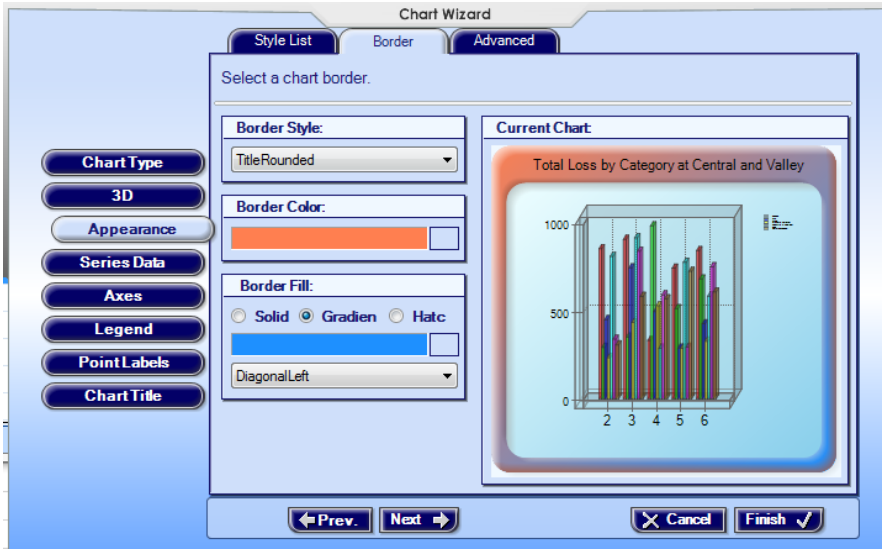


Figure 3.21: Changing the border style of your chart

c. Under the **Advanced** tab, select an element of the chart you would like to edit by clicking on the chart image. In the **Line/Border Attributes** section, select the **Color**, **Width**, and **Style** of the line border of the element. In the **Back Fill** section, adjust the chart elements' background colors and color schemes (Solid, Gradient, or Hatch Background). In the **Shadow Size** section, set the depth of the shadow for the element (Figure 3.21).

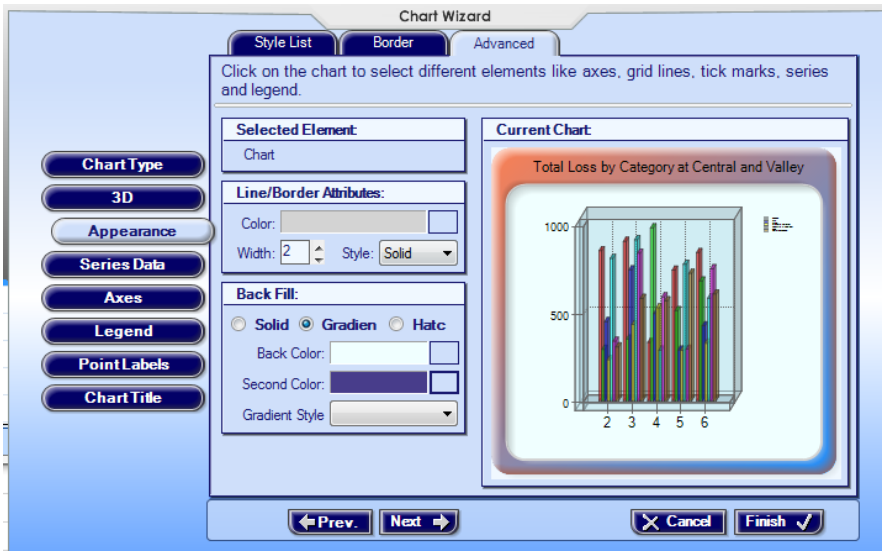


Figure 3.22: Advanced settings that can be applied to your chart

Series Data

In the Series Data module, there are two tabs that are located at the top of the Chart Wizard window—Data Source and Series Data.

a. As the **Data Source** for our chart has already been created, this tab never needs to be activated, and is locked.

b. Under the **Series Data** tab, you can add, remove, move, rename, and select Chart Types for the series variables included in your chart and legend.

Axes

Please refer to Figure 3.23 for an example of the following steps.

a. Under the **Axis X** and **Axis Y** tabs, assign formatted axes **Titles**.

b. Choose the placement of **Tick Marks** for axes values.

c. Make **Grid Lines** visible or invisible.

d. Apply **Interlacing Strips** of gray shading to every other grid column or row.

e. Make the chart axes **reversed**.

f. Maintain or eliminate any white space between the charted elements and the edges of the chart area with the **Side Margin** or **Start at Zero** option.

g. Set the axes **Values Type** to Numeric or Date/Time format.

h. Select the correct **Axis Labels Formats** and the number of **Decimals** for these values. In our example, we will set the Y-axis to Currency with two decimal places.

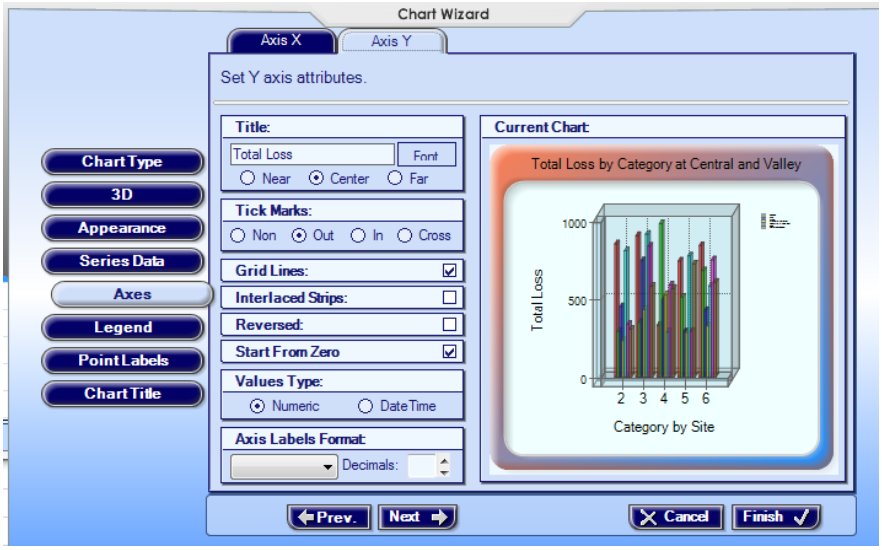


Figure 3.23: Controlling your axes

Legend

Please refer to Figure 3.24 for an example of the following steps.

a. If your chart has a legend, ensure the **Legend Visibility** box is checked to display the legend.

b. Choose the legend's presentation **Style**.

c. Select the legend's position relative to the chart in **Docking** and **Alignment**. Check **Legend Inside Plot Area** to display the legend inside the chart area.

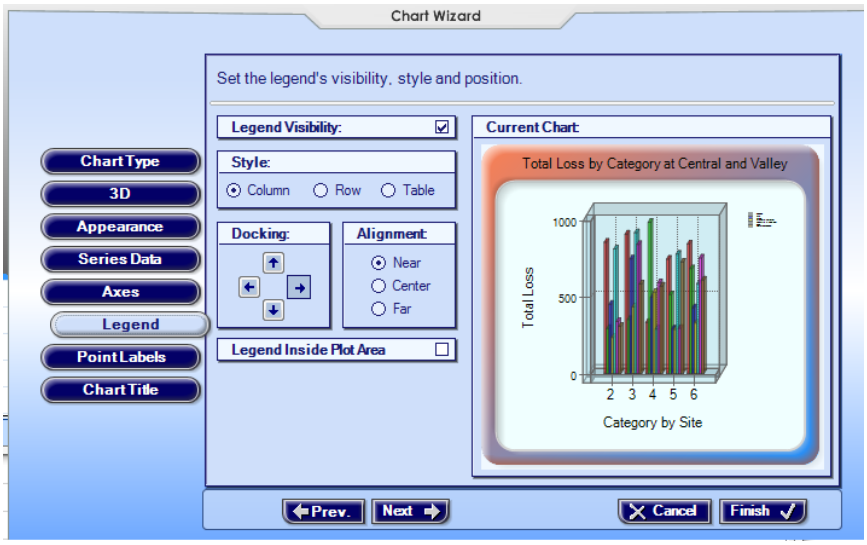


Figure 3.24: Controlling your legend

Point Labels

a. Check **Display Point Labels** if you want to label charted values for columns, bars, and so forth. Under **Selected Chart**, choose to format series of labels for each variable separately, or apply the same formatting to all charted point labels.

b. Select the **Color** and **Font** of labels.

c. Set the **Angle** and **Position** of the label text relative to the point charted.

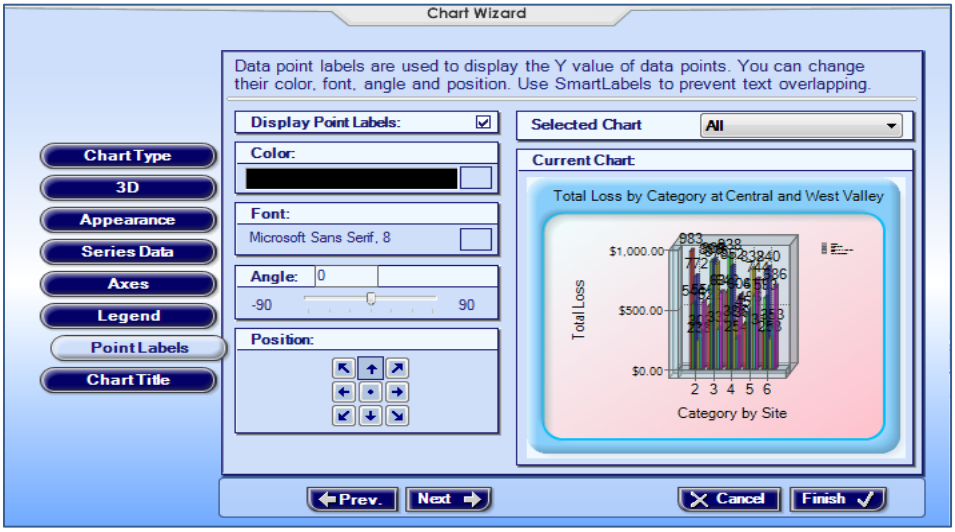


Figure 3.25: Controlling your labels

Chart Title

Please refer to Figure 3.26 for an example of the following steps.

a. Enter or edit the chart title's **Text**.

b. Choose its **Color**, **Font**, and **Style**.

c. Select the title's position relative to the chart with the **Docking** and **Alignment** options.

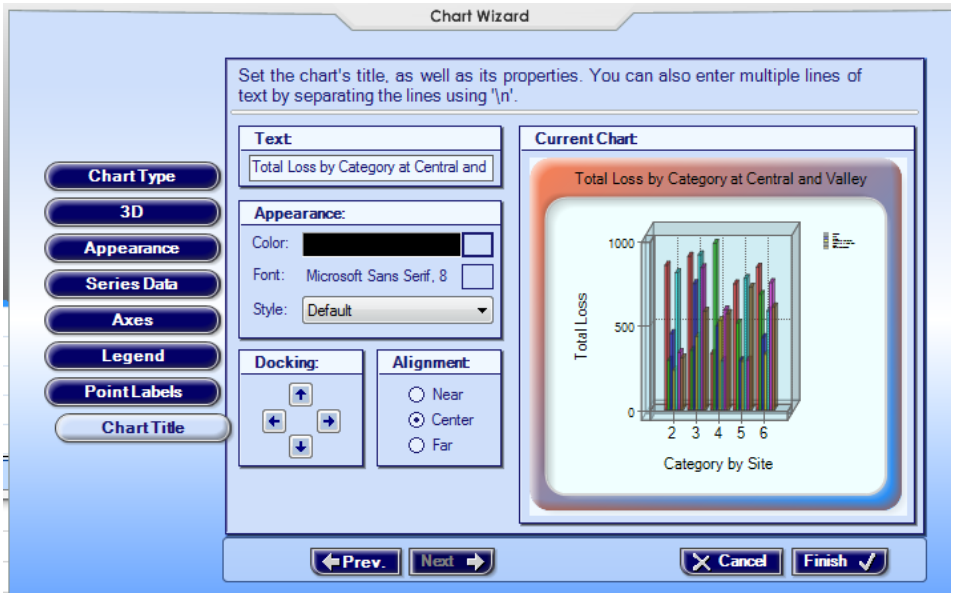


Figure 3.26: Changing your chart's title

3. Once the design of your chart is complete, click **Finish** to exit the Wizard and see your chart results (Figure 3.27).

4. Click **Cancel** to restore the chart to its original view.

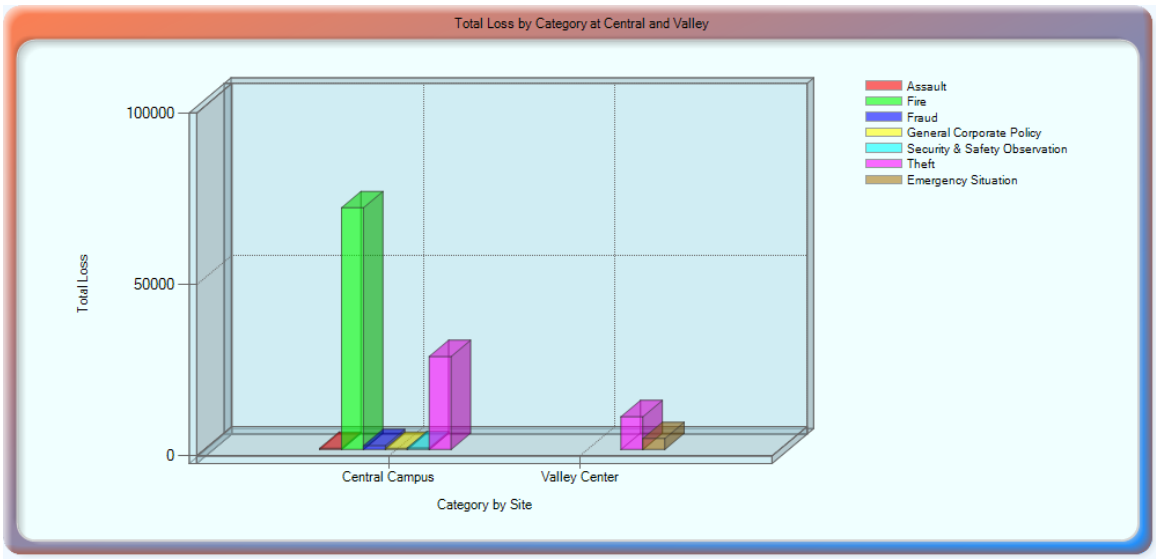


Figure 3.27: Finalized chart

Analyze and Chart Child Data

Child data refers to data that are recorded on Perspective's subforms, or that could potentially correspond to more than one referent. Examples of child data include information about Involved Persons, Involved Vehicles, Item Losses, and so on. Although the main principles of analyzing the parent data also apply to the child data, some navigation and analysis options only apply to the child data type.

> ***Example:***
>
> Build a query that looks at all incidents that involve blue-eyed persons. Select to analyze the incidents' **class** and **category** (parent data), and the person's **first name**, **last name**, and **eye color** (child data).

Please refer to Figures 3.28-3.35 for examples of the following steps.

1. Add a new Incident query containing child fields.
    a. In the **Form(s)** pane, click the **Incident Detail** form.
    b. In the **Field(s)** pane, check **Incident Number**.
    c. In the **Form(s)** pane, expand **Incident Detail** and click the **Class Rollups** form.
    d. In the **Field(s)** pane, check **Class** and **Category**.
    e. In the **Form(s)** pane, click the **Incident Persons** form.
    f. In the **Field(s)** pane, select **First Name**, **Last Name**, and **Eye Color**.

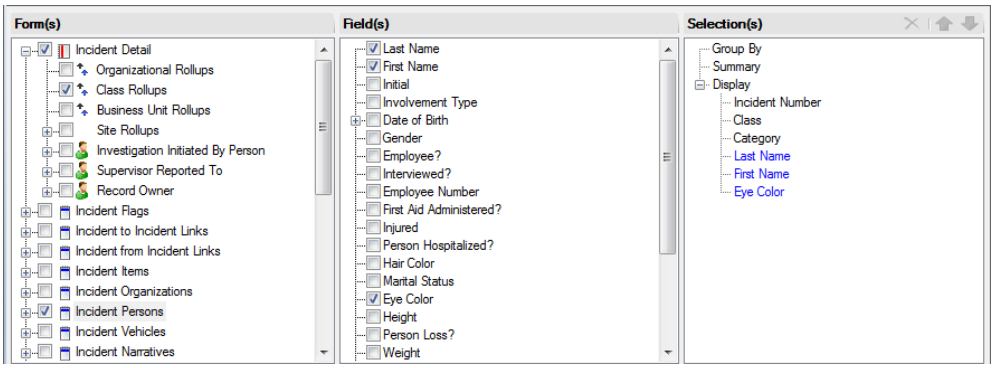


Figure 3.28: Building a query to look at blue-eyed persons.

g. In order to see the incidents that only involve blue-eyed persons, right click **Eye Color** in the **Field(s)** pane, and select **Search By**.

h. In the **Criteria Designer**, set the **Eye Color** criterion to **equal** (=) **Blue** (Figure 3.29).

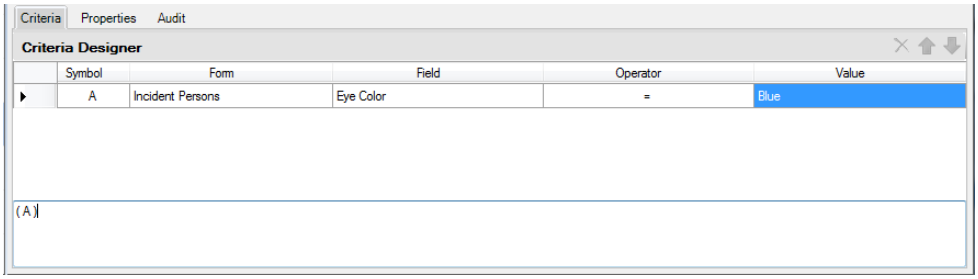


Figure 3.29: Searching incidents that only involve blue-eyed persons.

Note: The child data contained in the query results will show at least one child record that corresponds to the Search By criterion set previously, but will not be limited to the child records that only correspond to this criterion. Instead, the query results will list the parent records that strictly correspond to the Search By criterion (e.g., incidents with at least one involved person with blue eyes), and at the same time displaying all the parent data-relevant child records, including both the child records that have the Search By criterion (i.e., involved persons with blue eyes) and those that do not have it (i.e., involved persons with any other eye color).

2. Execute the query ensuring optimal visualization of the child data.

a. Click **Execute** on the Ribbon. In the query results window, you will see all incidents that have at least one involved person with blue eyes.

b. In order to see all child records, you can navigate to the View Style section on the left, select **Show Child Record**.

c. Click **Expand All** (Figure 3.30).

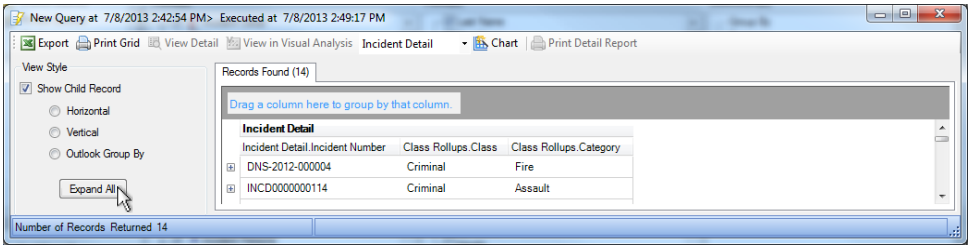


Figure 3.30: Showing all child records in results

- Alternatively, you may selectively expand the records by clicking on the **plus** icon beside corresponding record nodes. Each of the expanded Incident records will unfold a list of all involved persons, not just those with blue eyes (Figure 3.31)

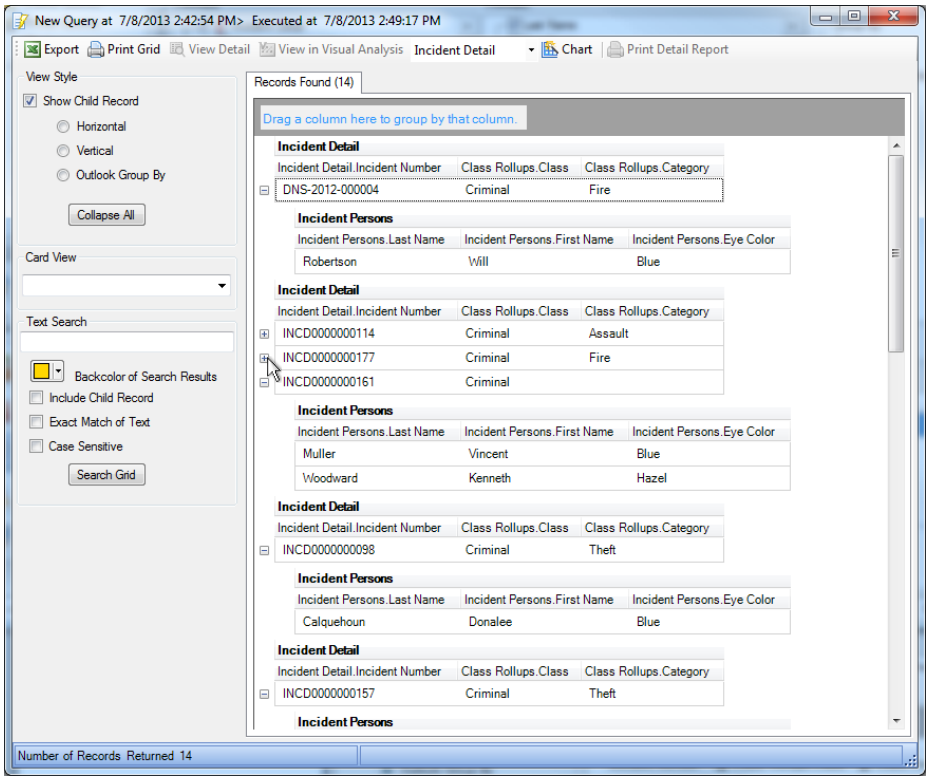


Figure 3.31: Looking at all involved persons (not just those with blue eyes)

d. By default, the child records are displayed below their respective parent records. To view the child records to the right of the parent records, check the **Show Child Record** box and select the **Horizontal** radio button. To restore the default view, select the **Vertical** radio button (Figure 3.32).

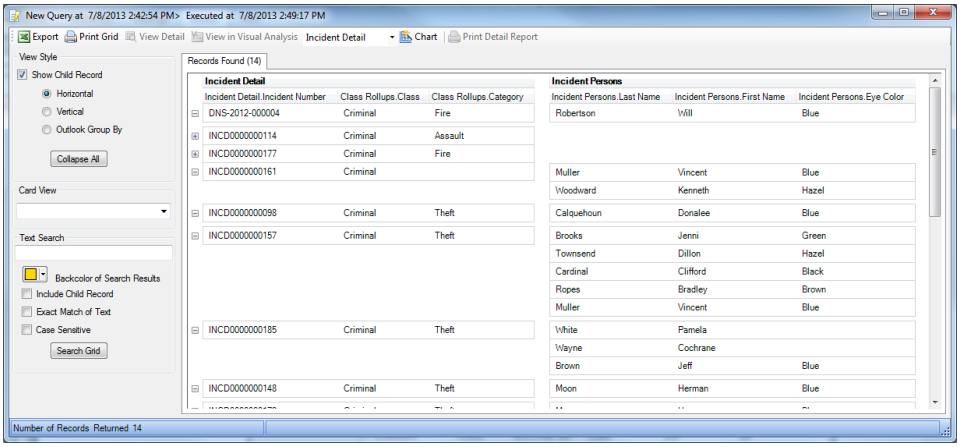


Figure 3.32: Viewing child records beside the parent records

e. In order to perform a search including the child data, type the key word in the Text Search field (e.g., “blue”), check **Include Child Record** and click **Search Grid** (Figure 3.33).

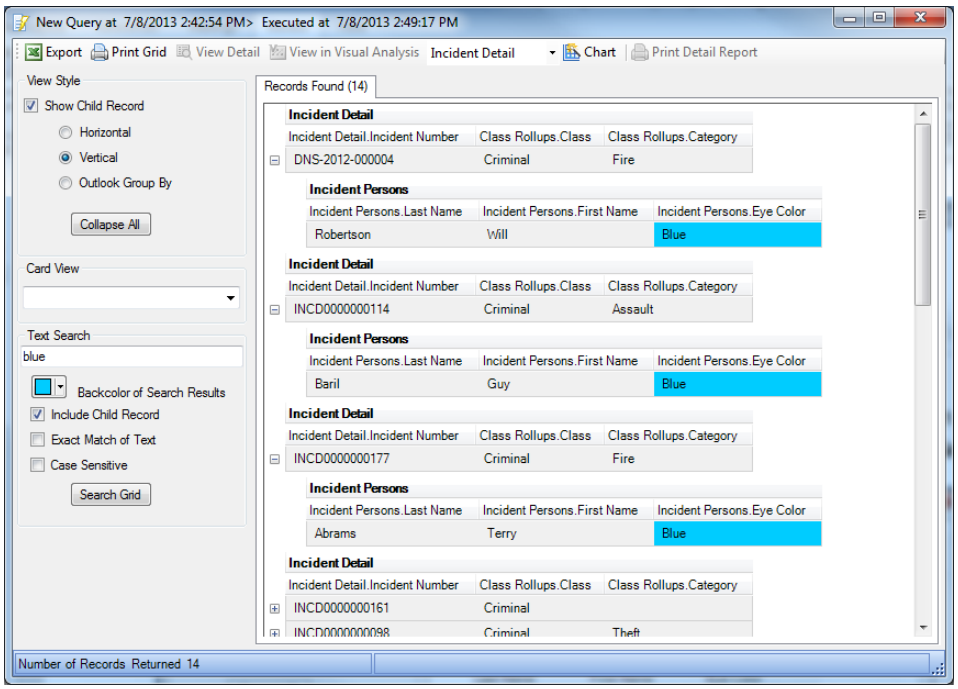


Figure 3.33: Include child data in your Text Search

3. Chart your child record information.

   Note: The resulting chart will be limited, because Analysis Expert cannot chart parent and child data at the same time.

Example:

Chart the query's child data, displaying the count of involved persons by eye color.

a. In order to select the child data for charting, select **Incident Persons** in the drop-down menu next to the Chart button, and then click **Chart** (Figure 3.34).

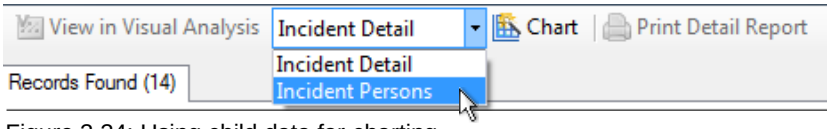


Figure 3.34: Using child data for charting

b. In the charting window, select **Eye Color** as the X-Field, and **Last Name** as the Y-Field. Having selected Last Name for the Y-Field you will count the number of the involved persons with distinct last names. This way, your chart will show a count of all involved persons (assuming that they all have distinct last names) by each eye color (Figure 3.35).

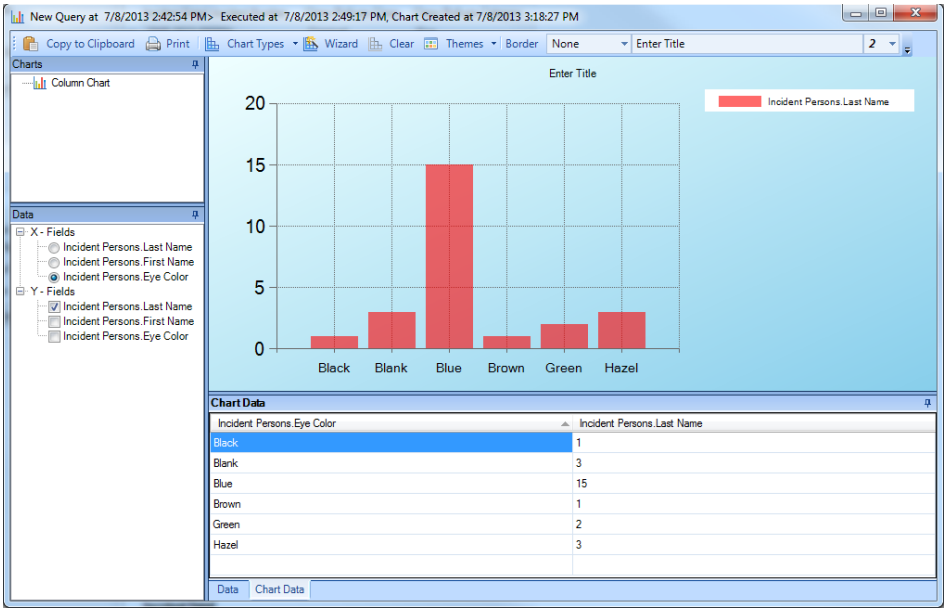


Figure 3.35: Charting Last Name by Eye Color

Note: Since Analysis Expert is designed to chart parent and child data separately, you may need to take your analysis a step further by exporting your results to Excel. See the "Export Query Results to Excel" chapter (pg. 14) for details.

Contact Information

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Fax: (780) 448-0618
Email: information@ppm2000.com
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Appendix A: Criteria Operators

Criteria Designer Operators

Symbol	Read as	Explanation of Result
=	“equals”	Will display records where the field’s value is equal to the value specified. Note that only exact matches will be displayed.
>=	“is greater than or equal to”	Will display records where the field’s value is greater than or equal to the value specified. This operator is only available for criteria with numerical values, such as dates, quantities, amounts of money, etc.
<=	“is less than or equal to”	Will display records where the field’s value is less than or equal to the value specified. This operator is only available for criteria with numerical values.
>	“is greater than”	Will display records where the field’s value is greater than the value specified. This operator is only available for criteria with numerical values.
<	“is less than”	Will display records where the field’s value is less than the value specified. This operator is only available for criteria with numerical values.
<>	“is not equal to”	Will display records where the field’s value is not equal to the value specified.
Like	“like”	Will display records where the value specified is contained somewhere in the selected field.
Starts with	“starts with”	Will display records where the field’s value starts with the value specified.
Ends with	“ends with”	Will display records where the field’s value ends with the value specified.

Table A1: Descriptions of what the Operators in the Criteria Designer mean

Note: You may use any of Perspective's operators in combination to search for records matching multiple criteria.

Appendix B: Boolean Logic Statements

Boolean logic is a complete system for symbolic logical operations. In simple terms, Boolean logic is a form of algebra in which all values are interpreted as either ***true*** or ***false***. Having a common understanding of Boolean logic statements is a necessity when working with Analysis Expert, because AE uses ***truth tables*** as a basis for search.

A **truth table** is a mathematical table used in logic—specifically, in connection with Boolean functions—to compute functional values of logical expressions and possible combinations. In particular, a truth table determines if an expression or statement is true for all legitimate (or valid) inputs. The expressions themselves are built using ***operators*** (e.g., "AND", "OR") and ***parentheses***. For example, if we search for all incidents that were "thefts" **OR** "frauds" **AND** "occurred between 2004" **AND** "2006" **AND** "occurred at Site A" **OR** "Site B", the list of our results will show all incidents where the statements or expressions are valid according to the "AND" and "OR" functions used.

The column headings on a truth table show each possible valuation of "true" or "false" statements. The tables below represent truth tables that can be applied to Analysis Expert.

Example 1

A typical search of the incident database involves searching for a specific incident category (e.g., *Thefts*) that occurred at a specific location (e.g., *Building A*). In a truth table, this search statement is interpreted as a combination of A (*Theft*) **and** B (*Building A*). This is a strict Boolean search, ***meaning that both components of the statement must be "true" for a valid result***. As shown below, only the bottom combination produces a result where the conditions "*Theft*" and "*Building A*" are both observed making the statement valid (Table B1).

Truth Table Using "And"

A	B	Results
Theft TRUE	Building B FALSE	FALSE
Fraud FALSE	Building A TRUE	FALSE
Fraud FALSE	Building B FALSE	FALSE
Theft TRUE	Building A TRUE	TRUE

Table B1: Using a truth table to illustrate a search where a specific incident (Theft) occurred at a specific location (Building A)

Example 2

Another typical search involves looking for records that satisfy one or the other criterion. In our case, this means looking for incidents that are categorized as *Thefts* **or** that happened in *Building A*. Either statement can be true, which is reflected in the truth table as A (*Theft*) **or** B (*Building A*). In this scenario, there is likelihood for multiple results, and lines 1, 2 and 4 all produce a "true" outcome, satisfying the A **or** B requirement (Table B2).

Truth Table Using "Or"

A	B	Results
Theft TRUE	Building B FALSE	TRUE
Fraud FALSE	Building A TRUE	TRUE
Fraud FALSE	Building B FALSE	FALSE
Theft TRUE	Building A TRUE	TRUE

Table B2: Using a truth table to illustrate a search for incidents that are Thefts, or incidents that happened in Building A

Example 3

A more in-depth search can involve a combination of both statements **and** and **or**. For example, you can search for *Thefts* where the incident occurred in either *Building A* **or** *Building C*. The truth table captures this query as A (*Theft*) **and** (B (*Building A*) **or** C (*Building C*)). In this scenario, one of many statements must be true in order to produce a valid result. The valid combinations are both A and B or A and C (Table B3).

Truth Table Using "And" and "Or"

A	B	C	Results
Theft TRUE	Building B FALSE	Building D FALSE	FALSE
Fraud FALSE	Building A TRUE	Building C TRUE	FALSE
Fraud FALSE	Building B FALSE	Building D FALSE	FALSE
Theft TRUE	Building A TRUE	Building D FALSE	TRUE
Theft TRUE	Building B FALSE	Building C TRUE	TRUE

Table B3: Using a truth table to illustrate a search where a Theft occurred in Building A, or in Building C

The purpose of Boolean logic statements in Perspective is to complete a search that returns exactly what you ask for in your search statement. In order to get accurate results from your database, you must make sure your enquiry to the database (i.e., your Boolean logic statement) is correct.

Appendix C: Query Examples

I. Monthly Incident Report by Class and Site

Example:

Look at the number of incidents that occurred during a specific month and view what class and site they belong to.

Please refer to Figures C1-C5 for examples of the following steps.

1. Add an Incident query by selecting **Incident** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Incident Detail**.
3. In the **Field(s)** pane, check **Incident Number** and **Occurred From Date/Time**.
4. Expand the **Occurred From Date/Time** node and select **Year** and **Month**.

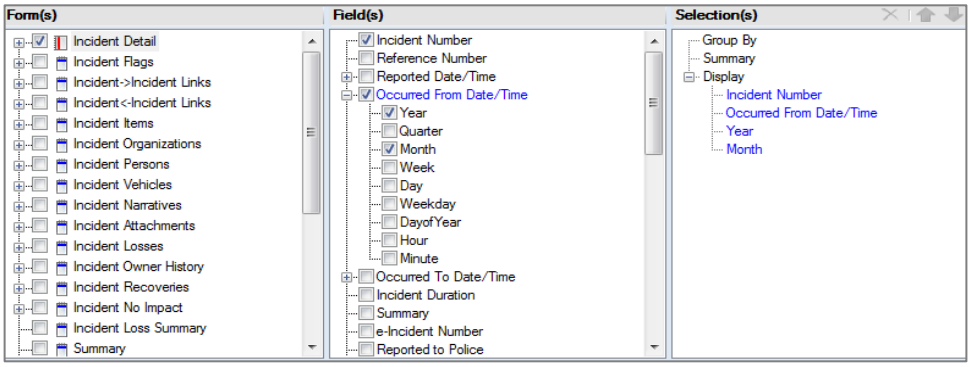

Figure C1: Query—Incident Number and Occurred From Date/Time > Year, and > Month

5. We will add criteria to the month and year in order to narrow down our results to what we specifically need:
   a. In the **Field(s)** pane, right-click on the **Month** field and select **Search By**. It is important to note that each month is represented by a number, i.e., January=1, February=2, and so on.
   b. Choose the *"equal"* (**=**) **Operator** and put the appropriate month number. In our example, we will enter "2".
   c. In the **Field(s)** pane, right-click on the **Year** field and select **Search By**.

d. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**) and enter the four-digit year **Value** you want to search on. In our example, we will enter "2011".

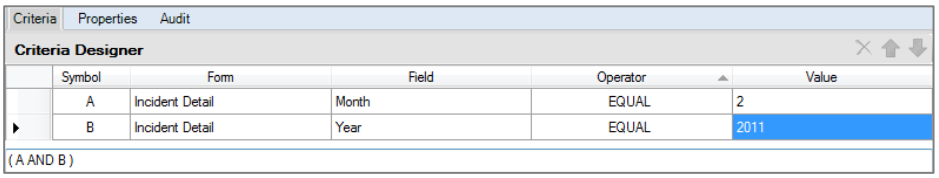

Figure C2: Criteria Designer and the Boolean logic statement (bottom left)

6. In the **Form(s)** pane, expand the **Incident Detail** node and click on **Class Rollups**.
7. In the **Field(s)** pane, check **Class**.
8. In the **Form(s)** pane, select the words **Site Rollups**.
9. In the **Field(s)** pane, check **Site**.

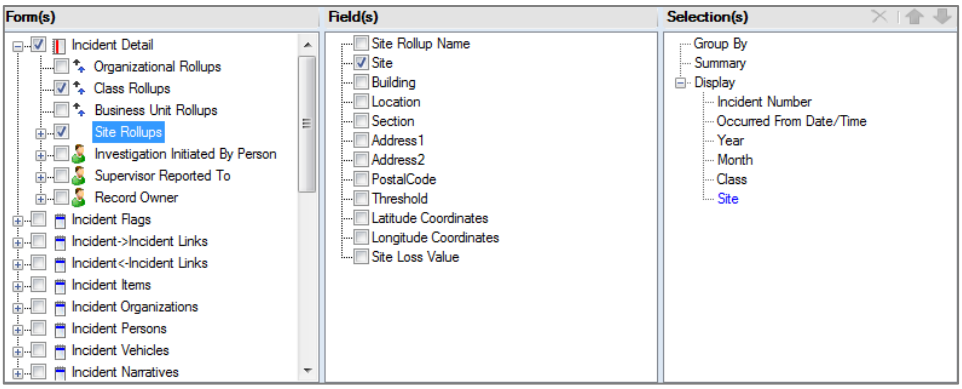

Figure C3: Query—Site

10. Execute your query.

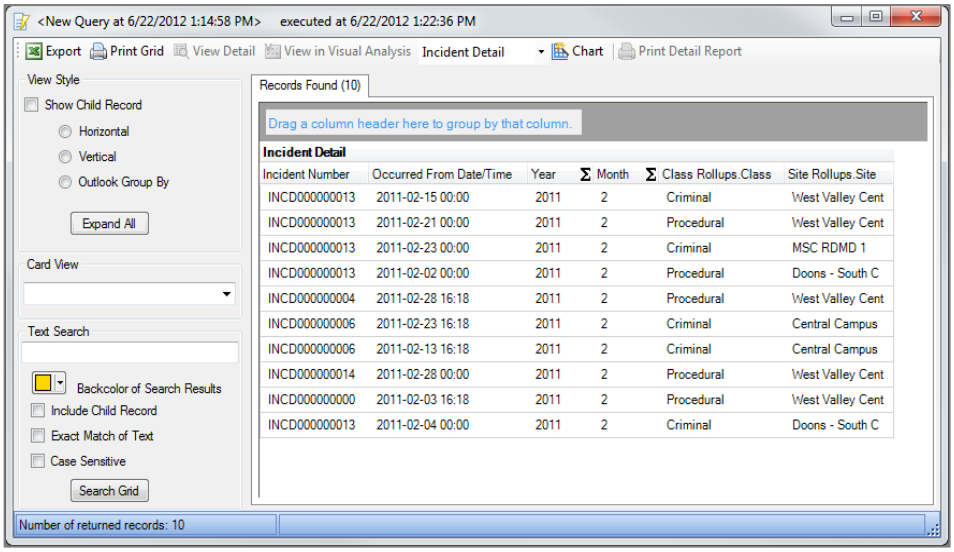

Figure C4: Executed query

11. Once in the results screen, you can group your data for counting, or you can export the data to Excel by clicking the **Export** button on the top toolbar. From Excel, you can further filter your data or create a pivot table.

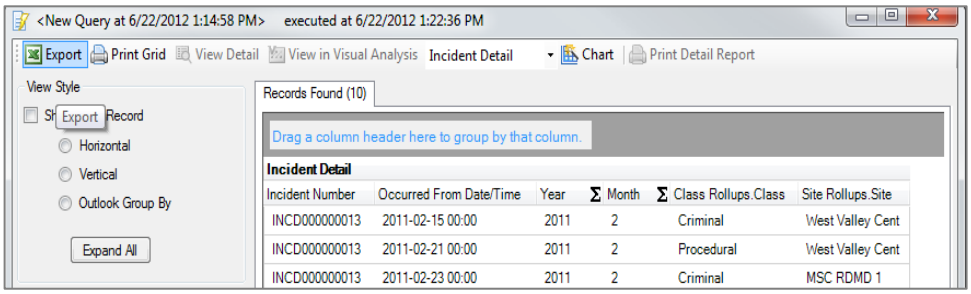

Figure C5: Exporting your query results to Excel for analysis

II. “Open” Incidents by Owner Workgroup

Example:

Look at all incidents with an “Open” status for which a workgroup has owner rights.

Please refer to Figures C6-C10 for examples of the following steps.

1. Add an Incident query by selecting **Incident** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Incident Detail**.
3. In the **Field(s)** pane select **Incident Number** and **Reported Date/Time**.

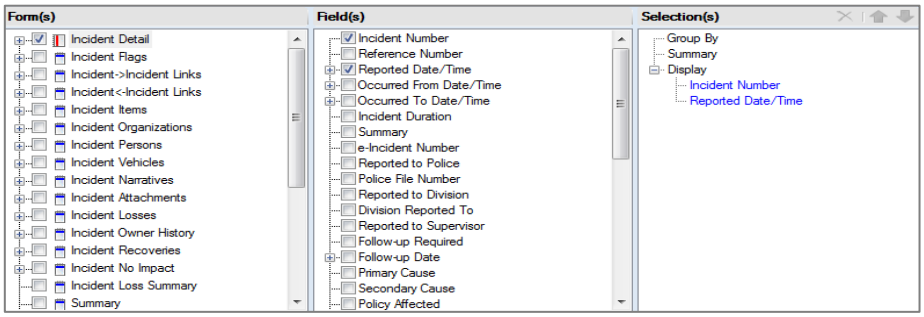

Figure C6: Query—Incident Number and Reported Date/Time

4. In the **Form(s)** pane, select the words **Incident Visibility**.
5. In the **Field(s)** pane, check **Owner Workgroup**, **Read**, and **Update**.
   - The latter two fields will show up as checkboxes in the results, so that you can see the access rights that correspond to each available workgroup.

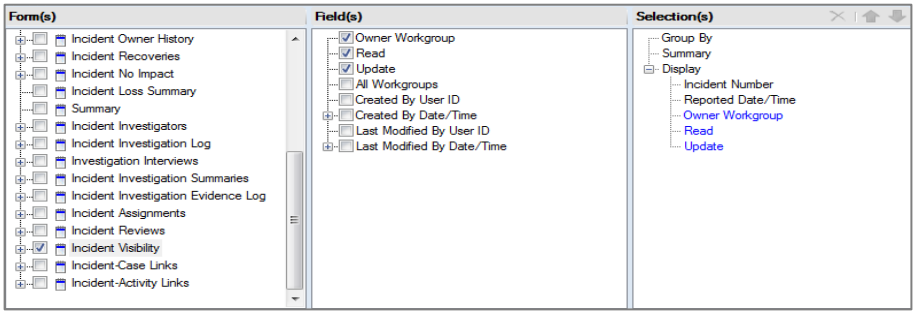

Figure C7: Query—Owner Workgroup, Read, and Update

6. In the **Form(s)** pane, expand **Incident Visibility** and select the word **Workgroups**.

7. In the **Field(s)** pane, check **Workgroup Name**.

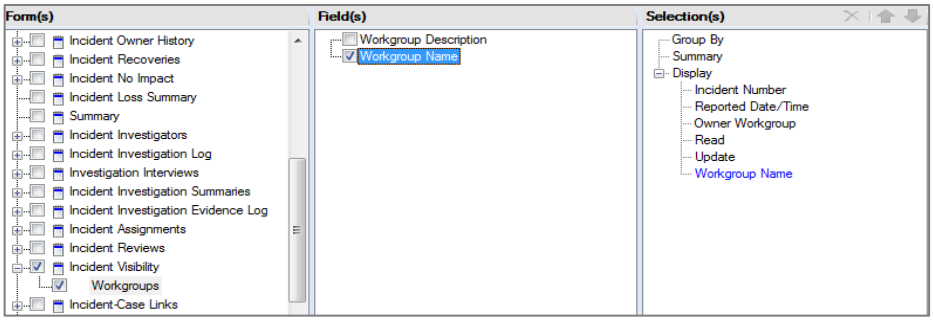

Figure C8: Query—Workgroup Name

8. From here, you can add criteria to see the incidents between certain dates. We will limit our search results to incidents that occurred in 2009. In the **Selection(s)** pane, select **Reported Date/Time**.

   - This will show the Field(s) pane that contains the Reported Date/Time field.

9. In the **Field(s)** pane, expand the **Reported Date/Time field**, right-click on **Year**, and select **Search By**.

10. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and then type in your four-digit year in the **Value** field.

    Note: You do not need to select a field to add criteria to it. In our case, we added a criterion to show only the incidents from 2009, but the Year field will not appear in the results.

11. We will also add a criterion to the **Status** field (without displaying Status in our results). In the **Field(s)** pane, right-click on **Status** and select **Search By**.

12. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and select "Open" in the **Value** field.

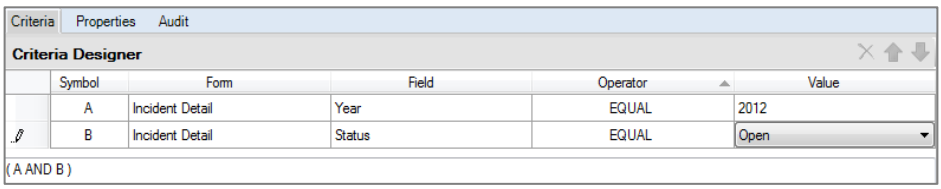

Figure C9: Criteria Designer and the Boolean logic statement (bottom left)

13. Execute your query. In the results screen, expand all child records that contain the workgroup information for each returned incident.

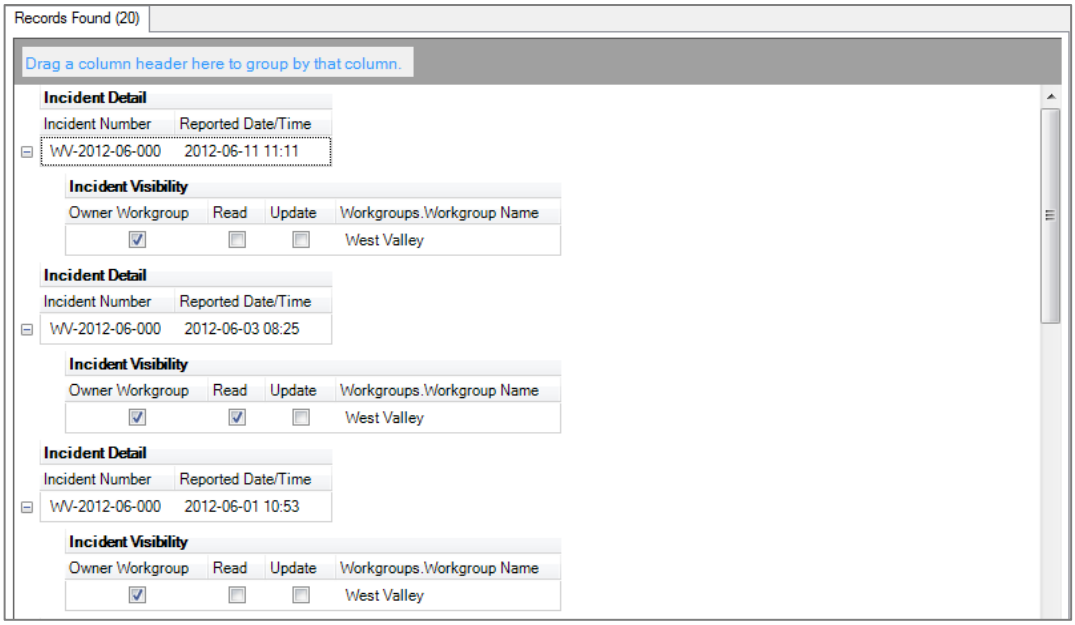

Figure C10: Query results with expanded child records

III. Incidents with Losses over $1000 by Year

Example:

Show only the incidents with losses over a certain dollar amount in a particular year. In this example, we will keep the details simple, but you can add any type of extra information you need to analyze, such as class or site.

Please refer to Figures C11-C15 for examples of the following steps.

1. Add an Incident query by selecting **Incident** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Incident Detail**.
3. In the **Field(s)** pane, check **Incident Number** and **Occurred From Date/Time**.
4. Expand the **Occurred From Date/Time** node and select **Year** and **Month**.

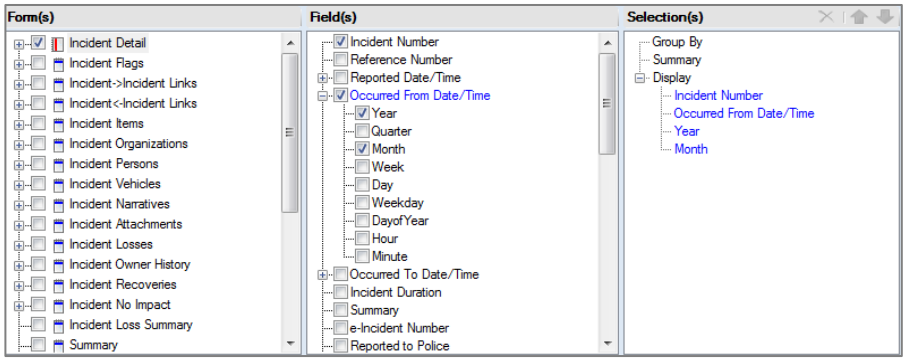

Figure C11: Query—Incident Number and Occurred From Date/Time > Year, and > Month

5. In the **Field(s)** pane, right click on **Year** and select **Search By**.

6. In Criteria Designer, set the **Operator** *"equal"* (**=**), and set the **Value** to the year you would like to analyze (e.g., "2011").

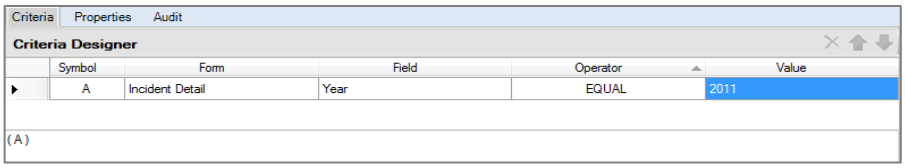

Figure C12: Criteria Designer and the Boolean logic statement (bottom left)

7. In the **Form(s)** pane, select the words **Incident Loss Summary**.

8. In the **Field(s)** pane, check Total Loss, Total Recoveries, and Net Loss.

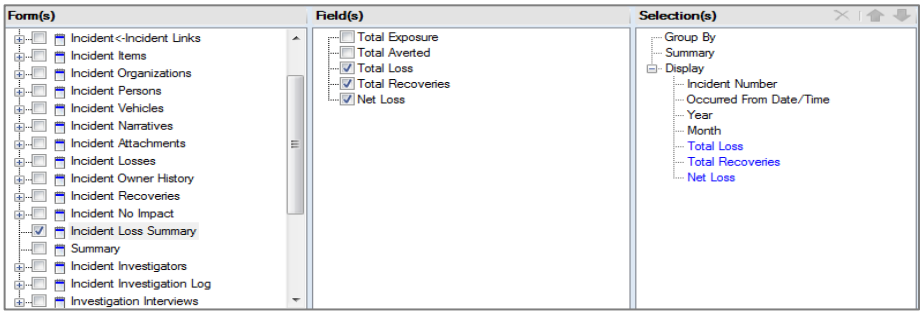

Figure C13: Query—Total Loss, Total Recovers, and Net Loss

9. In the **Field(s)** pane, right-click on **Net Loss** and select **Search By**.

10. In **Criteria Designer**, change the **Operator** to *"greater than or equal to"* (**>=**), and set the **Value** to "1000".

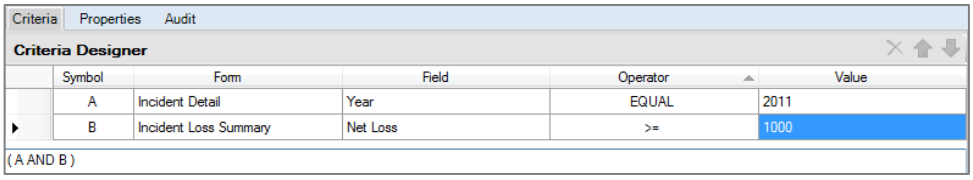

Figure C14: Criteria Designer and the Boolean logic statement (bottom left)

11. Execute your query. From the results screen, you can chart your results for further analysis.

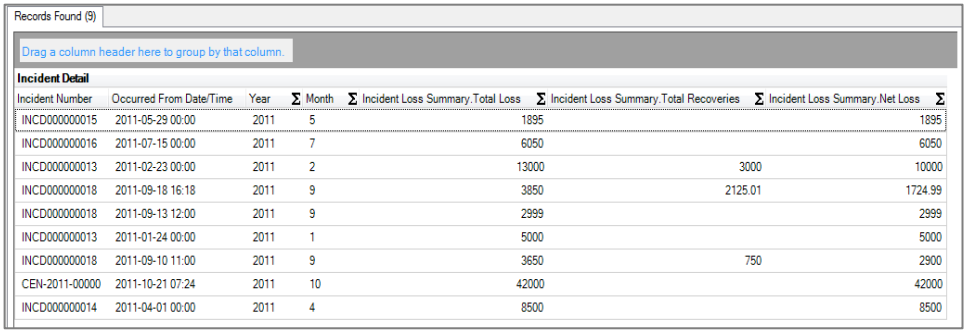

Figure C15: Executed query

IV. Male Suspects in Person Records

Example:

Search through the general Person records to find all male suspects and the incidents they are linked to.

Please refer to Figures C16-C21 for examples of the following steps.

1. Add a new Person query by selecting **Person** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Person Detail**.
3. In the **Field(s)** pane, select **First Name**, **Last Name**, and **Gender.**

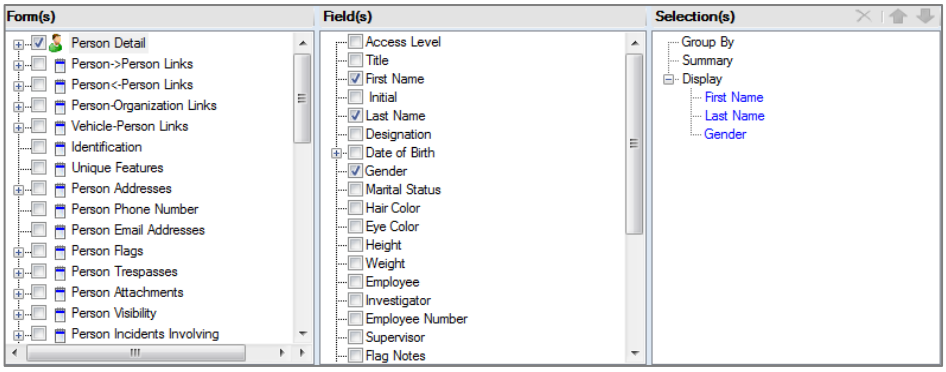

Figure C16: Query—First Name, Last Name, and Gender

4. Add a criterion to the Gender field by right-clicking on **Gender** in the **Field(s)** pane and selecting **Search By**.

5. In the **Criteria Designer**, select the **Operator** to *"equal"* (**=**), and set **Value** to "Male".

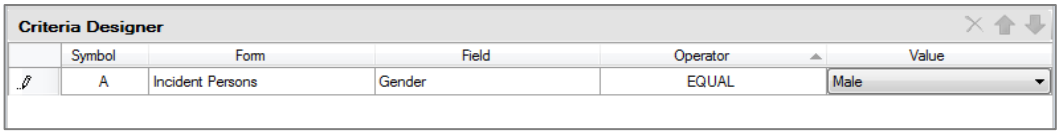

Figure C17: Criteria Designer, set to search for males

6. In the **Form(s)** pane, select the words **Person Incidents Involving**.

7. In the **Field(s)** pane, check **Involvement Type**.

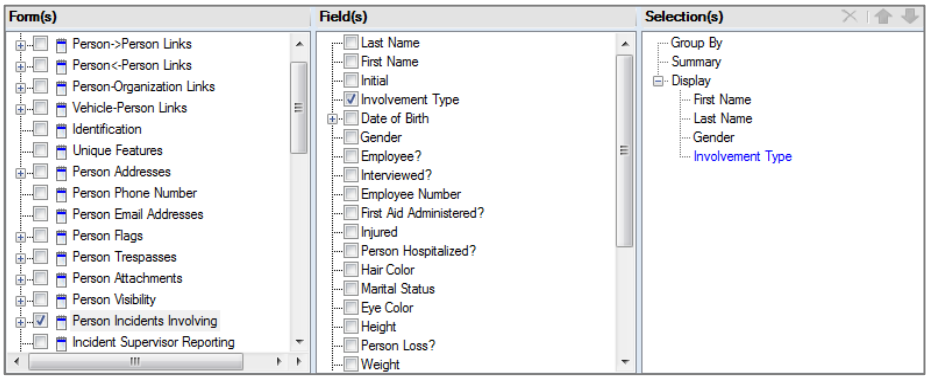

Figure C18: Query—Involvement Type

8. Set a criterion on the Involvement Type field by right-clicking on **Involvement Type** in the **Field(s)** pane and selecting **Search By**.

9. In **Criteria Designer**, select the **Operator** *"equal"* (**=**), and set **Value** to "Suspect".

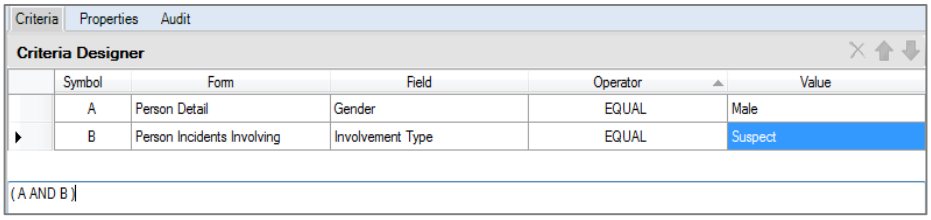

Figure C19: Criteria Designer, set to search for male suspects and incidents they are linked to

10. In the **Form(s)** pane, expand **Person Incidents Involving** and click on the word **Incident**.

11. In the **Field(s)** pane, check **Incident Number**. This will enable filtering of the incidents with male suspect involvement.

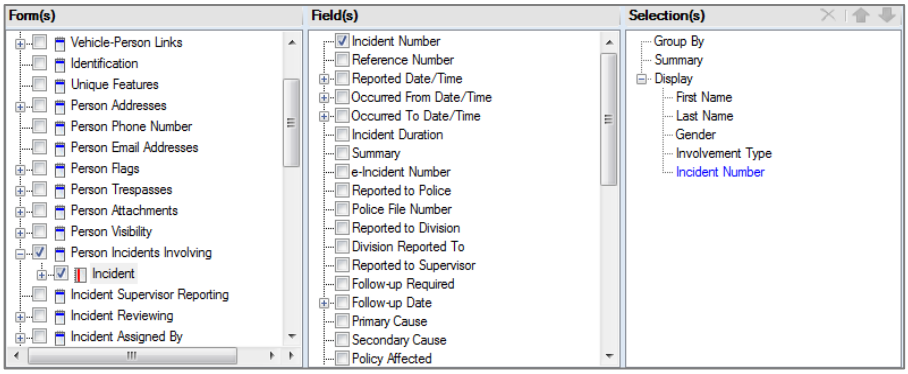

Figure C20: Query—Incident Number

12. Execute your query. In the results screen, expand the child nodes that contain the records of all involvement types for each returned person, with at least one Suspect involvement type included.

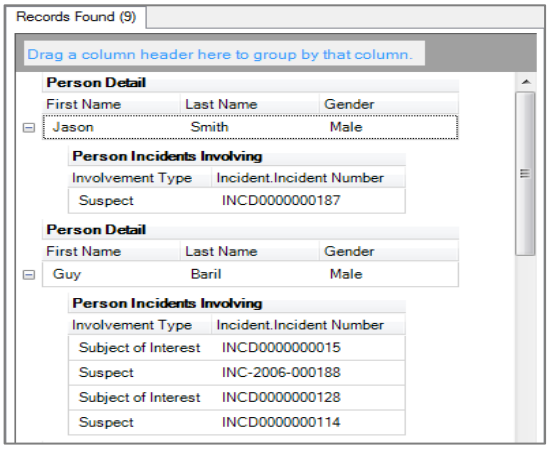

Figure C21: Query results with expanded child records

13. Once in the results screen, you can export your data to Excel by clicking the **Export** button on the top toolbar. From Excel, you can filter your data even further, or create a pivot table.

V. Persons with “Wanted” and “Violent” Flags

Example:

Find all Person records that have been marked with the “Wanted” and the “Violent” flags. This query can be run for any flag.

Please refer to Figures C22-C26 for examples of the following steps.

1. Add a new Person query by selecting **Person** in the Navigation Pane and clicking the **Add** button.

2. In the **Form(s)** pane, select the words **Person Detail**.

3. In the **Field(s)** pane, check **First Name** and **Last Name**.

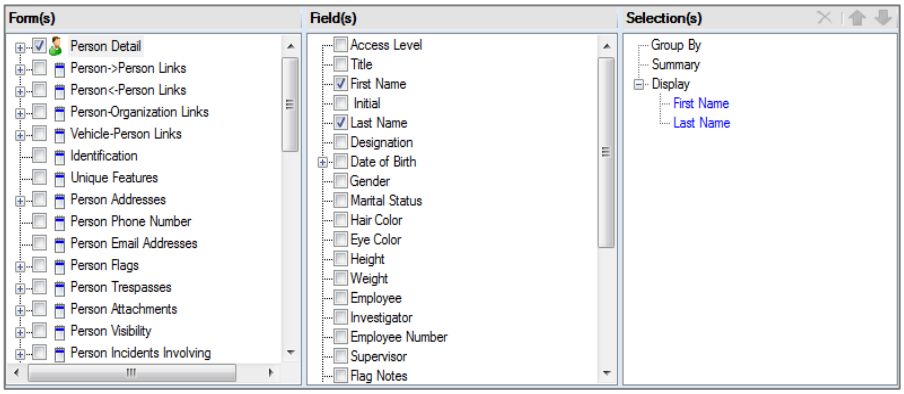

Figure C22: Query—First Name and Last Name

4. In the **Form(s)** pane, select the words **Person Flags**.

5. In the **Field(s)** pane, check **Severity**.

Figure C23: Query—Severity

6. In the **Form(s)** pane, expand **Person Flags** and select the words **Person Flag List**.

7. In the **Field(s)** pane, check **Flag Description**.

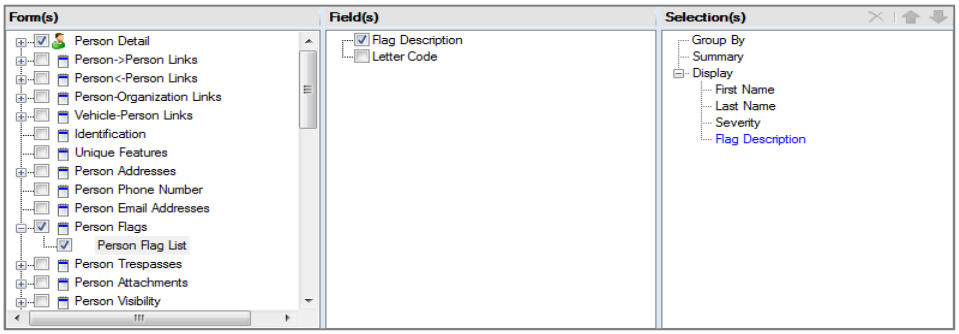

Figure C24: Query—Flag Description

8. Set the two required criteria on the Flag Description field by right-clicking on **Flag Description** in the **Field(s)** pane and selecting **Search By**.

9. In **Criteria Designer**, set the first criterion to “Flag Description *“equal”* (**=**) Wanted”, and the second criterion to “Flag Description *“equal”* (**=**) Violent”.

10. Change the Boolean logic statement to “(A **OR** B)”, as we want to search for the persons that have been flagged “Wanted” or “Violent”.

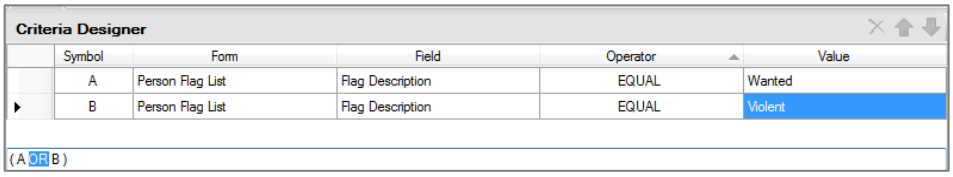

Figure C25: Criteria Designer and the Boolean logic statement (bottom left)

11. Execute the query. In the results screen, expand the child nodes that contain the records of all flags attached to each returned person record, with at least one Violent or Wanted flag included.

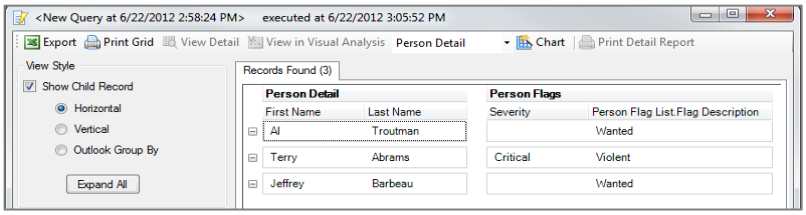

Figure C26: Query results with expanded child records

VI. Trespass Information

Example:

Show all persons that have a trespass notice and who have been involved in incidents.

Please refer to Figures C27-C31 for examples of the following steps.

1. Add a new Person query by selecting **Person** in the Navigation Pane and clicking the **Add** button.

2. In the **Form(s)** pane, select the words **Person Detail**.

3. In the **Field(s)** pane, check **First Name**, **Last Name**, **Date of Birth**, **Gender**, **Height**, and **Weight**.

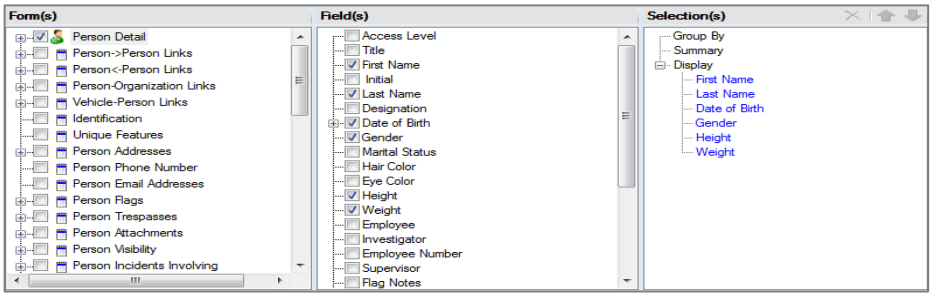

Figure C27: Query—First Name, Last Name, Date of Birth, Gender, Height, and Weight

4. In the **Form(s)** pane, select the words **Person Trespasses**.

5. In the **Field(s)** pane, check **Expiry Date** and **Comments**.

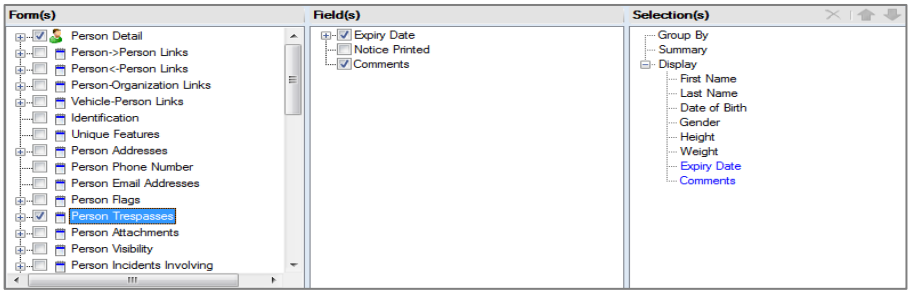

Figure C28: Query—Expiry Date and Comments

6. In the **Form(s)** pane, expand **Person Trespasses** and select the words **Site Rollups**.

7. In the **Field(s)** pane, check **Site**, **Building**, **Location**, and **Section**. These fields will show you the places from which the person was banned.

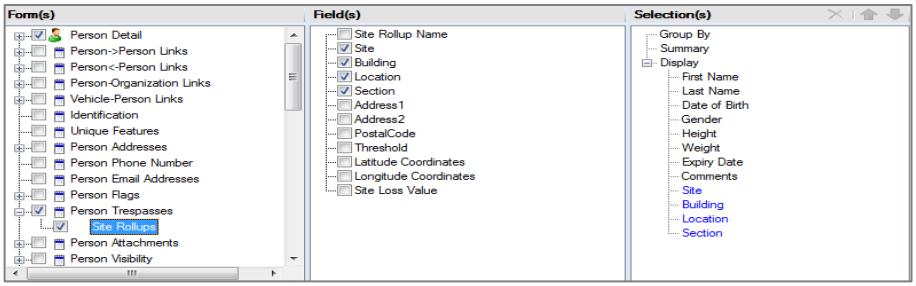

Figure C29: Query—Site, Building, Location, and Section

8. In order to eliminate persons without a trespass notice, add a relevant criterion to the **Site** field. In the **Field(s)** pane, right-click on **Site** and select **Search By**.

9. In **Criteria Designer**, set the **Operator** to *"not equal"* (**<>**), and the **Value** to "Null".

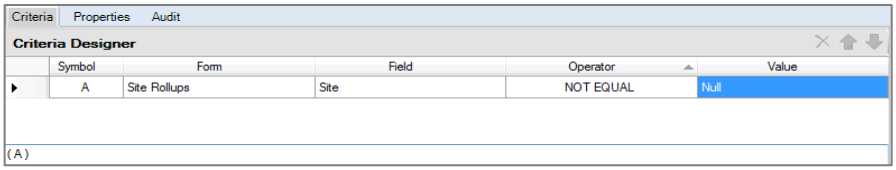

Figure C30: Criteria Designer and the Boolean logic statement (bottom left)

10. Execute the query. In the results window, expand the child nodes to see the trespass information for each returned person record.

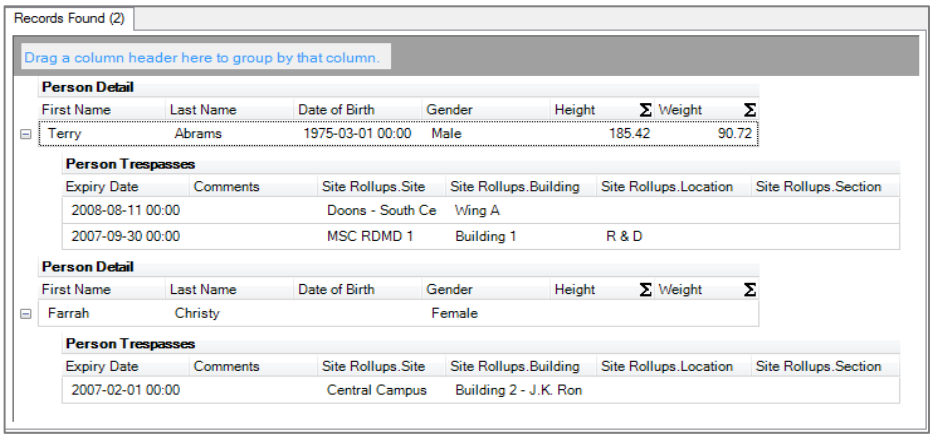

Figure C31: Query results with expanded child records

VII. Cases with Start Dates Over 60 Days Ago

Example:

Track the age of cases by start date.

Please refer to Figures C32-C34 for examples of the following steps.

1. Add a new Case query by selecting **Case** in the Navigation Pane and clicking the **Add** button.

2. In the **Form(s)** pane, select the words **Case Detail**.

3. In the **Field(s)** pane, select **Case Number**, **Case Name**, **Case Start Date**, and **Status**.

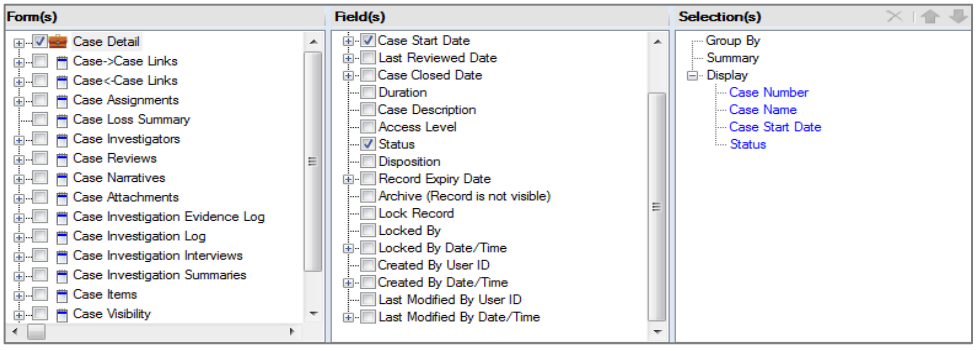

Figure C32: Query—Case Start Date and Status

4. In the **Field(s) pane**, right-click on **Case Start Date** and select **Search By**.

5. In **Criteria Designer**, set the **Operator** to *"less than or equal to"* (**<=**), and the **Value** to the date of 60 days previous to the current day (e.g., "11/4/2011").

6. In the **Field(s)** pane, right-click on **Status** and select **Search By**.

7. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and the **Value** to "Open".

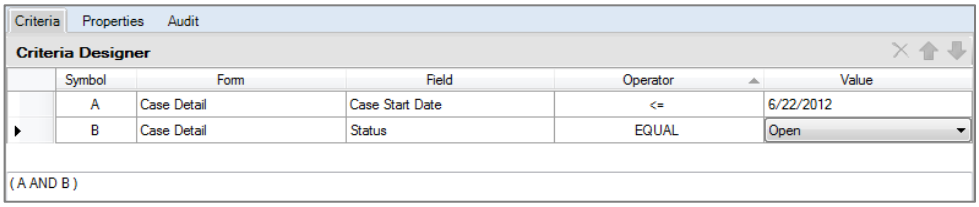

Figure C33: Criteria Designer and the Boolean logic statement (bottom left)

8. Execute your query.

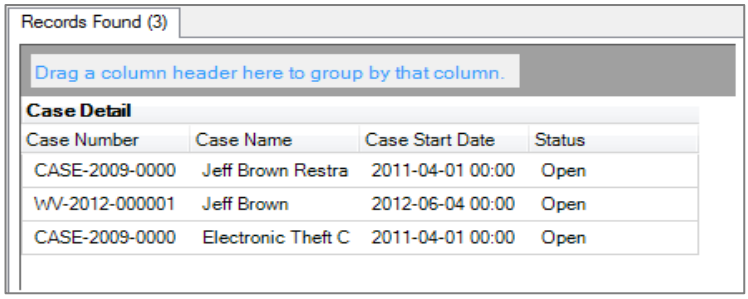

Figure C34: Executed query

VIII. Vehicles with Partial License Plate Numbers

Example:

Search through general Vehicle records to find the vehicles that use only a partial plate number.

Please refer to Figures C35-C38 for examples of the following steps.

1. Add a new Vehicle query by selecting **Vehicle** in the Navigation pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Vehicle Detail**.
3. In the **Field(s)** pane, check **License Plate**, **Year**, **Style**, and **Color**.

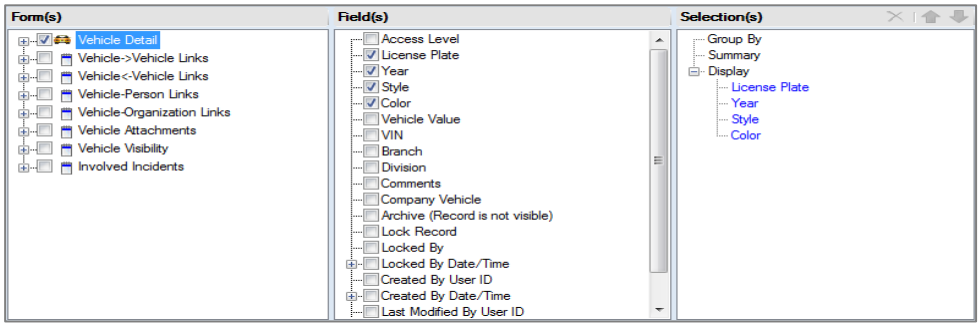

Figure C35: Query—License Plate, Year, Style, and Color

4. In the **Form(s)** pane, expand **Vehicle Detail** and select the words **Vehicle Make Model Rollups**.
5. In the **Field(s)** pane, check **Make** and **Model**.

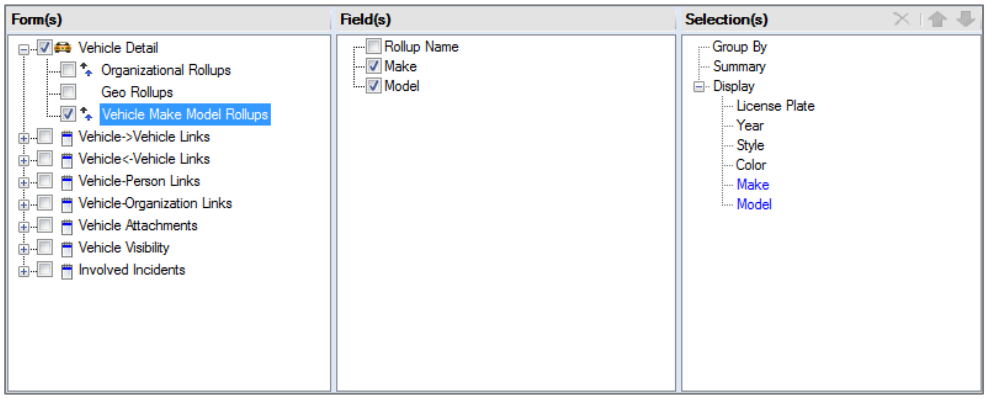

Figure C36: Query—Make and Model

6. In the **Form(s)** pane, select the words **Vehicle Detail**.

7. In the **Field(s) pane**, right-click on **License Plate** and select **Search By**.

8. In **Criteria Designer**, set the **Operator** to **Starts With** and the **Value** to the known starting characters of the license plate (e.g., “XYZ”).

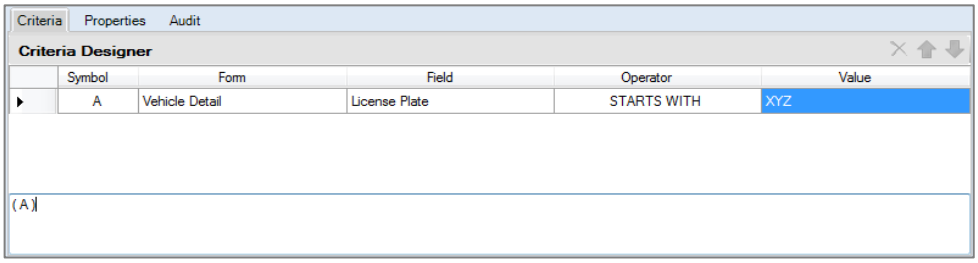

Figure C37: Criteria Designer and the Boolean logic statement (bottom left)

9. Execute your query.

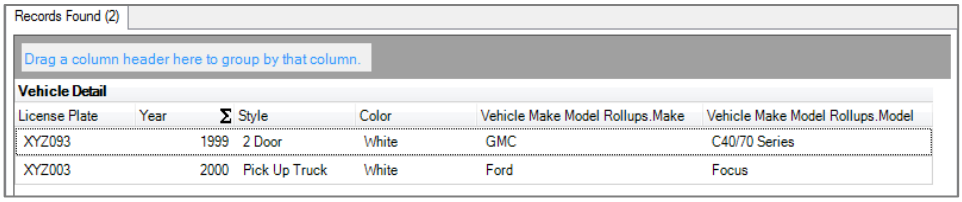

Figure C38: Executed query

IX. A Specific Organizations Type

Example:

Search the contact information for all Organizations with a specific Organization Type

Please refer to Figures C39-C44 for examples of the following steps.

1. Add new Organization query by selecting **Organization** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Organization Detail**.
3. In the **Field(s)** pane, check the **Organization Name** and **Organization Type**.

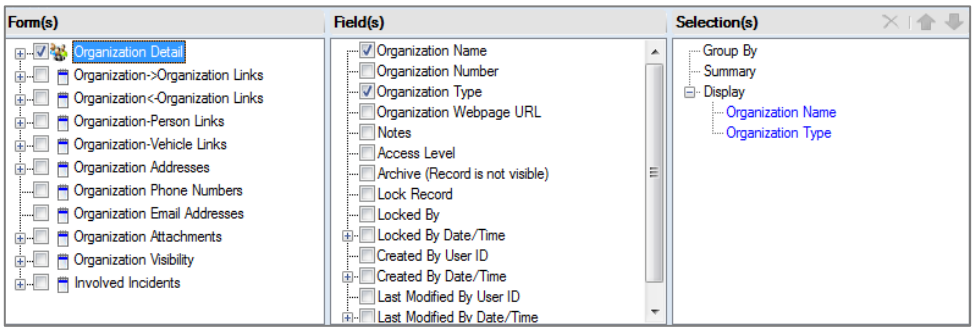

Figure C39: Query—Organization Name and Organization Type

4. In the **Field(s)** pane, right-click on **Organization Type** and select **Search By**.
5. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and the **Value** to your desired Organization Type (e.g., "Corporation").

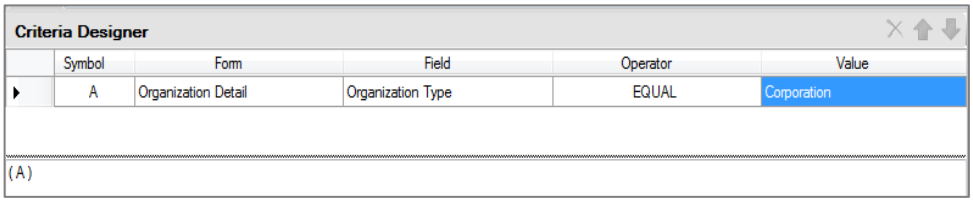

Figure C40: Criteria Designer and the Boolean logic statement (bottom left)

6. In the **Form(s)** pane, select the **Organization Addresses**.
7. In the **Field(s)** pane, select the **Primary Address**, **Type**, and **Address 1**.

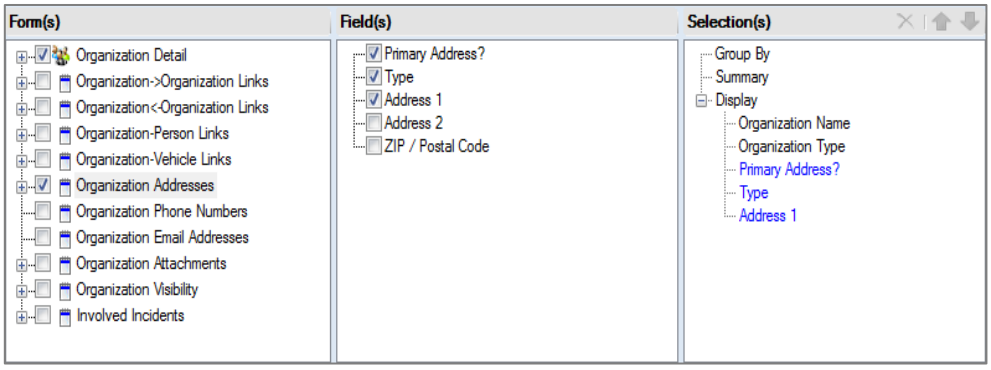

Figure C41: Query—Primary Address, Type, Address 1

8. In the **Form(s)** pane, expand the **Organization Addresses** node and select the words **Geo Rollups**.

9. In the **Field(s)** pane, check **State\Province** and **City**.

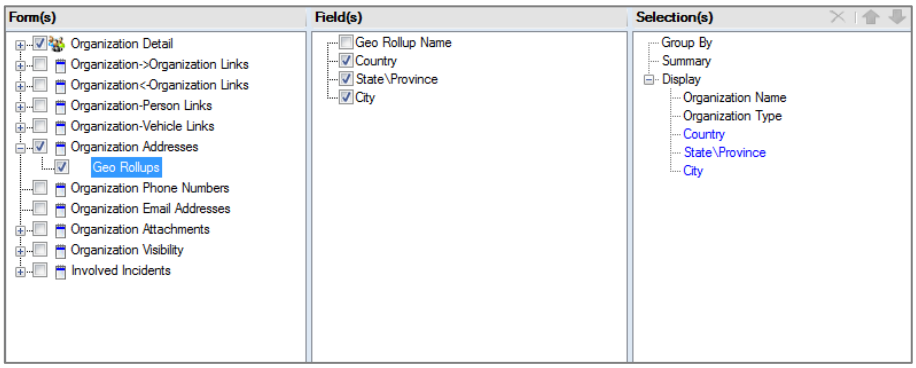

Figure C42: Query—Country, State/Province, City

10. In the **Form(s)** pane, select the **Organization Phone Numbers**.

11. In the **Field(s)** pane, select the **Primary Number**, **Type**, and **Phone Number.**

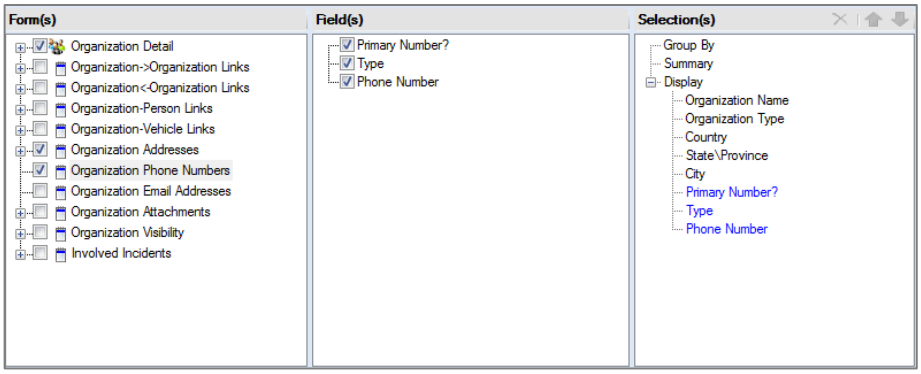

Figure C43: Query—Primary Number, Type, and Phone Number

12. Execute the query. In the results screen, expand the child nodes that contain the records of all addresses and phone numbers for each returned Organization.

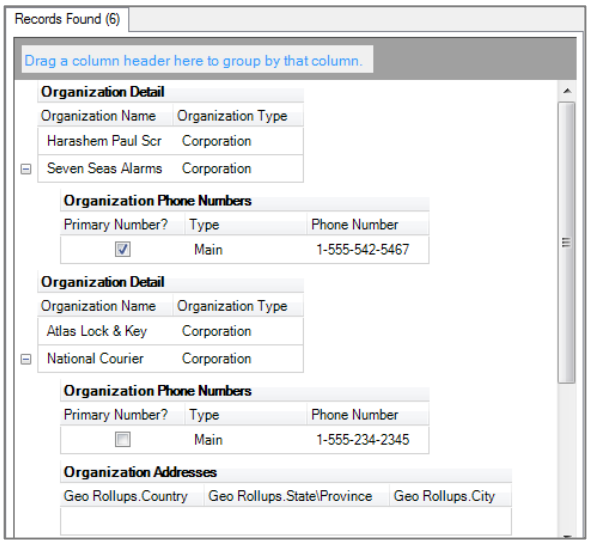

Figure C44: Query results with expanded child records

X. Items Involved in an Incident

Example:

Search for a list of items that have been involved in an incident.

Please refer to Figures C45-C49 for examples of the following steps.

1. Add new Item query by selecting **Item** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Item Incidents Involving**.
3. In the **Field(s)** pane, check **Item Name**.

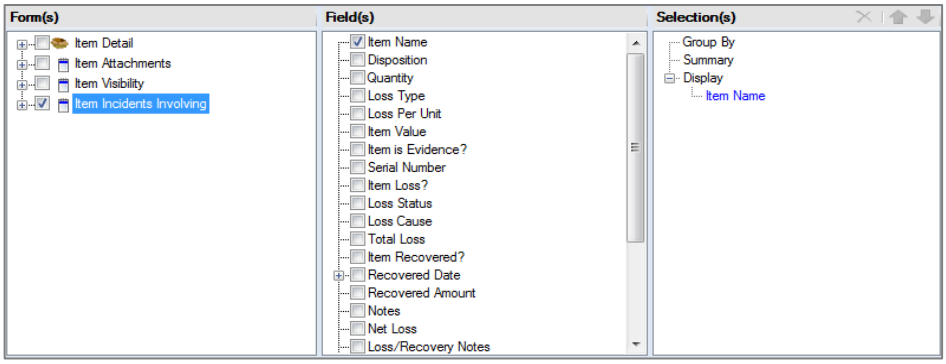

Figure C45: Query—Item Name

4. In the **Form(s)** pane, expand the **Item Incidents Involving** node and select the word **Incident**.

5. In the **Field(s)** pane, check **Incident Number** and **Occurred From Date/Time**.

6. Expand the **Occurred From Date/Time** node and check **Year**.

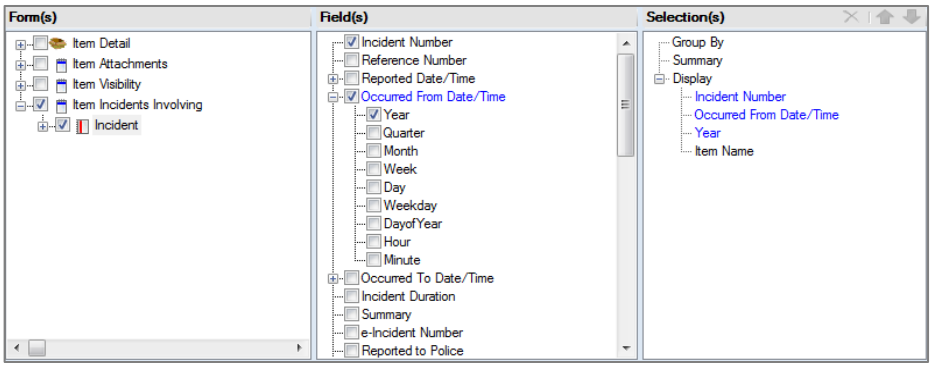

Figure C46: Query—Incident Number and Occurred From Date/Time > Year

7. In the **Field(s)** pane, right-click on **Year** and select **Search By**.

8. In **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and the **Value** to the four-digit year value you would like to search (e.g., "2011").

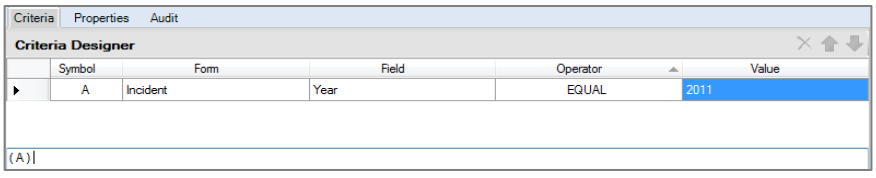

Figure C47: Criteria Designer and the Boolean logic statement (bottom left)

9. In the **Form(s)** pane, expand the **Incident** node and select the words **Class Rollups**.

10. In the **Field(s)** pane, check **Class** and **Category**.

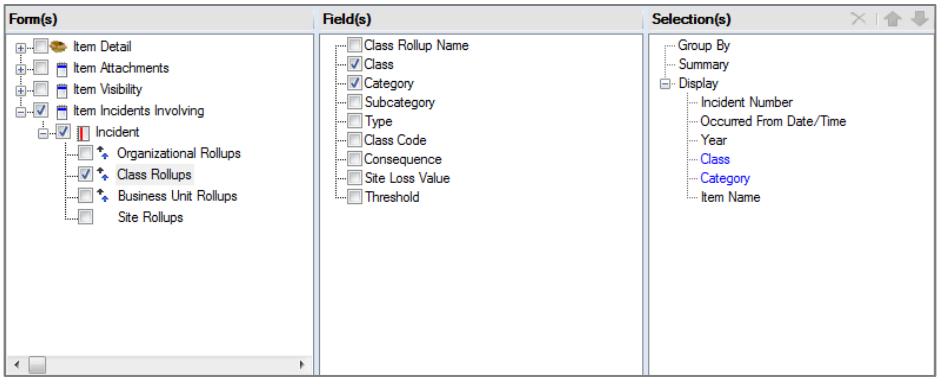

Figure C48: Query—Class and Category

11. Execute the query.

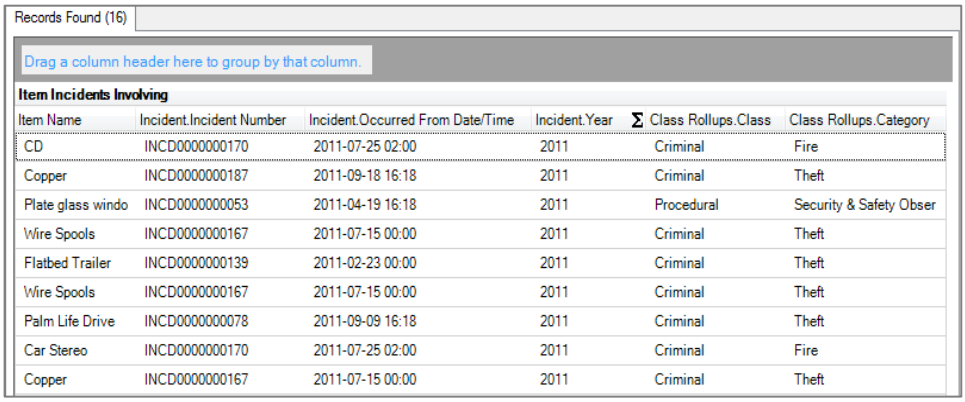

Figure C49: Query—Executed query

XI. Data Entry Management

Example:

Track creation of incidents to ensure users are entering appropriate information. You can track any field that is important to your organization. In this particular example, we will make sure that users are linking the Person records to the corresponding Involved Person records.

Please refer to Figures C50-C53 for examples of the following steps.

1. Add an Incident query by selecting **Incident** in the Navigation Pane and clicking the **Add** button.

2. In the **Form(s)** pane, select the words **Incident Detail**.

3. In the **Field(s)** pane, check **Incident Number**, **Created By User ID**, and **Created By Date/Time**.

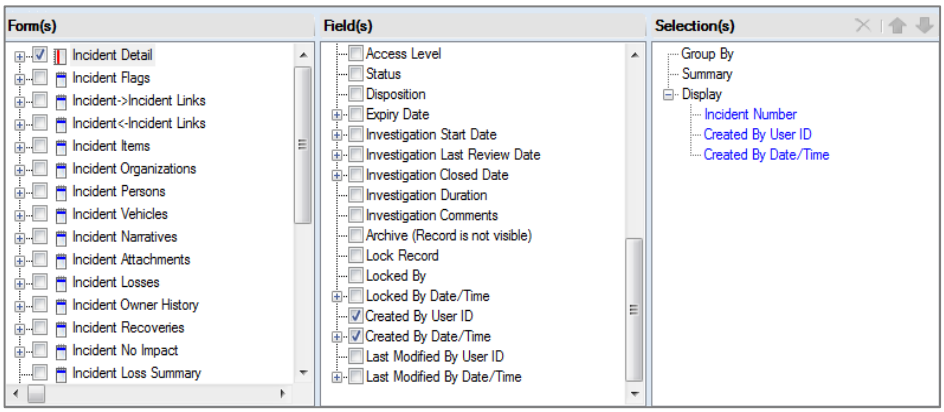

Figure C50: Query—Created By User ID and Created By Date/Time

4. In the **Form(s)** pane, select the words **Incident Persons**.

5. In the **Field(s)** pane, check **First Name** and **Last Name**.

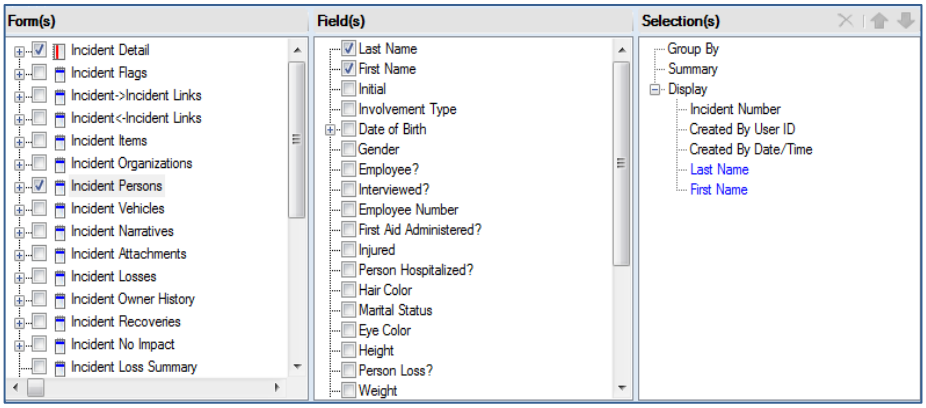

Figure C51: Query—Last Name and First Name

6. In the **Form(s)** pane, expand the **Incident Persons** node and select the words **Involved Person**.

7. In the **Field(s)** pane, check **First Name** and **Last Name**.

   Note: The "Incident Persons" data is stored in a particular Incident record under the Involvements > Persons sub-tab, whereas the "Involved Person" data is stored in a general Person record that you are linking to (i.e., static information).

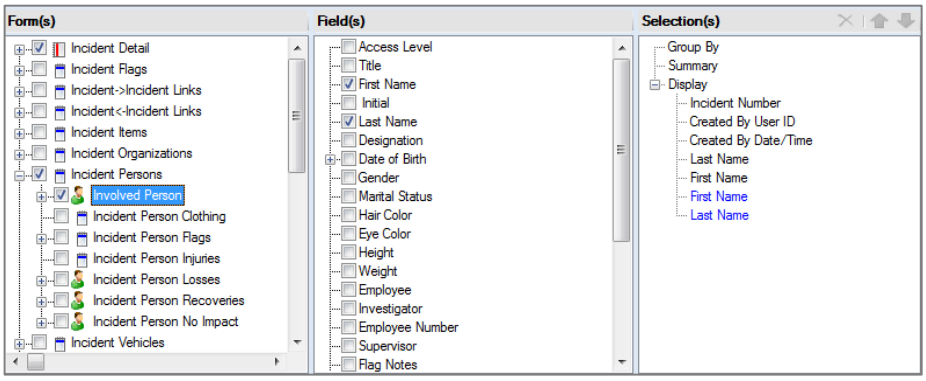

Figure C52: Query—First Name and Last Name

8. You may choose to add criteria to the **Created By Date/Time** field, in order to see only a subset of records that belong to a certain time frame (e.g., the last month). In our example, we will not set any criteria.

9. Execute your query. In the results window, expand the child nodes containing the Incident Person records.

   - In our results, we can see that Incident record INC-2008-000017 has two Incident Person records (i.e., two involved persons—Holly Becker and Jamie Campbell) with the *Involved Person.First Name* and *Involved Person.Last Name* fields populated with their respective names. This means that the involved persons have been linked to their respective general Person records. In contrast, the involved persons Vulkin Tui and Green Pea have

not been linked to any general Person records, which is reflected in the empty *Involved Person.First Name* and *Involved Person.Last Name* fields.

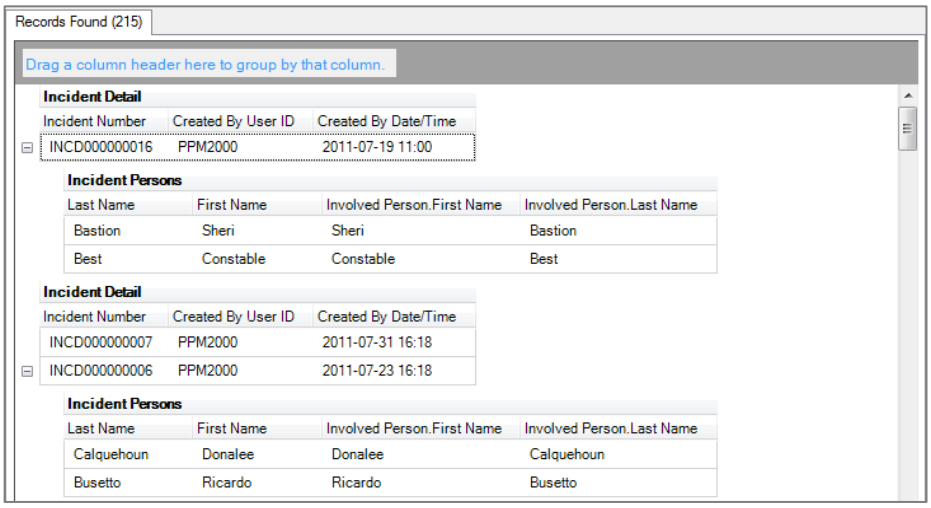

Figure C53: Query results with expanded child records

XII. Activity Calls vs. Call Responses by User

Example:

Count the total number of recorded activity calls and the number of times the calls were actually taken up, arranging the results by users that created the activities.

Please refer to Figures C54-C57 for examples of the following steps.

1. Add an Activity query by selecting **Activity** in the Navigation Pane and clicking the **Add** button.
2. In the **Form(s)** pane, select the words **Activity Details**.
3. In the **Field(s)** pane, check **Activity Number** and **Created By User ID**.
4. In the **Field(s)** pane, right-click the **Created By User ID** field and select **Group By**.
   - The field will be duplicated under the Group By node in the Selection(s) pane, and the Activity Number's Operator will be set to COUNT.

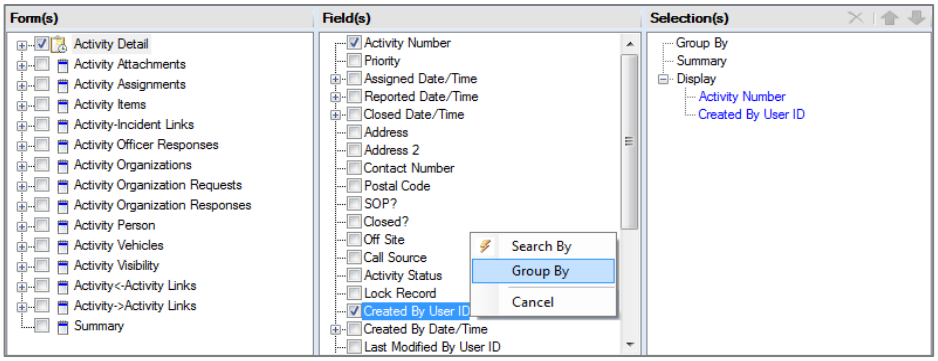

Figure C54: Query—"Group By" Created By User ID

5. In the **Form(s)** pane, expand the **Activity Detail** node and select the words **Call Taken By**.

6. In the **Field(s)** pane, check **Last Name**.

   - The field will be added under the Summary node in the Selection(s) pane with the purpose of doing a DISTINCT COUNT of officers that took calls. In this case, the count would reflect the number of physical persons that participated in call responses, rather than the number of times the responses were actually made. *How can we fix this?*

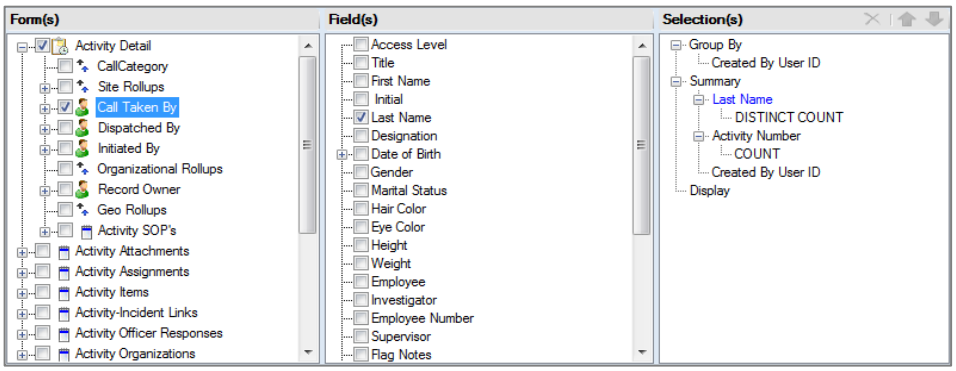

Figure C55: Query—Last Name

7. To make the system count the total number of officers' responses to the calls, right-click the **Last Name** field in the **Selection(s)** pane and change the Operator to **COUNT**.

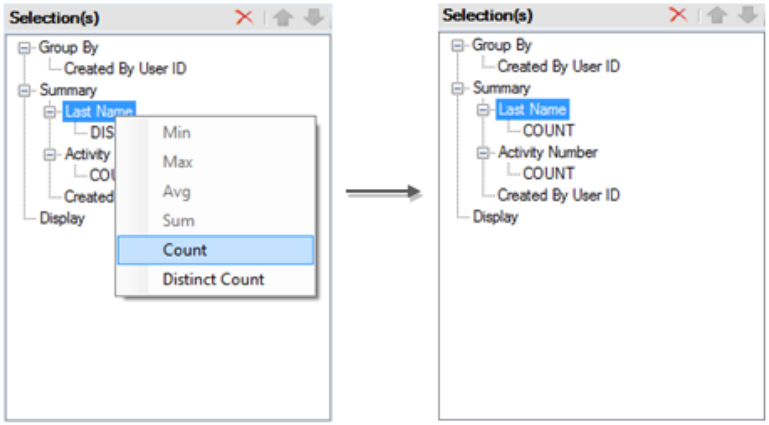

Figure C56: Query—"Count" Last Name

8. Execute your query. In the results window, you will see the number of activities created by each user that participated in activity creation, as well as the number of officers' responses to their calls.

Records Found (6)

Drag a column header here to group by that column.

Activity Detail

COUNT_Activity Number	Σ Created By User ID	COUNT_Call Taken By.Last Name	Σ GROUPED_BY
9	Dale	3	Dale
16	dowens	4	dowens
3	JFernandez	3	JFernandez
12	jpollock	0	jpollock
1	jsieben	1	jsieben
13	KJones	0	KJones

Figure C57: Query results

I. Vehicle Associated Losses

Example:

Search all Category specific Vehicle Losses.

Please refer to Figures C58-C62 for examples of the following steps.

1. Add an Incident query by selecting **Incident** in the Navigation Pane and clicking the **Add** button.

2. In the **Form(s)** pane, select the words **Incident Details**.
3. In the **Field(s)** pane, check **Incident Number** and **Reported Date/Time**
4. In the **Forms(s)** pane, expand the **Incident Detail** node and select the words **Class Rollups**.
5. In the **Field(s)** pane check the **Class**, **Category**, **Subcategory**, and **Type**.

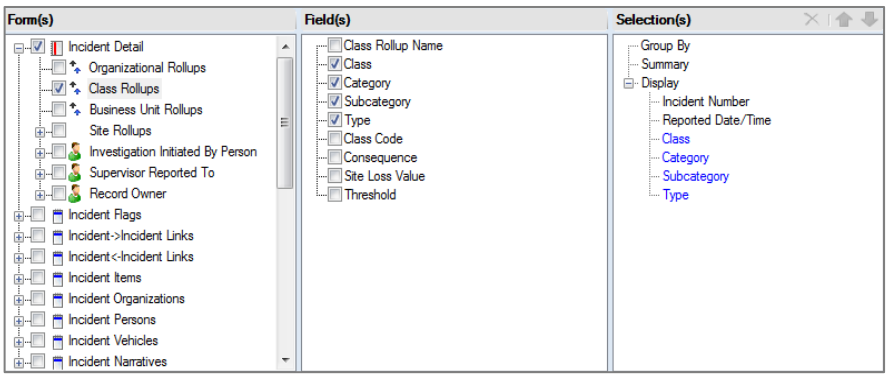

Figure C58: Query—Class, Category, Subcategory, and Type

6. In the **Field(s)** pane, right click on **Category** and select **Search By**.
7. In the **Criteria Designer**, set the **Operator** to *"equal"* (**=**), and the **Value** to your desired Category (e.g., "Theft").

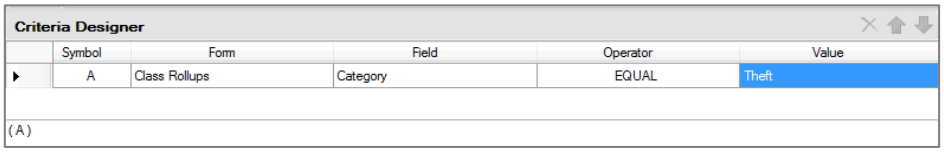

Figure C59: Query—Criteria Designer and the Boolean logic statement (bottom left)

8. In the **Form(s)** pane, expand the **Incident Vehicle** node and expand the **Incident Vehicle Losses** node. Select the word **Losses**.
9. In the **Field(s)** pane, check the **Loss Cause**, **Method**, and **Total**.

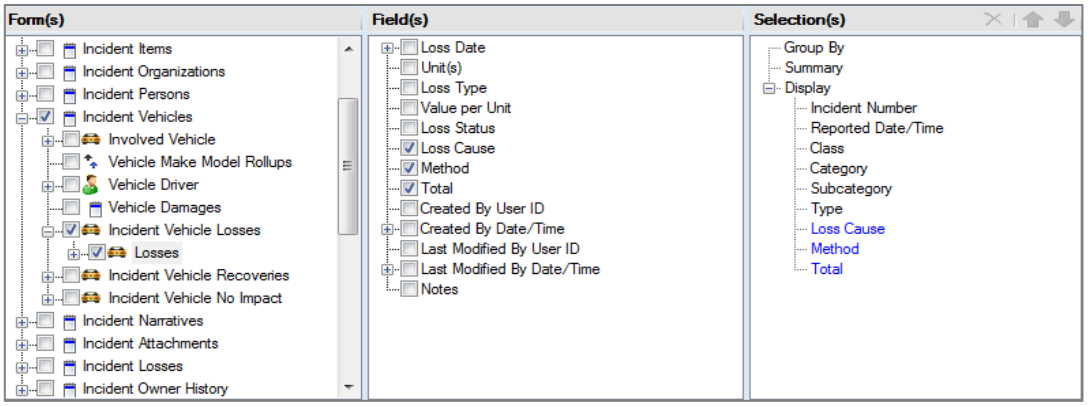

Figure C60: Query—Loss Cause, Method, and Total

10. In the **Field(s)** pane, right-click and select **Total**, and select **Search By**.

11. In the **Criteria Designer**, set the **Operator** to *"not equal"* (**<>**), and the **Value** to "0".

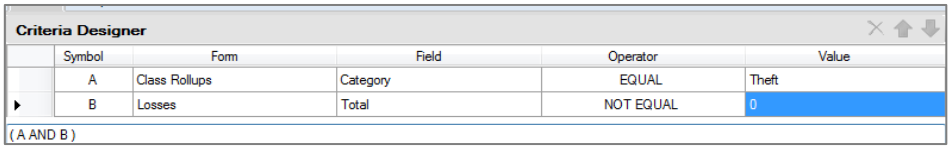

Figure C61: Criteria Designer and the Boolean logic statement (bottom left)

12. Execute the query. In the results screen, expand the child nodes to view the Vehicle associated Loss information.

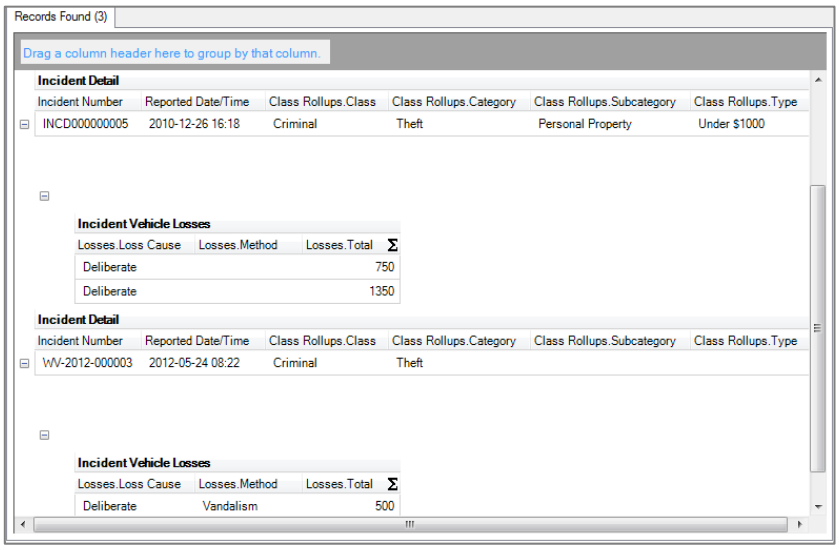

Figure C62: Query results with expanded child records

Glossary

Activity	An activity is an event or series of events with which security personnel may become involved. When an activity has been closed, the corresponding Activity record is transferred to the Activities component within Data Forms, where it can be further described, investigated, and analyzed.
Administrator	An Administrator sets up Perspective, changes settings, and assigns security protocols to users. Administrators have the highest level of access to all records, forms, and fields; they have no visibility or access restrictions within the program.
Analysis Expert	Analysis Expert is an internal search engine that scans the data in all Activity, Incident, Case, Item, Person, Organization, and Vehicle records, and returns results that meet defined search requirements. With Analysis Expert, you can create a query, and then turn your query's results into a spreadsheet, a chart, a printed grid, or a report.
Assignment	An assignment is a task that is given to a user by his or her supervisor. Only authorized users can create assignments.
Boolean Logic	Boolean logic expresses the reasoning Perspective uses when applying search criteria. It uses letter symbols to represent each set of search criteria and applies AND/OR operators and parentheses to define the relationship of search criteria to each other. For example, the simple Boolean logic statement (A) AND (B) shows that Perspective will only search for results that meet both criteria A and B; in order to include results that meet criterion A or criterion B, the logic formula would need to be modified.
Case	A case is a grouping of incidents related by person, item, location, class or other commonality, generally requiring further investigation. (Case management is only available in the Premium Edition of Perspective.)
Child Data	Child data refers to the data that are recorded on Perspective's subforms, or that could potentially correspond to more than one referent. Examples of child data include information about involved Persons, involved Vehicles, and so on.
Child Node	A child node is a node that can only be accessed when its associated parent node has been expanded.

Class Rollup	A Class Rollup describes an incident according to its Class, Category, Subcategory, and/or Type. Class Rollups are hierarchical, meaning that the option selected in the first level of the hierarchy (Class) determines what options are available in the second level of the hierarchy, Category, and so forth.
Component	A component is a program subdivision represented by a specific type of form. For example, the Data Forms *component* of Perspective contains such forms, or *components*, as Incidents, Cases, Activities, Items, etc. The components within Data Forms are graphically represented by *banners* accessible from the Navigation pane.
Criteria Designer	The Criteria Designer is where the items you want to build your query by are displayed. Here, you set your Form and Field Operators and Values.
Dashboard	The Dashboard is like the Home page or main screen of Perspective. It displays charts summarizing incident information, as well as messages and assignments from supervisors.
Database	A database is a collection of data stored in a structured format. A database might be compared to an electronic filing cabinet. Databases are often organized into tables that store related information in the form of records (e.g., Incident records, Person records, Item records).
Dialog Box	A dialog box is a window that appears on screen when a particular selection is made. It generally provides further options for the selected program feature.
Docking	When changing the legend in the Chart Wizard, you can decide where you want the legend to appear (top, bottom, left, right) by changing the Docking location.
Drop-down	A drop-down list or menu offers a range of selections that have been condensed to save screen space. Click on the down arrow on the right side of a drop-down field, and the field will expand to display a list of options. Select an option by clicking it.
Entity	An entity is an object, person, event, or other concept that provides information about a larger category recorded in Perspective. For example, in order to create a detailed Incident record, you may need to enter such entities, as involved persons and items, attachments, assignments, losses, pieces of evidence, etc., that help to create a full picture of the larger category—the incident.

Export	To export a file is to convert a file created in one software program or application into a format that is usable in another application. For example, exporting a set of query results to Microsoft® Excel® involves converting the results into a format suitable for use in Excel.
Field	A field is an element within a form that allows you to enter or access a specific nugget of information related to the record type. One field in an address record might be “Street”.
Filter	When filters are applied in directory searches, they tell the program to return only records in which the content of a specific field matches the criteria set by the user.
Form	A form is a part of the user interface that allows you to interact with the information contained in the database via a screen populated with related fields and designed to perform specific program functions, like reporting an incident, conducting searches, preparing reports, and so forth.
Group By	Selecting Group By in the Field(s) pane categorizes the data fields you are grouping by in order (i.e., grouping by date of birth will create query results with the DOBs appearing in chronological order).
Hierarchy	A hierarchy is organized into successive levels or layers with each level subject to the preceding levels in the hierarchy. For example, the Class Rollup is divided into four fields ordered hierarchically (Class, Category, Subcategory, and Type); a selection made in the Class field determines what options are available in the Category field and so forth.
Import	To import a file is to bring a file into the currently active application. For example, importing an electronic report into the Gateway involves converting the file into a format that is usable within Perspective, and then uploading the properly formatted file into the Gateway.
Incident	An incident is an unusual action or situation affecting persons or property, either accidental or purposeful, which requires notice or follow-up by a security or human resources department.
Interface	Interface in Perspective refers to the visual on-screen means (e.g., windows, dialog boxes, buttons, banners, panes, or icons) by which Perspective modules and components communicate with the user to allow for a seamless entry, display, analysis, and transfer of data.

Lookup List	See “Drop-down”.
Navigation Pane	The Navigation pane is the area of Perspective where users navigate to major program components (e.g., the Dashboard, Data Forms, Analysis Expert), and, to some extent, within the program components. The Navigation pane is located on the left side of the screen.
Node	A node is a point of intersection in a tree that allows users to navigate through the tree to access increasingly specific levels of data or program function. A node can be identified by the small square box to the left of its position in the tree. Clicking the box when it has a plus (+) symbol inside will expand the entity and display all its sub-entities underneath. Clicking the box when it has a minus (-) sign inside will collapse all the sub-entities and hide them under the main entity. When a sub-entity also has a small square box to its left, it is known as a child node.
Operator	An operator is used to create a more refined search. Like the calculation symbols used in mathematical formulae, where operators define the relationship between the formula’s parts (e.g., A is equal to B), operators in Perspective express the relationship of the field to the value when setting search criteria. For example, if the Class field is selected and Criminal is the chosen value, an operator of “equal to” (=) would stipulate that any records appearing in your search results would have a Class equal to Criminal. Examples of other operators include not equal to, less than, like, starts with, and ends with.
Organization	In the context of Perspective, an organization is any agency, company, or group.
Pane	A pane is an area within an on-screen window that contains specific type of information in form of interconnected files, fields, messages, banners, buttons, formulae, or other information. For example, Data Forms interface is expressed through the functionalities contained in the Navigation, Listing, and Viewing panes.
Parent Data	Parent data refers to the basic data that are recorded on Perspective’s main forms, or that correspond to only one referent. Examples of parent data include, but are not limited to, an incident’s Class, Site, Business Unit, Reported Date/Time, Status, Created by User, etc.

Premium Edition	The Premium Edition of Perspective is the “full” version of Perspective, including all features and functionality available in the Standard Edition, plus more. Features and functionality available only in the Premium Edition include investigation management, case management, the Quick Find tool, and the option of integrating with any of Perspective’s add-on modules (including Perspective Visual Analysis). For a list of features and functionality common to both the Premium and Standard Editions of Perspective, see “Standard Edition”.
Query	A query is a request for information. In Analysis Expert, when the Execute button is clicked, the program sends a message to the database where all information is stored, requesting results matching the query’s specified criteria.
Radio Button	A radio button allows users to select one option out of a set of options. Before a radio button has been selected, it will look like an open circle, and after it is selected, a dot will appear inside the circle. Once a user has selected one radio button, selecting any other radio button in the same set will deselect the first option.
Record	A record is a subsection of database holding information about one entity or a member of a category within the database that is stored as one unit (e.g., an Incident, Activity, Item, or Person record).
Record View	A record view is a particular list of records that a user is permitted to access. In Perspective, users are able to create and save their own customized record views in the Data Forms component, allowing them to better organize and manage the records they need to view on an ongoing basis.
Ribbon	Formerly the Action Toolbar, the Ribbon in Perspective locates the most frequently used general administration, navigation, help and search tools and a search field for you to refer to sections of the integrated Help files. In the Data Forms component, the Visual Analysis icon is added that assists in visual representation of relationships between the records stored in the Perspective’s database. In the Analysis Expert component, the Ribbon is populated with an additional set of icons that perform saving, adding, cloning, deletion, sharing, and execution of queries.

Rollup	A rollup is also known as a multi-tier or hierarchical lookup list. Rollups are used to streamline the options and functions available to users, making selections from related lookup lists. Each rollup has up to four tiers. The first tier is known as the Root; the option selected in this first tier determines what options are available in the second tier, and so forth. A higher tier in the hierarchy is known as a Parent field and a lower tier is known as a Child field. Any Child fields that are on the same tier of the hierarchy are called Sibling fields.
Search By	Selecting Search By in the Field(s) pane determines the specific data your query will search for.
Sigma (Σ)	Sigma is the Greek symbol for “sum”. In Analysis Expert, the sigma symbol appears on the heading of a column when Group By is clicked, indicating that the data in the column can be added together.
Standard Edition	The Standard Edition of Perspective is the “lite” version of Perspective, offering the same quality, design, and potential as the Premium Edition, but with less functionality and an easier implementation. Features and functionality common to both the Standard and Premium Editions include incident management, searching and analysis, reporting, Dashboard assignments and charts, data segregation and application security, and the option of integrating with a number of Perspective’s add-on modules (including Perspective e-Reporting). For a list of features and functionality available only in the Premium Edition of Perspective, see “Premium Edition”.
Subform	A subform is a sub-tabbed screen that contains child data, allowing you to enter a large amount of detailed information about an entity, in an organized and coherent manner. A subform can only be accessed through its associated parent form. Like its parent form, the subform is designed to perform specific program functions (e.g., recording an involved person or registering a piece of evidence).
Tab	A tab in Perspective is used to mark a particular section within a data form. It looks like and operates like a tab in a file folder. To access the contents of a tab, users must simply click on the tab.
Text Search	In your query results window, Text Search pinpoints specific data you want to find. Begin the search by clicking the Search Grid button.

Tier	When grouping results by a field, you can drag and drop column headings. By doing this, you can add tiers (or column headings), remove tiers, or reorder tiers.
Toolbar	A row of icons that activate functions or options when clicked. (e.g., The Ribbon).
Tree	A tree, in Perspective, is a hierarchical structure representing the links and relationships between program components. For example, expanding a single node reveals child nodes, which in turn yield further entities, until the user arrives at individual fields containing precise pieces of data. The hierarchical relationship between all these pieces, essentially a navigation map of one particular area of the program, can be described as a tree.
Value	A value is the specific information, or data, entered into a field.
Viewing Pane	The Viewing pane is the area of Perspective where users view record contents. (Depending on their user privileges, users may also be authorized to edit, delete, or add records in the Viewing pane.) The record displayed in the Viewing pane depends on selections made in the Navigation pane and the Listing pane. The Viewing pane is located on the right side of the screen.
Visual Analysis	Perspective Visual Analysis is an optional module for the Premium Edition of Perspective, allowing data relationships between Incident, Case, Item, Person, Organization, or Vehicle records to be rendered into powerful visual link charts. These visual elements can easily be analyzed and interpreted, bringing clarity to complex investigations and scenarios.
Window	A window is an enclosed rectangular on-screen viewing area that displays programs, files, fields, messages, or Web sites independently of other on-screen areas.
Wizard	The Wizard contains a number of options that allows you to customize your charts, such as the appearance, legend, themes, etc.
Workgroup	A workgroup, in Perspective, segregates users by department, division, corporate level, region, or any other criteria an organization wants to use, and allows an organization to limit users' access to data. Users can only access records assigned to their respective workgroups.

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