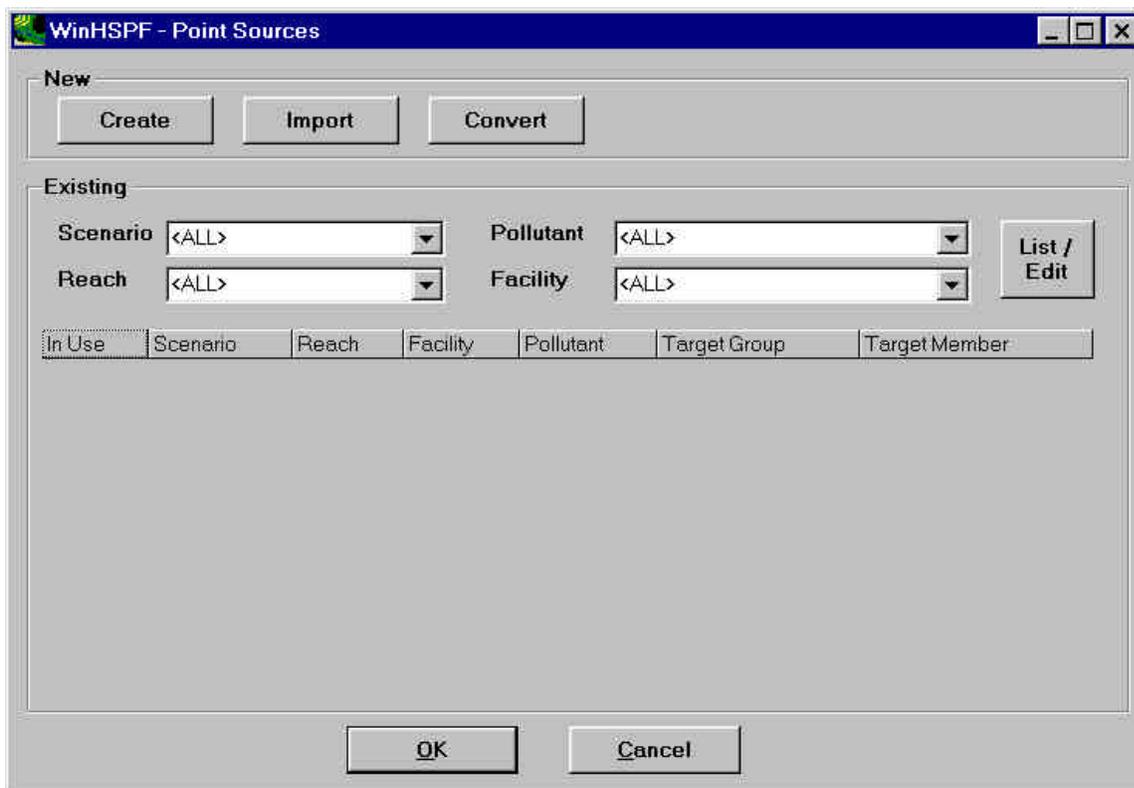


Lesson 7: Adding Point Source Data

With a project active in WinHSPF, the user may wish to add point source data to the project WDM file. The user may also wish to edit point source data. This lesson demonstrates how to add point source data on the project WDM file, and how to edit existing point sources.

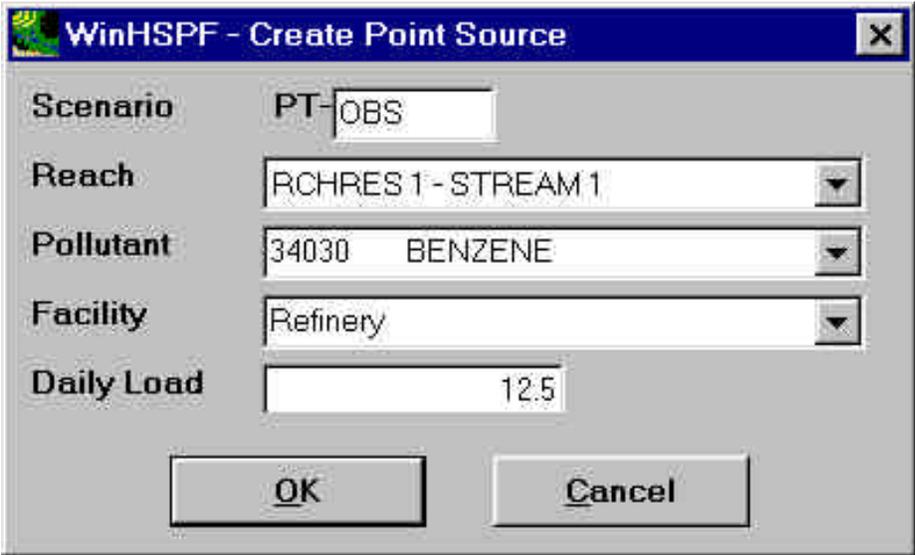
Upon creation of a new project, point source data is written to the project WDM file for all point sources and constituents specified in the BASINS point sources file. Click on the  button on the toolbar and the following window will appear:



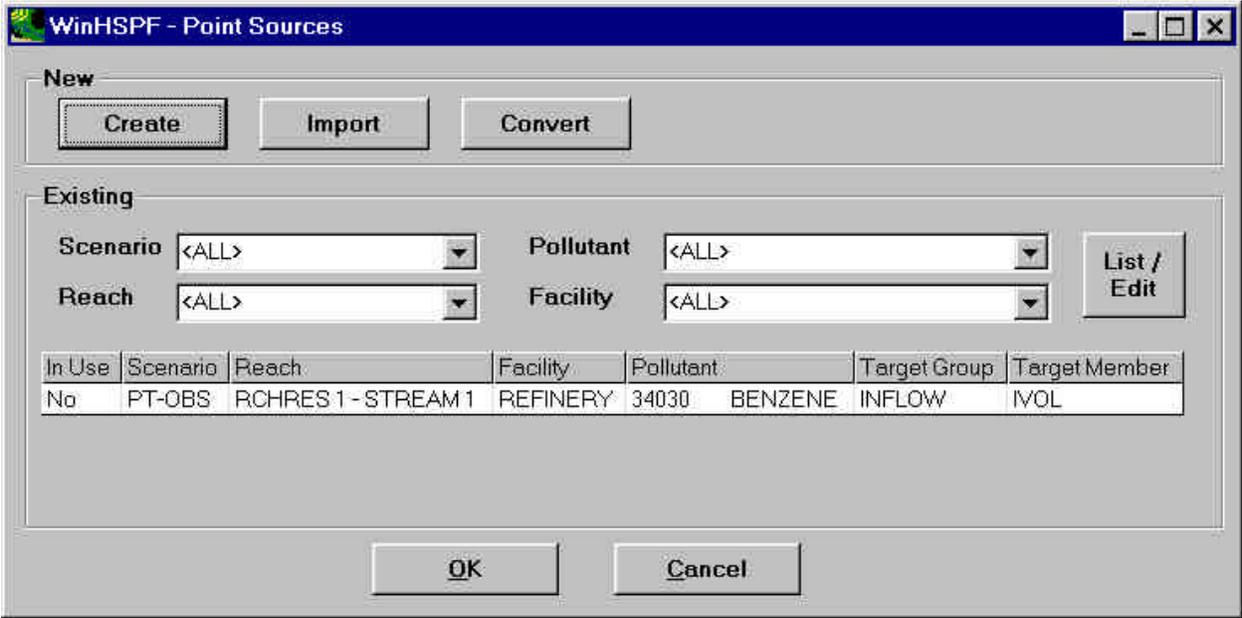
The absence of a grid on the bottom portion of the window indicates that there are currently no point source data for the project. The three buttons at the top of the window provide ways to add such data to the project WDM file.

- **Create** - allows the user to manually create a point source data set
- **Import** - allows the user to import a MUTSIN point source data file
- **Convert** - converts any MUTSIN point source files referenced in the HSPF input sequence to WDM data sets

Click on the **Create** button and enter the following information. Values for the **Scenario** and **Daily Load** fields must be typed in while the other 3 fields are selected from drop-down lists.

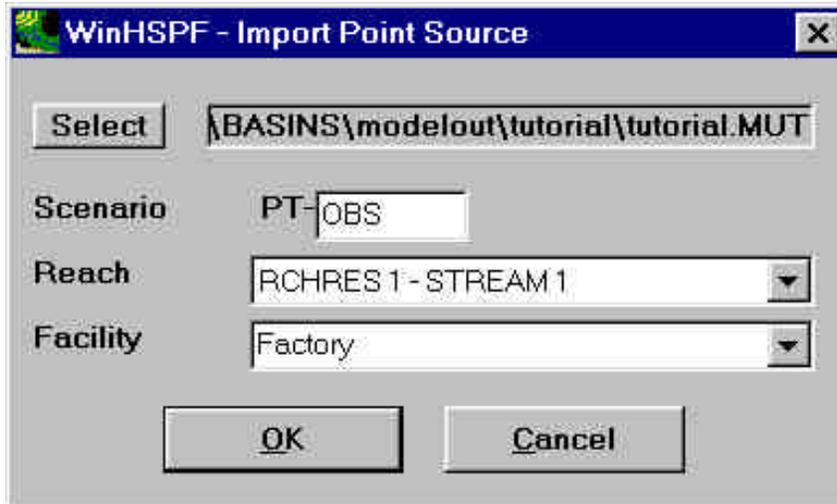


Once the values have been entered, click the **OK** button to create the new point source in the project WDM file and return to the main **Point Sources** window. The new point source data set is now displayed in the grid.



Now click on the **Import** button and enter the following information. Select tutorial.MUT from the '\BASINS\data\tutorial\HSPF' subdirectory, type in the extension of the **Scenario** name, and select the

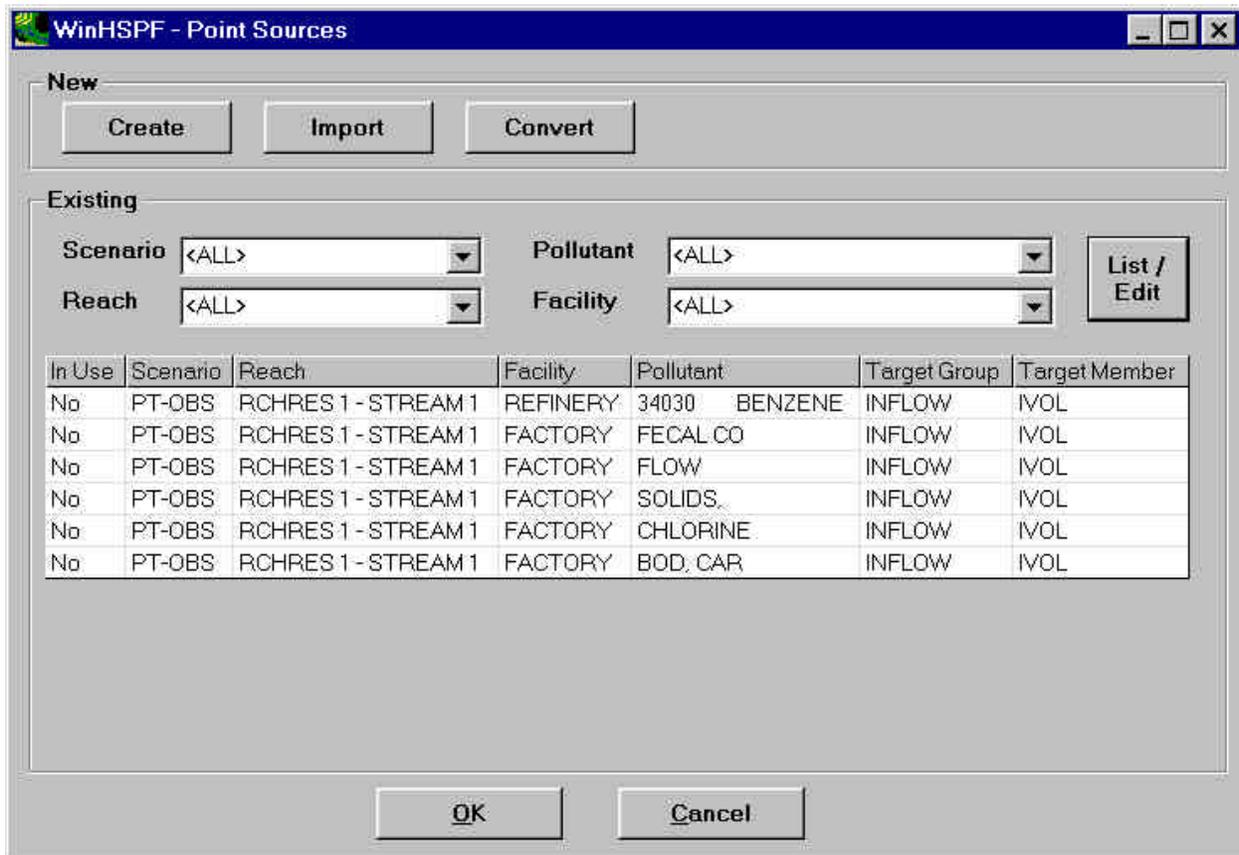
Reach from its drop-down list box. The **Facility** field is automatically filled in with text from the import file.



The dialog box titled "WinHSPF - Import Point Source" contains the following fields and controls:

- Select** button: A button with the text "Select".
- File Path**: A text box containing the path "\BASINS\modelout\tutorial\tutorial.MUT".
- Scenario**: A text box containing "PT-OBS".
- Reach**: A drop-down menu showing "RCHRES 1 - STREAM 1".
- Facility**: A drop-down menu showing "Factory".
- OK** and **Cancel** buttons: Two buttons at the bottom of the dialog.

Once the values have been entered, click the **OK** button to import the new point sources into the project WDM file and return to the main **Point Sources** window.

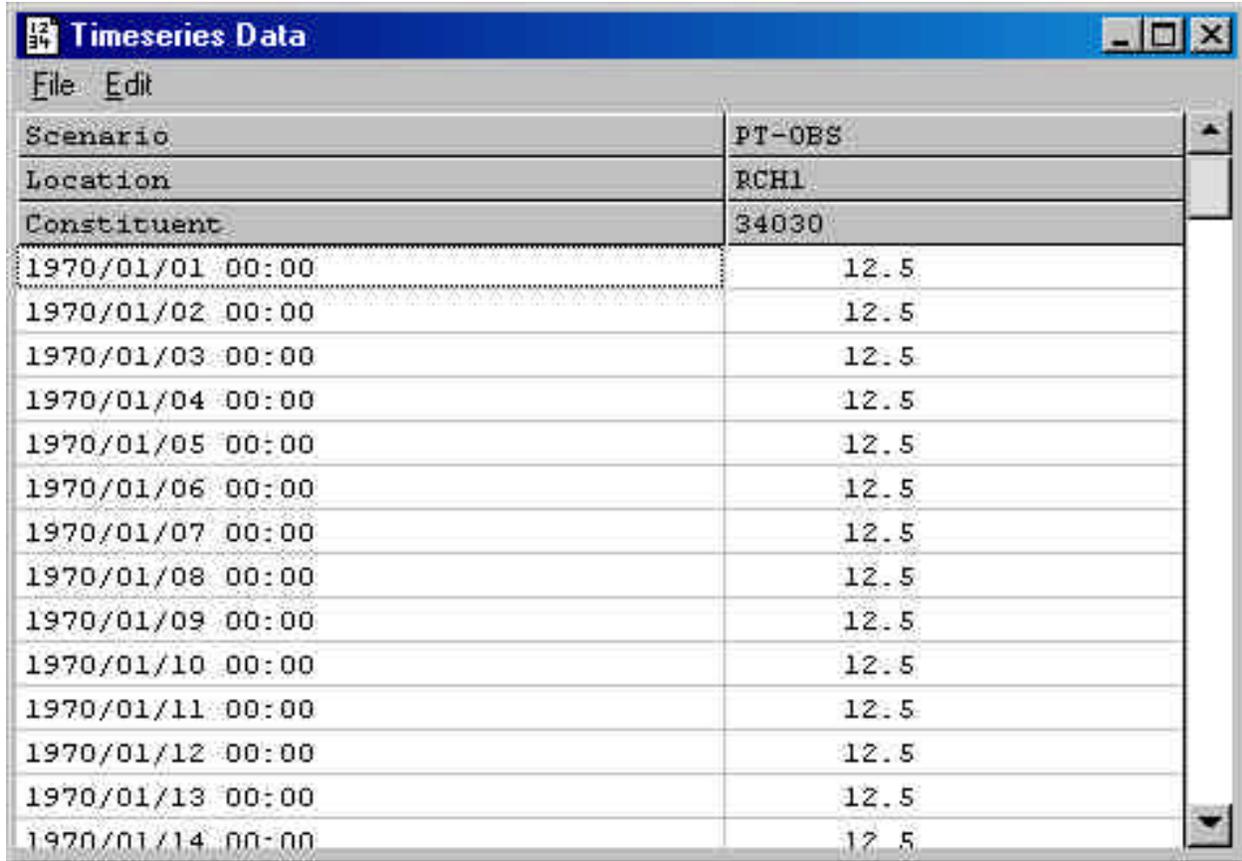


The dialog box titled "WinHSPF - Point Sources" contains the following sections and controls:

- New** section: Contains three buttons: "Create", "Import", and "Convert".
- Existing** section: Contains four drop-down menus: "Scenario" (set to "<ALL>"), "Pollutant" (set to "<ALL>"), "Reach" (set to "<ALL>"), and "Facility" (set to "<ALL>"). A "List / Edit" button is located to the right of these menus.
- Table**: A table with 7 columns: "In Use", "Scenario", "Reach", "Facility", "Pollutant", "Target Group", and "Target Member". The table contains 6 rows of data.
- OK** and **Cancel** buttons: Two buttons at the bottom of the dialog.

In Use	Scenario	Reach	Facility	Pollutant	Target Group	Target Member
No	PT-OBS	RCHRES 1 - STREAM 1	REFINERY	34030 BENZENE	INFLOW	IVOL
No	PT-OBS	RCHRES 1 - STREAM 1	FACTORY	FECAL CO	INFLOW	IVOL
No	PT-OBS	RCHRES 1 - STREAM 1	FACTORY	FLOW	INFLOW	IVOL
No	PT-OBS	RCHRES 1 - STREAM 1	FACTORY	SOLIDS	INFLOW	IVOL
No	PT-OBS	RCHRES 1 - STREAM 1	FACTORY	CHLORINE	INFLOW	IVOL
No	PT-OBS	RCHRES 1 - STREAM 1	FACTORY	BOD, CAR	INFLOW	IVOL

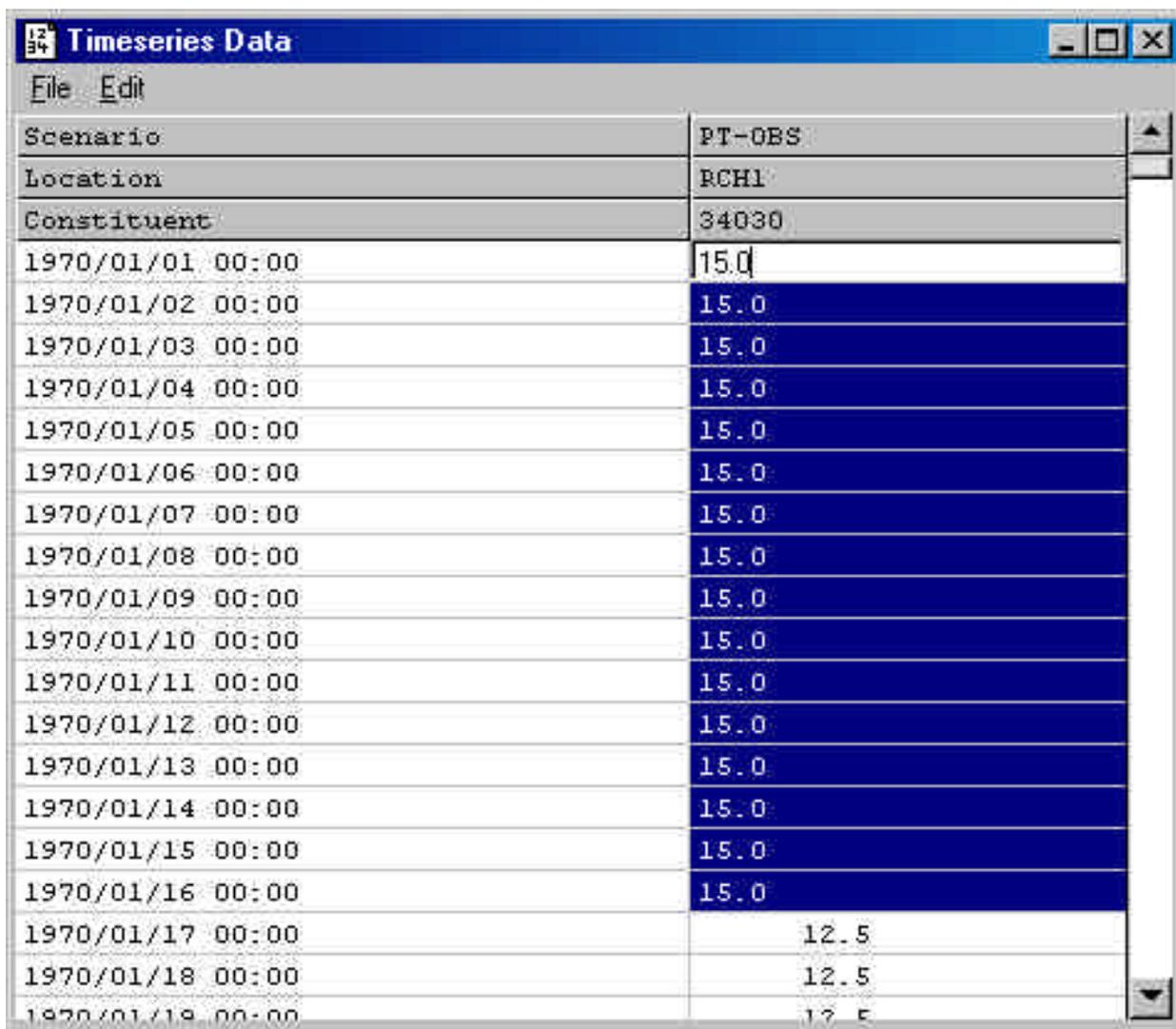
Select a field in the first row containing the information associated with Benzene, then click on the **List/Edit** button. The following form appears:



The screenshot shows a window titled "Timeseries Data" with a menu bar containing "File" and "Edit". The window contains a table with the following data:

Scenario	PT-OBS
Location	RCH1
Constituent	34030
1970/01/01 00:00	12.5
1970/01/02 00:00	12.5
1970/01/03 00:00	12.5
1970/01/04 00:00	12.5
1970/01/05 00:00	12.5
1970/01/06 00:00	12.5
1970/01/07 00:00	12.5
1970/01/08 00:00	12.5
1970/01/09 00:00	12.5
1970/01/10 00:00	12.5
1970/01/11 00:00	12.5
1970/01/12 00:00	12.5
1970/01/13 00:00	12.5
1970/01/14 00:00	12.5

Highlight the value fields for 1970/01/01 to 1970/01/16 then type in the value 15.

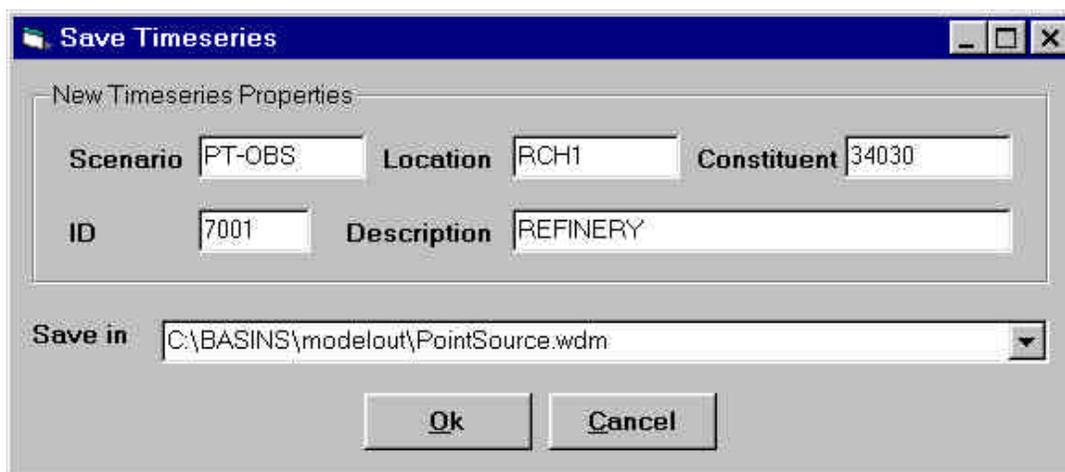


Scenario	PT-OBS
Location	RCH1
Constituent	34030
1970/01/01 00:00	15.0
1970/01/02 00:00	15.0
1970/01/03 00:00	15.0
1970/01/04 00:00	15.0
1970/01/05 00:00	15.0
1970/01/06 00:00	15.0
1970/01/07 00:00	15.0
1970/01/08 00:00	15.0
1970/01/09 00:00	15.0
1970/01/10 00:00	15.0
1970/01/11 00:00	15.0
1970/01/12 00:00	15.0
1970/01/13 00:00	15.0
1970/01/14 00:00	15.0
1970/01/15 00:00	15.0
1970/01/16 00:00	15.0
1970/01/17 00:00	12.5
1970/01/18 00:00	12.5
1970/01/19 00:00	12.5

Click on the X in the top right corner of the window and the following message box will prompt you to save the changes to the data set.



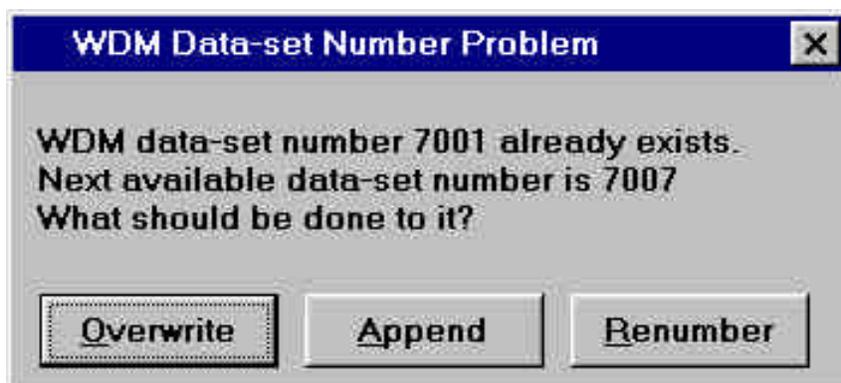
Click on the 'No' button. From the 'File' menu, choose 'Save Changed', and the following dialogue box appears:



The 'Save Timeseries' dialog box contains the following fields and controls:

- New Timeseries Properties:**
 - Scenario: PT-OBS
 - Location: RCH1
 - Constituent: 34030
 - ID: 7001
 - Description: REFINERY
- Save in:** C:\BASINS\modelout\PointSource.wdm
- Buttons:** Ok, Cancel

Click on the **OK** button without editing any values and the following message box appears:



The 'WDM Data-set Number Problem' message box contains the following text and controls:

**WDM data-set number 7001 already exists.
Next available data-set number is 7007
What should be done to it?**

Buttons: Overwrite, Append, Renumber

A final message box appears confirming that the edits were successfully saved to the project WDM file then the interface returns to the **Point Sources** window. Click on the **OK** button to return to the main WinHSPF form from there. Six new point source data sets have been added to the project WDM file.

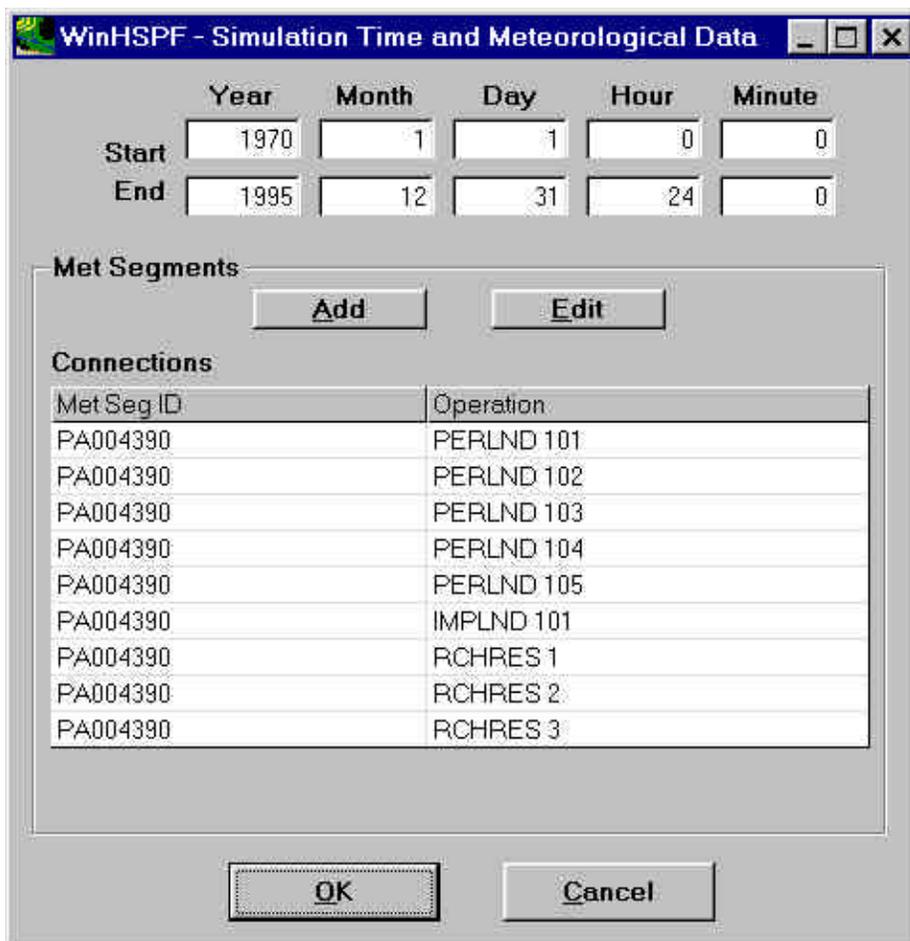
See the Point Sources section of the online help for more detailed information about adding point source data to the project.

Lesson 8: Modifying Meteorological Data

With a project active in WinHSPF, the user may wish to alter the time span simulated during the HSPF run or edit the composition of the meteorological segments contributing to the HSPF operations. Both of these tasks can be accomplished via the **Simulation Time and Meteorological Data** form. This lesson demonstrates how to:

- modify the time span of the HSPF simulation run
- create additional met segments
- edit which met segments contribute to which operations

While running the tutorial project distributed with WinHSPF, click on the  icon on the toolbar. The following window appears:



Year	Month	Day	Hour	Minute
1970	1	1	0	0
1995	12	31	24	0

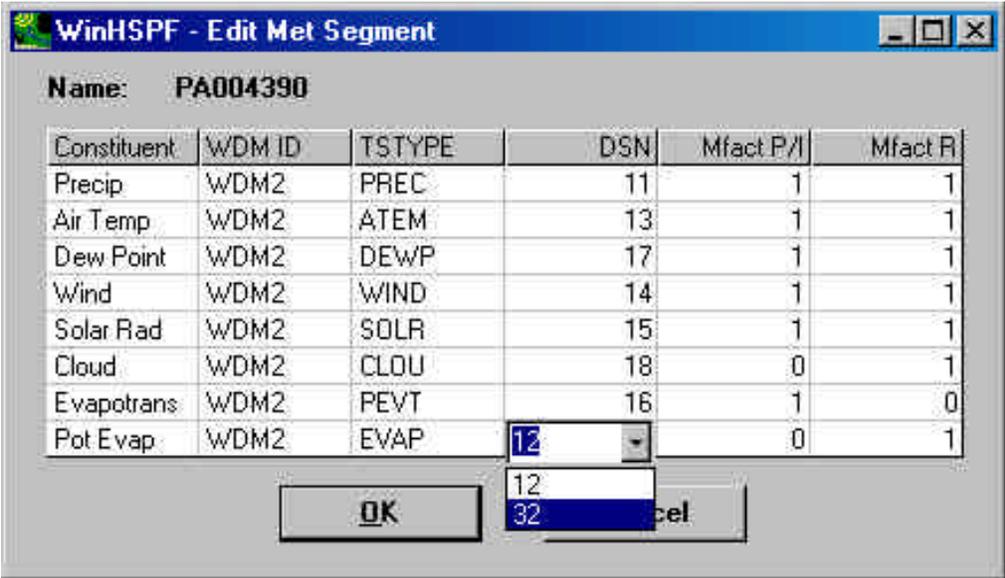
Met Segments

Connections

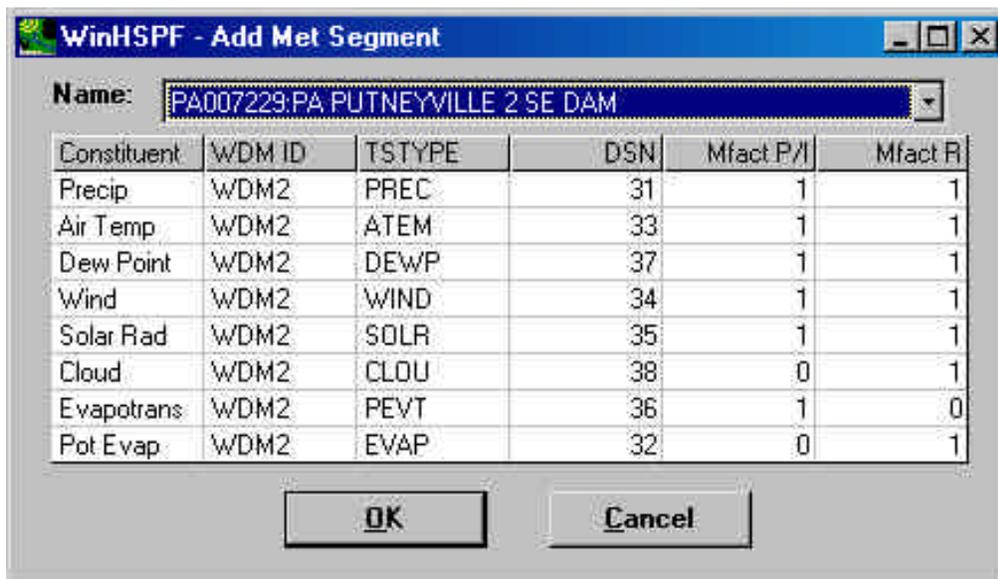
Met Seg ID	Operation
PA004390	PERLND 101
PA004390	PERLND 102
PA004390	PERLND 103
PA004390	PERLND 104
PA004390	PERLND 105
PA004390	IMPLND 101
PA004390	RCHRES 1
PA004390	RCHRES 2
PA004390	RCHRES 3

Click on the Start Year and enter a value of 1975. Now click on the the End Year and enter a value of 1980. The HSPF simulation will now only encompass this six-year span.

Now modify the met segments contributing to the operations. Double-click any field in the Met Seg ID column. The drop-down list contains only one met segment, indicating that there is only one such segment available for application to the corresponding operation. With a Met Seg ID still selected, click on the **Edit** button at the top left of the **Met Segments** frame. The **Edit Met Segment** form appears. Notice that the user may change the way this Met Segment is defined by changing the values in this grid, such as changing the Evap DSN.



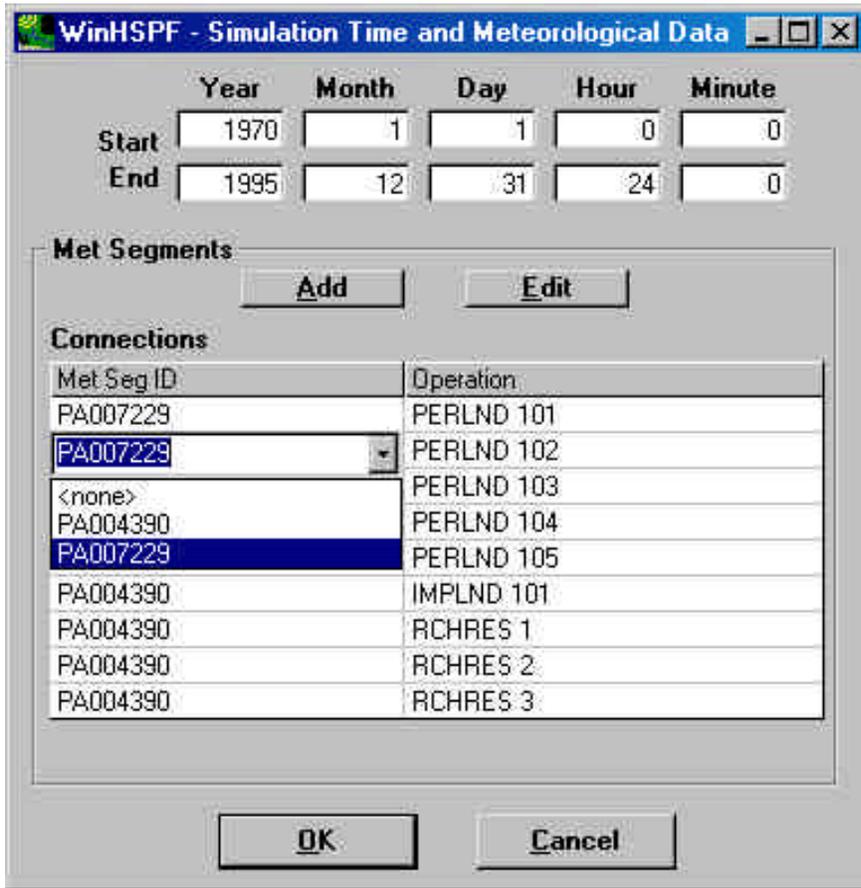
Click on the **Cancel** button and return to the **Simulation Time and Meteorological Data** form. Now click on the **Add** button at the top right of the **Met Segments** frame and the **Add Met Segment** form appears. In the drop down list at the top of the window, choose the second item.



The image shows a dialog box titled "WinHSPF - Add Met Segment". At the top, there is a "Name:" label followed by a text box containing "PA007229:PA PUTNEYVILLE 2 SE DAM". Below this is a table with six columns: "Constituent", "WDM ID", "TSTYPE", "DSN", "Mfact P/I", and "Mfact R". The table contains eight rows of data. At the bottom of the dialog box, there are two buttons: "OK" and "Cancel".

Constituent	WDM ID	TSTYPE	DSN	Mfact P/I	Mfact R
Precip	WDM2	PREC	31	1	1
Air Temp	WDM2	ATEM	33	1	1
Dew Point	WDM2	DEWP	37	1	1
Wind	WDM2	WIND	34	1	1
Solar Rad	WDM2	SOLR	35	1	1
Cloud	WDM2	CLOU	38	0	1
Evapotrans	WDM2	PEVT	36	1	0
Pot Evap	WDM2	EVAP	32	0	1

Notice that the user may customize this new Met Segment by editing the fields in this grid. Click on the **OK** button when the selections are complete and return to the **Simulation Time and Meteorological Data** form. Now double-click on the first two rows in the Met Seg ID column and select the recently created met segment PA007229.



The dialog box titled "WinHSPF - Simulation Time and Meteorological Data" contains the following elements:

- Start/End Dates:** A grid of input fields for Year, Month, Day, Hour, and Minute. Start is 1970-01-01 00:00, and End is 1995-12-31 24:00.
- Met Segments:** A section with "Add" and "Edit" buttons.
- Connections Table:** A table with two columns: "Met Seg ID" and "Operation".

Met Seg ID	Operation
PA007229	PERLND 101
PA007229	PERLND 102
<none>	PERLND 103
PA004390	PERLND 104
PA007229	PERLND 105
PA004390	IMPLND 101
PA004390	RCHRES 1
PA004390	RCHRES 2
PA004390	RCHRES 3

At the bottom are "OK" and "Cancel" buttons.

When the selections are complete, click the **OK** button and return to the main form. The newly created met segment PA007229 will now affect the PERLND 101 and PERLND 102 operations during a HSPF simulation run.