Event Trace

The Event Trace module of the Protector allows you to select any node(s) and conduct a trace algorithm to determine the extent of contamination from a selected source node(s) at a specific time. Once the Event Trace simulation is run, all pipes and nodes that contributed flows to the selected node will be displayed.

If only a single junction node is selected under Event Location (Step:1), the Protector will list in "Step:2 Source Identification" each source contributing water to that junction along with the fraction (percentage) of water originating from that source.

Step 1: Event Location

The specified node(s) from which an Event Trace simulation is to be conducted. Once the node(s) have been selected, specify a color to display this node in the Report Customer(s) at Risk section.

- **Domain** - Use this option to create a domain to conduct an Event Trace. Use the **Edit Domain** button to create a domain if one is not already present. Use this button to create, modify, and delete node elements to be included in a domain prior to an Event Trace simulation.
- **Selection** - Use this option to graphically select a node(s) to conduct an Event Trace. Use the **Edit Selection** button to graphically select the desired node(s). Use this button to select the Event Location on the map view.
- **Trace** - Use this to determine the source nodes that contribute water to the selected node(s) after the node element(s) have been selected and the analysis time specified. The source nodes will be displayed in the Source Identification box.

Select Time

Select a time from which to conduct a Fire simulation. The Fire simulation will run from hour 0:00 to the time specified with the Select Time dialog box. For example, if hour 13:00 is specified the Fire analysis will be run from hour 0:00 to 13:00 hours.

- **Select Time** - The **Select Time** button will display the select time slider. Use the slider to select a time from which to conduct an Fire simulation.

Step 2: Source(s) Identification

Select the desired source node(s) to be used in the Event Trace simulation. Only those nodes that contributed water to the selected nodes will be shown in the adjacent text box. You can select one or more source nodes before conducting the Event Trace simulation. Once the desired source node(s) have been selected, click on the **Run** button to complete the simulation.

- **Run** - Use this to run the Event Trace simulation.
- **Clear** - Click on the **Clear** button to clear the Source Identification list.

Affected Customers

All links and nodes affected during the Event Trace simulation can be stored in a user-defined selection set for later retrieval and analysis.

- **Selection Set**: Specify a selection set ID in the selection set drop-down box or create a new selection set by clicking on the **Browse** button.
- **Color**: Select the color for the affected customers.

Notify - Determine the affected customers after running the simulation.

Update Map - Use **Update Map** to update the map view and display the affected facilities.

Options - The **Options** button is used for assigning the GIS-based layer to be used for conducting a customer notification.

Reset Map - Click **Reset Map** to reset the map display to its default state.

Close - Closes the Protector dialog box. To conduct another water security analysis, simply click on another analysis tab in the Protector dialog box.