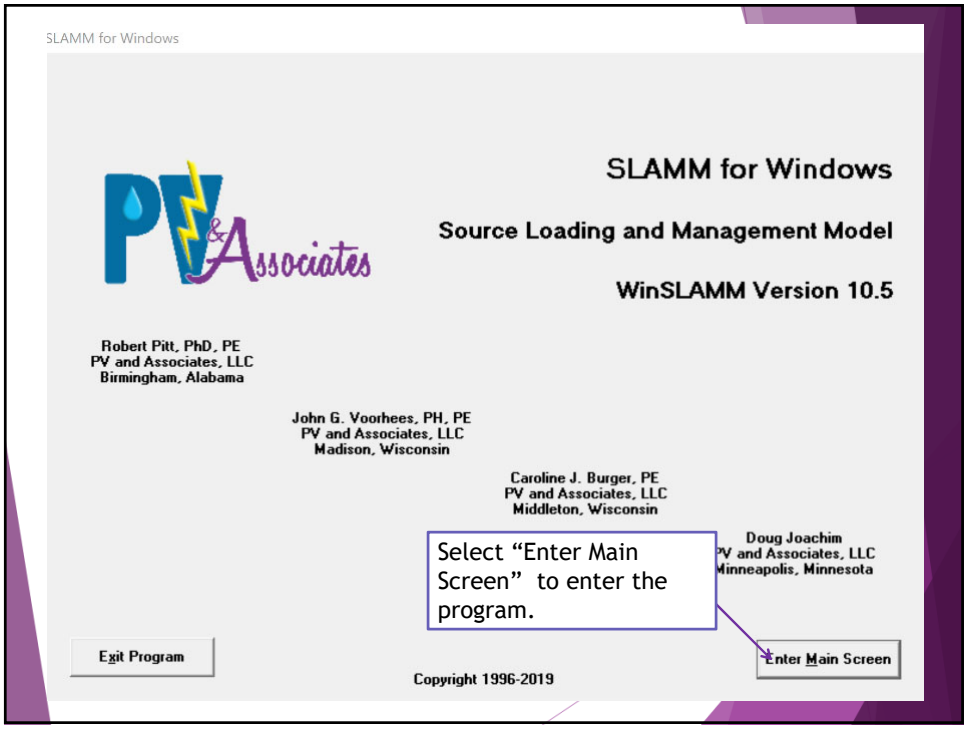
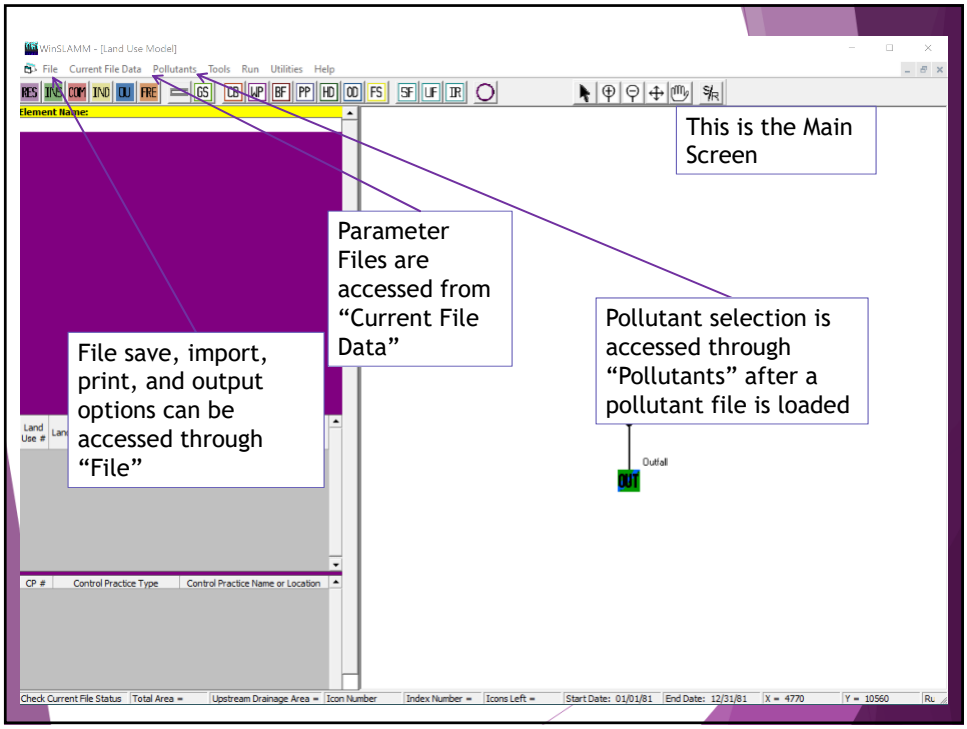
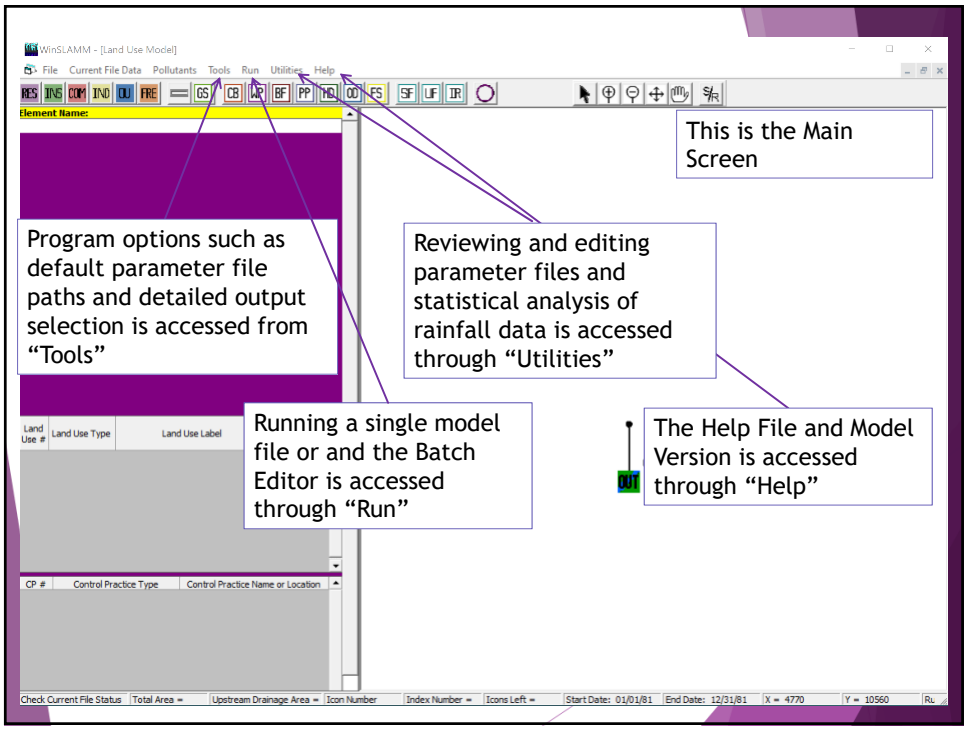
# WinSLAMM Model Features and Navigation

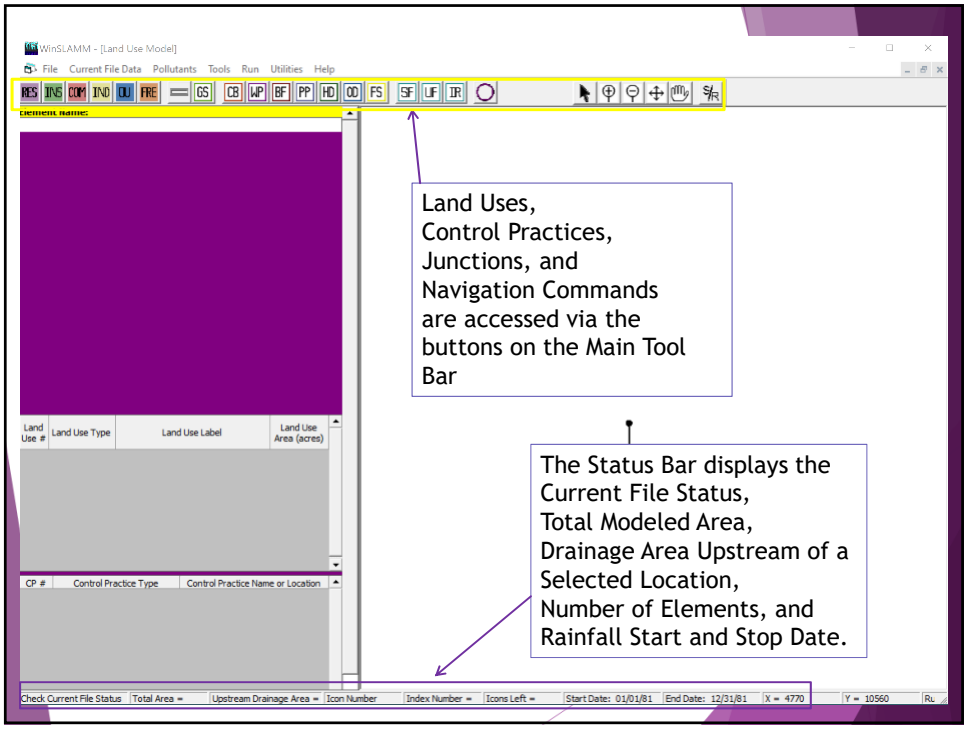
PVA January 2022 WinSLAMM Virtual Training

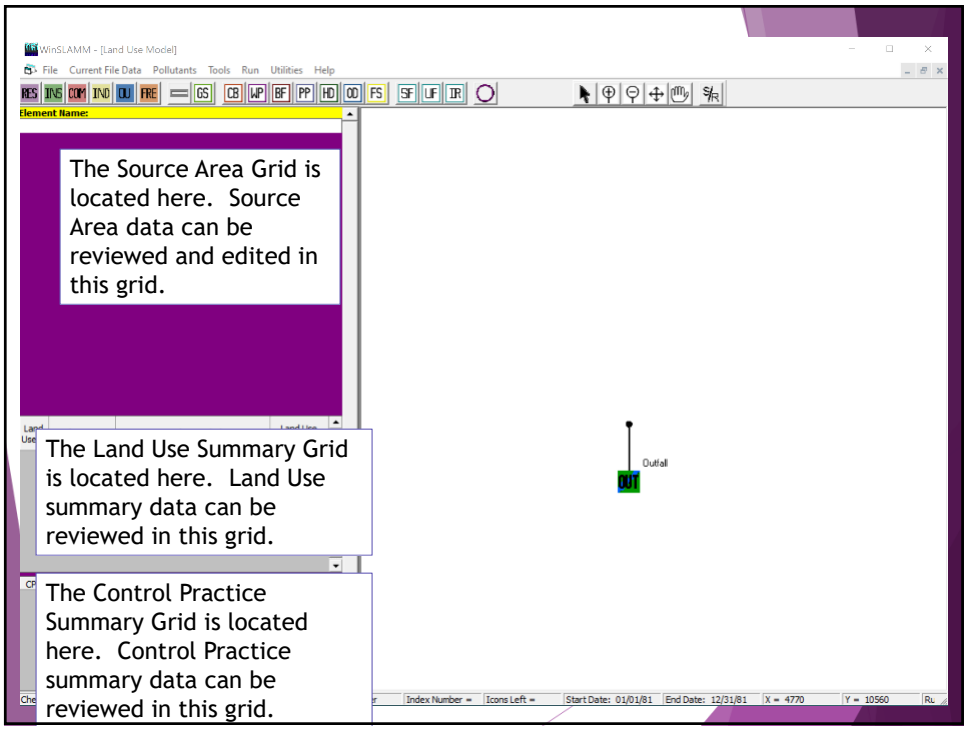
1

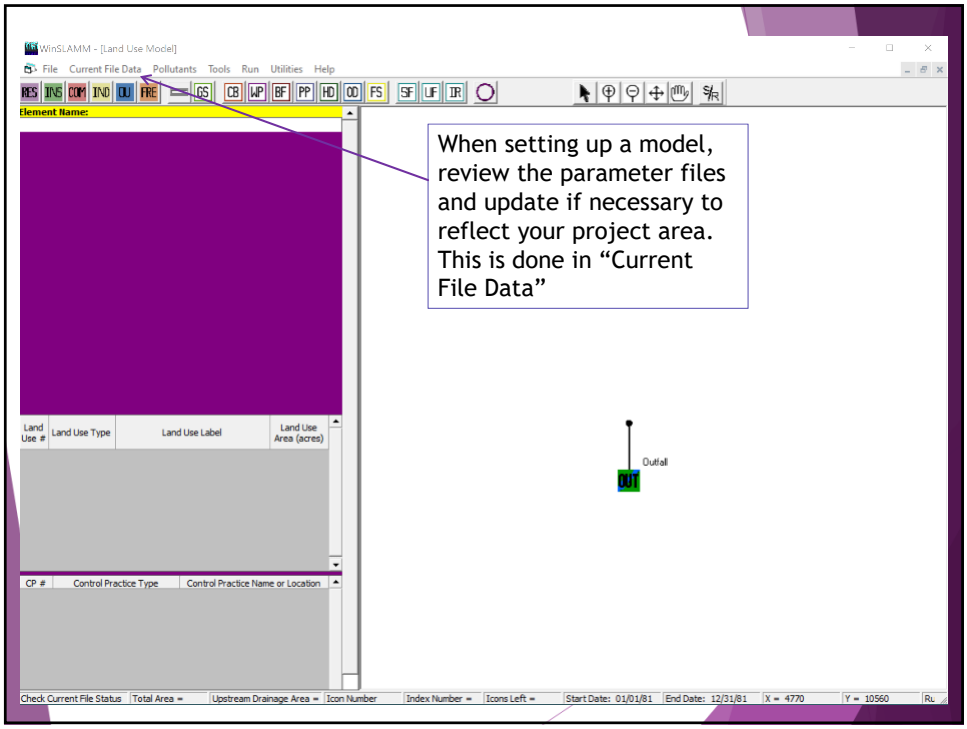


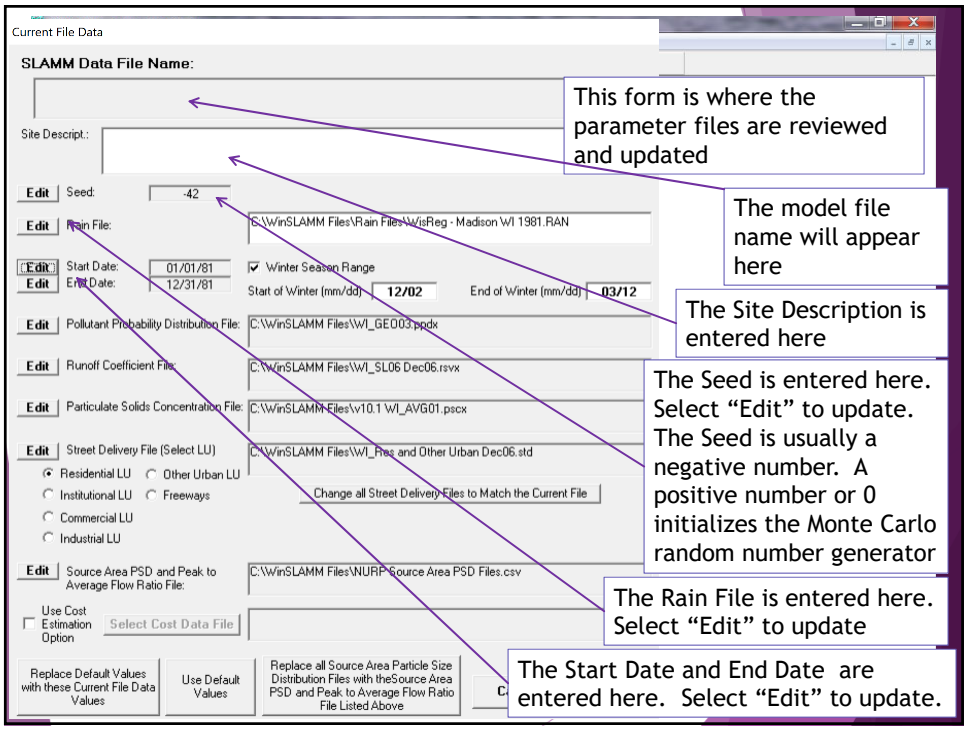

This is the Main Screen
Parameter Files are accessed from “Current File Data”
Pollutant selection is accessed through “Pollutants” after a pollutant file is loaded
File save, import, print, and output options can be accessed through “File”

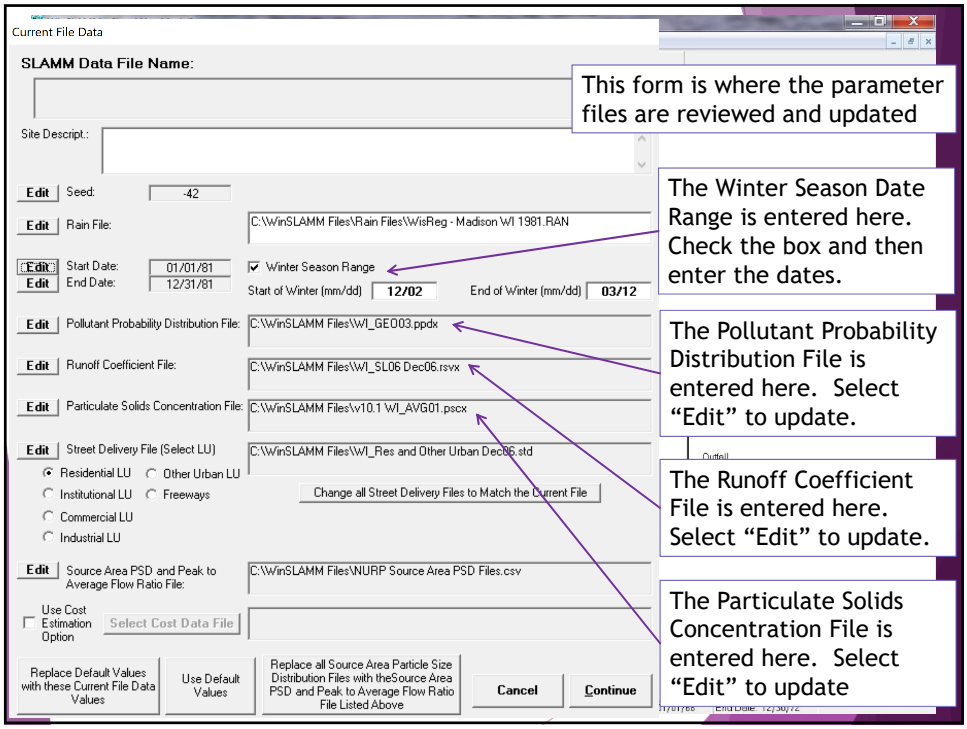

This is the Main Screen
Program options such as default parameter file paths and detailed output selection is accessed from “Tools”
Reviewing and editing parameter files and statistical analysis of rainfall data is accessed through “Utilities”
Running a single model file or and the Batch Editor is accessed through “Run”
The Help File and Model Version is accessed through “Help”

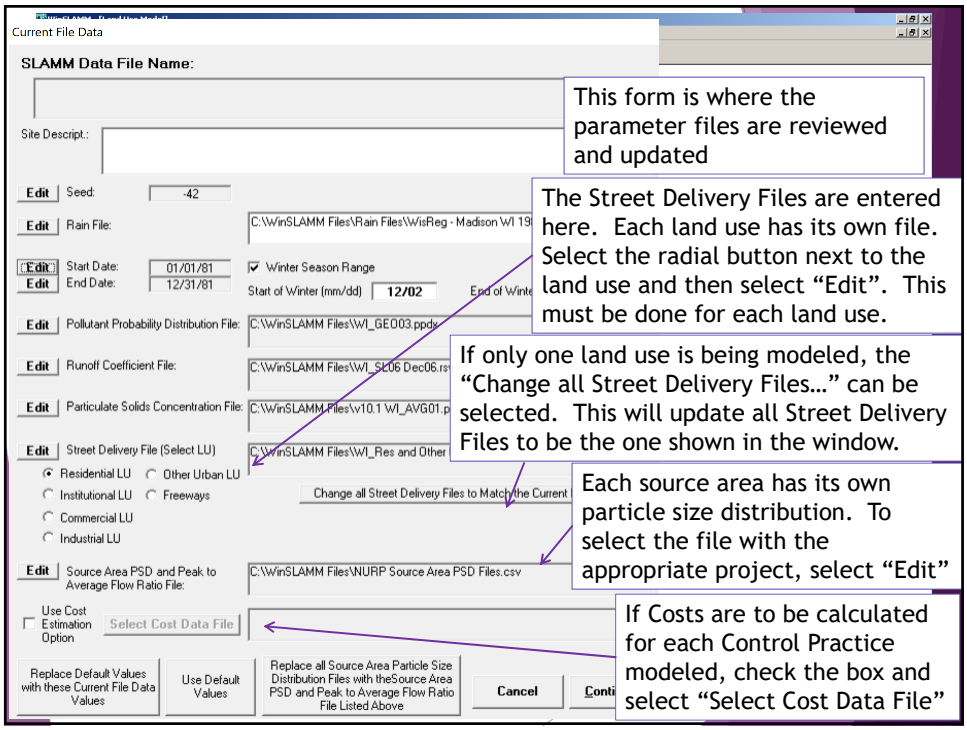

Land Uses, Control Practices, Junctions, and Navigation Commands are accessed via the buttons on the Main Tool Bar
The Status Bar displays the Current File Status, Total Modeled Area, Drainage Area Upstream of a Selected Location, Number of Elements, and Rainfall Start and Stop Date.

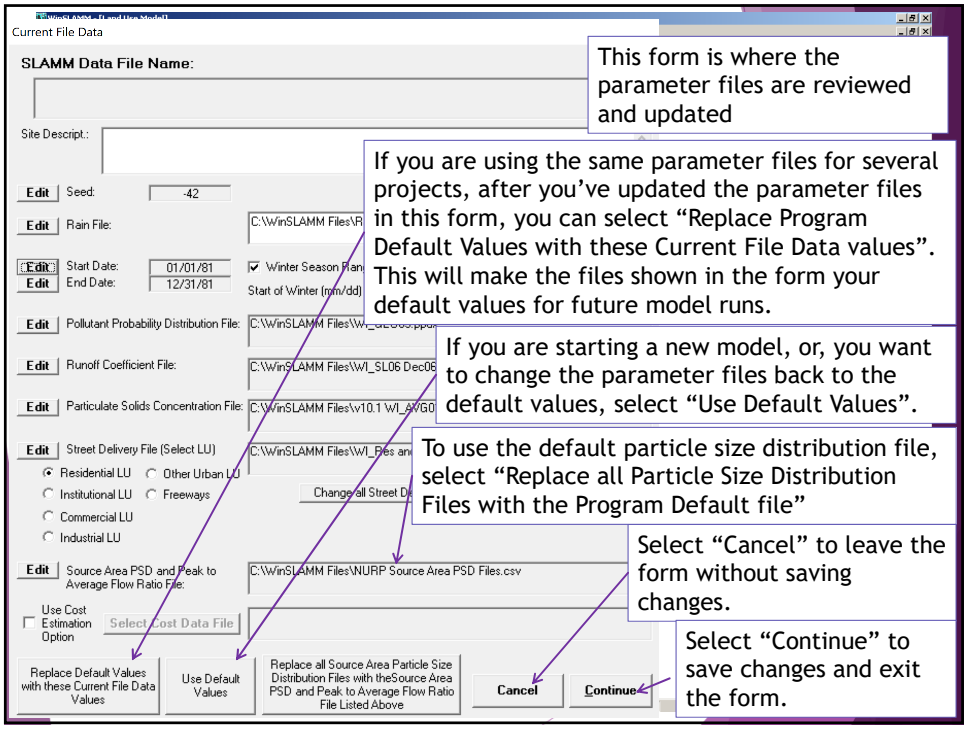

The Source Area Grid is located here. Source Area data can be reviewed and edited in this grid.
The Land Use Summary Grid is located here. Land Use summary data can be reviewed in this grid.
The Control Practice Summary Grid is located here. Control Practice summary data can be reviewed in this grid.

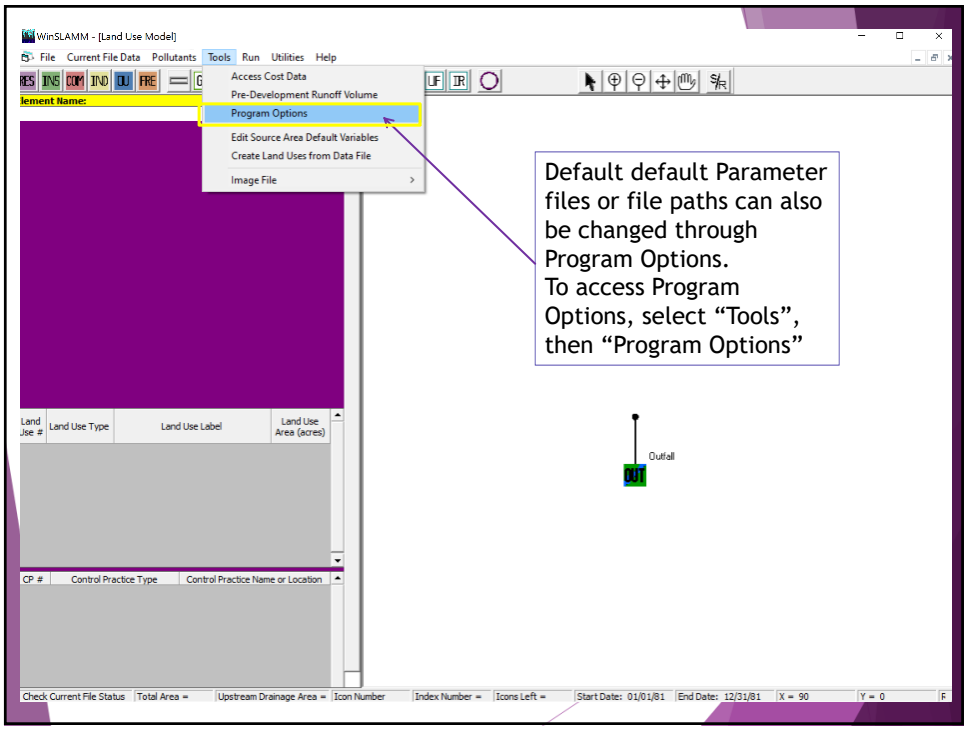

When setting up a model, review the parameter files and update if necessary to reflect your project area. This is done in “Current File Data”

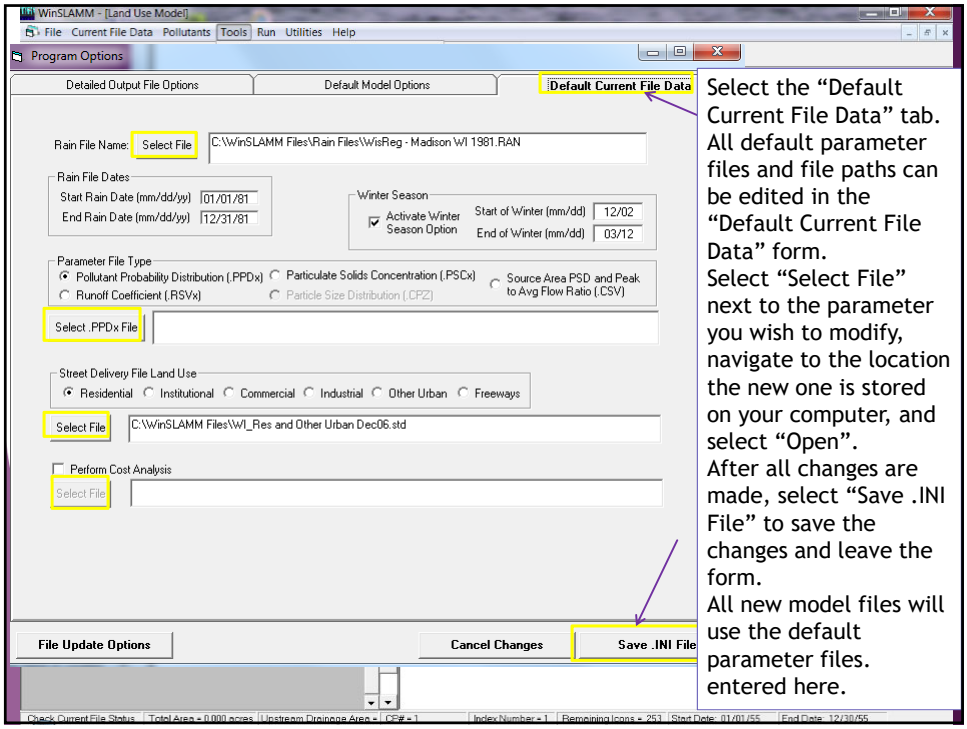

This form is where the parameter files are reviewed and updated
The model file name will appear here
The Site Description is entered here
The Seed is entered here. Select “Edit” to update. The Seed is usually a negative number. A positive number or 0 initializes the Monte Carlo random number generator
The Rain File is entered here. Select “Edit” to update
The Start Date and End Date are entered here. Select “Edit” to update.


Current File Data
SLAMM Data File Name:
Site Descript.:
Edit Seed: -42
Edit Rain File: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
Edit Start Date: 01/01/81
Edit End Date: 12/31/81
Winter Season Range
Start of Winter (mm/dd) 12/02
End of Winter (mm/dd) 03/12
Edit Pollutant Probability Distribution File: C:\WinSLAMM Files\WI_GE003.ppdx
Edit Runoff Coefficient File: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Edit Particulate Solids Concentration File: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Edit Street Delivery File (Select LU): C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Residential LU
Other Urban LU
Institutional LU
Freeways
Commercial LU
Industrial LU
Change all Street Delivery Files to Match the Current File
Edit Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Use Cost Estimation Option
Select Cost Data File
Replace Default Values with these Current File Data Values
Use Default Values
Replace all Source Area Particle Size Distribution Files with theSource Area PSD and Peak to Average Flow Ratio File Listed Above
Cancel
Continue
This form is where the parameter files are reviewed and updated
The Winter Season Date Range is entered here. Check the box and then enter the dates.
The Pollutant Probability Distribution File is entered here. Select "Edit" to update.
The Runoff Coefficient File is entered here. Select "Edit" to update.
The Particulate Solids Concentration File is entered here. Select "Edit" to update

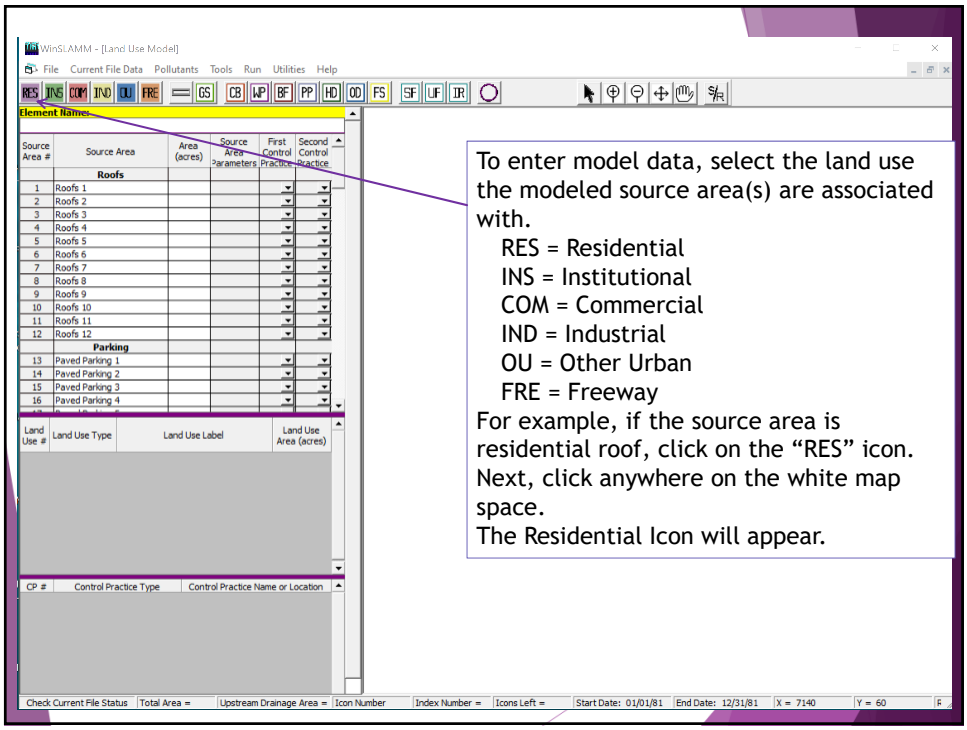

Current File Data
SLAMM Data File Name:
Site Descript.:
Edit Seed: -42
Edit Rain File:
Edit Start Date: 01/01/81
Edit End Date: 12/31/81
Winter Season Range
Start of Winter (mm/dd) 12/02
Edit Pollutant Probability Distribution File:
Edit Runoff Coefficient File:
Edit Particulate Solids Concentration File:
Edit Street Delivery File (Select LU):
Residential LU
Other Urban LU
Institutional LU
Freeways
Commercial LU
Industrial LU
Edit Source Area PSD and Peak to Average Flow Ratio File:
Use Cost Estimation Option
Select Cost Data File
Replace Default Values with these Current File Data Values
Use Default Values
Cancel
This form is where the parameter files are reviewed and updated
The Street Delivery Files are entered here. Each land use has its own file. Select the radial button next to the land use and then select "Edit". This must be done for each land use.
If only one land use is being modeled, the "Change all Street Delivery Files…" can be selected. This will update all Street Delivery Files to be the one shown in the window.
Each source area has its own particle size distribution. To select the file with the appropriate project, select "Edit"
If Costs are to be calculated for each Control Practice modeled, check the box and select "Select Cost Data File"


Current File Data
SLAMM Data File Name:
Site Descript.:
Edit Seed: -42
Edit Rain File:
Edit Start Date: 01/01/81
Edit End Date: 12/31/81
Winter Season Ran
Start of Winter (mm/dd)
Edit Pollutant Probability Distribution File:
Edit Runoff Coefficient File:
Edit Particulate Solids Concentration File:
Edit Street Delivery File (Select LU)
Residential LU
Other Urban LU
Institutional LU
Freeways
Commercial LU
Industrial LU
Change all Street D
Edit Source Area PSD and Peak to Average Flow Ratio File:
C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Use Cost Estimation Option
Select Cost Data File
Replace Default Values with these Current File Data Values
Use Default Values
Replace all Source Area Particle Size Distribution Files with theSource Area PSD and Peak to Average Flow Ratio File Listed Above
Cancel
Continue
This form is where the parameter files are reviewed and updated
If you are using the same parameter files for several projects, after you've updated the parameter files in this form, you can select "Replace Program Default Values with these Current File Data values". This will make the files shown in the form your default values for future model runs.
If you are starting a new model, or, you want to change the parameter files back to the default values, select "Use Default Values".
To use the default particle size distribution file, select "Replace all Particle Size Distribution Files with the Program Default file"
Select "Cancel" to leave the form without saving changes.
Select "Continue" to save changes and exit the form.


WinSLAMM - [Land Use Model]
File
Current File Data
Pollutants
Tools
Run
Utilities
Help
Access Cost Data
Pre-Development Runoff Volume
Program Options
Edit Source Area Default Variables
Create Land Uses from Data File
Image File
Land Use #
Land Use Type
Land Use Label
Land Use Area (acres)
CP #
Control Practice Type
Control Practice Name or Location
Outfall
OUT
Check Current File Status
Total Area =
Upstream Drainage Area =
Icon Number
Index Number =
Icons Left =
Start Date: 01/01/81
End Date: 12/31/81
X = 90
Y = 0
Default default Parameter files or file paths can also be changed through Program Options.
To access Program Options, select "Tools", then "Program Options"



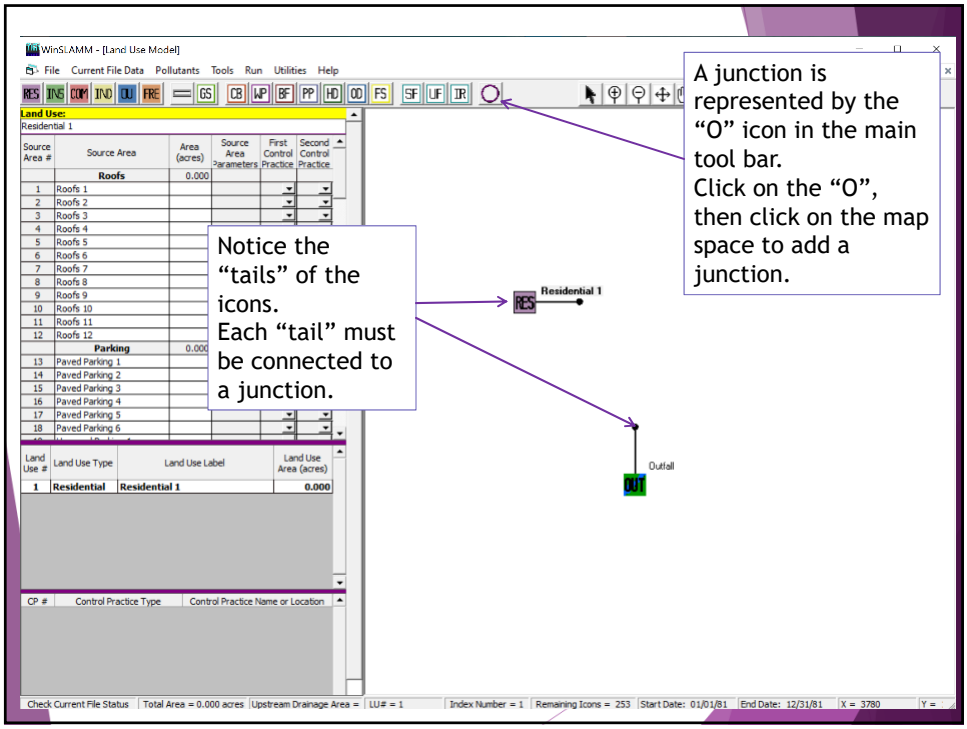

Select the "Default Current File Data" tab.
All default parameter files and file paths can be edited in the "Default Current File Data" form.
Select "Select File" next to the parameter you wish to modify, navigate to the location the new one is stored on your computer, and select "Open".
After all changes are made, select "Save .INI File" to save the changes and leave the form.
All new model files will use the default parameter files. entered here.

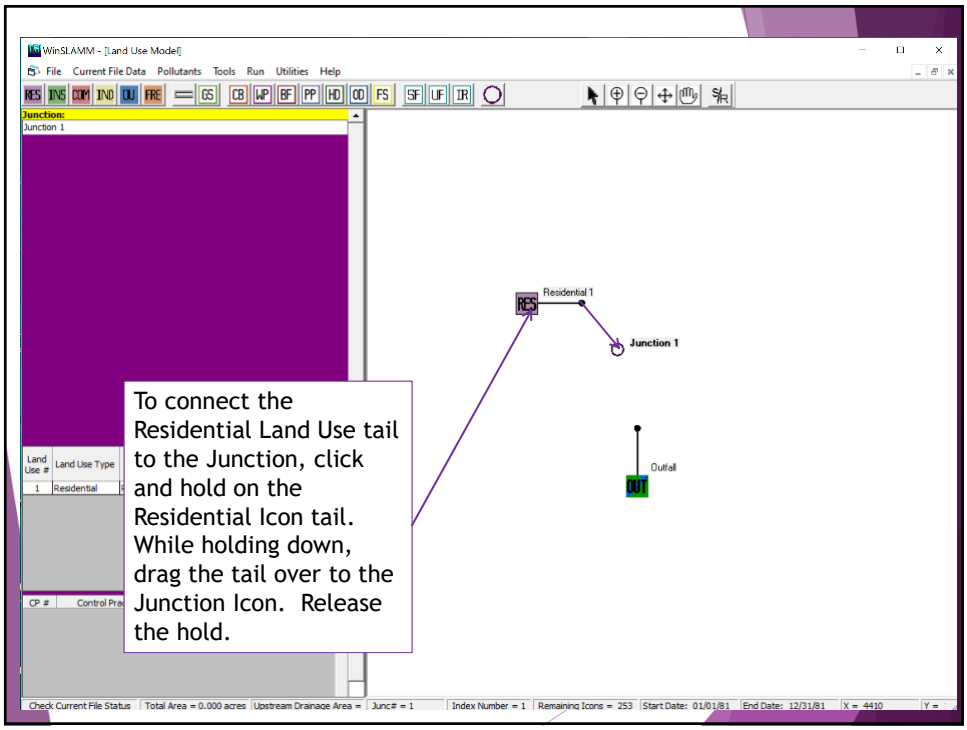


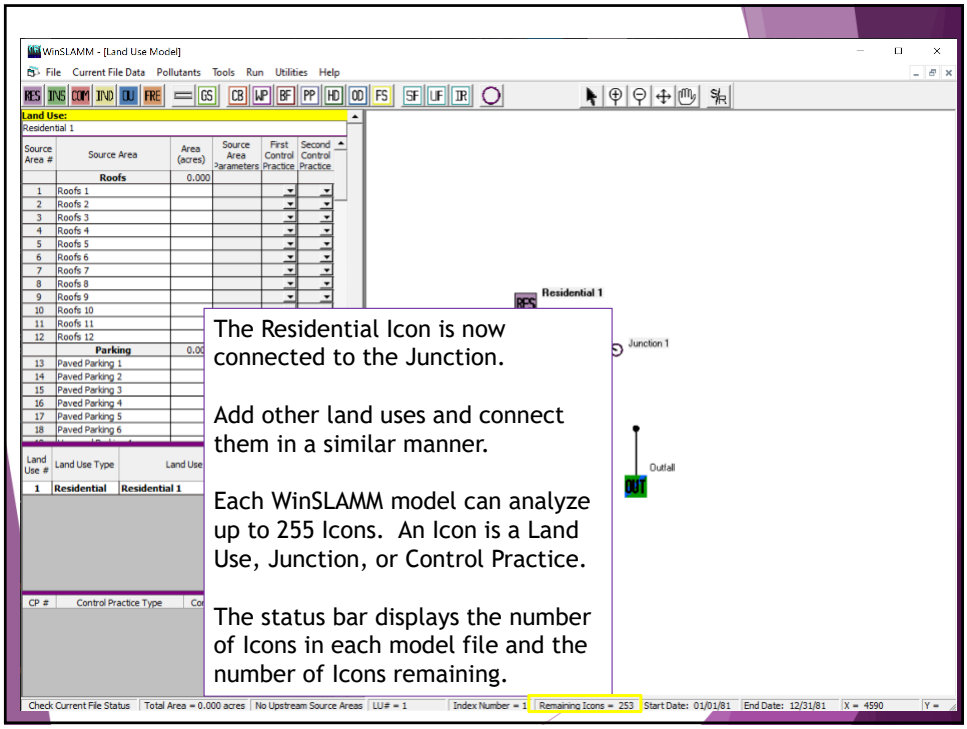

To enter model data, select the land use the modeled source area(s) are associated with.

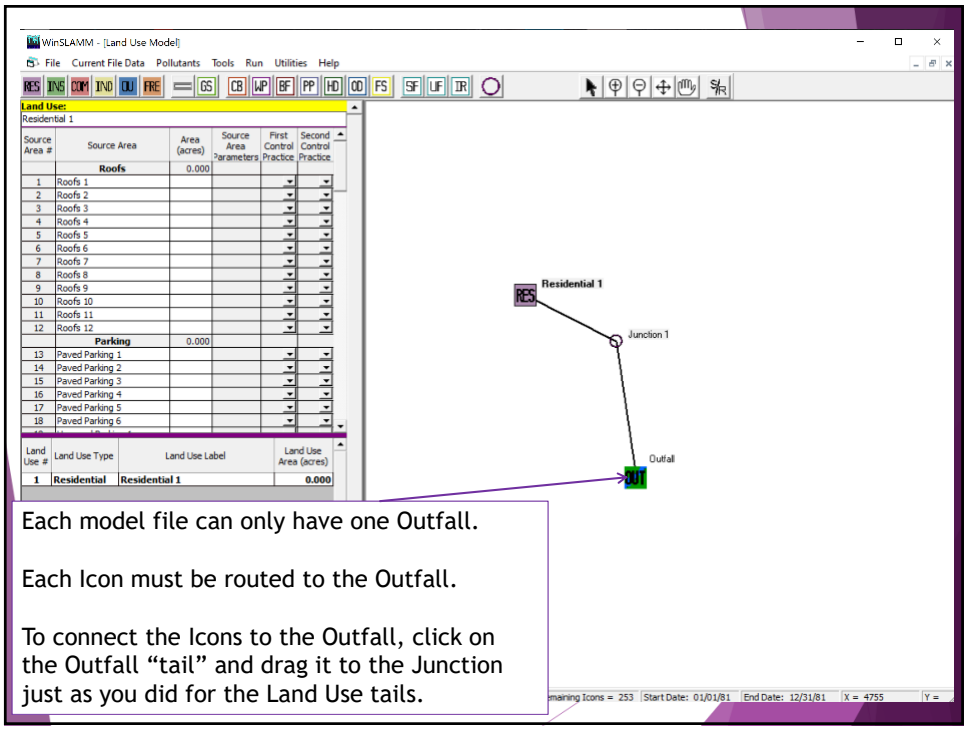
- RES = Residential
- INS = Institutional
- COM = Commercial
- IND = Industrial
- OU = Other Urban
- FRE = Freeway

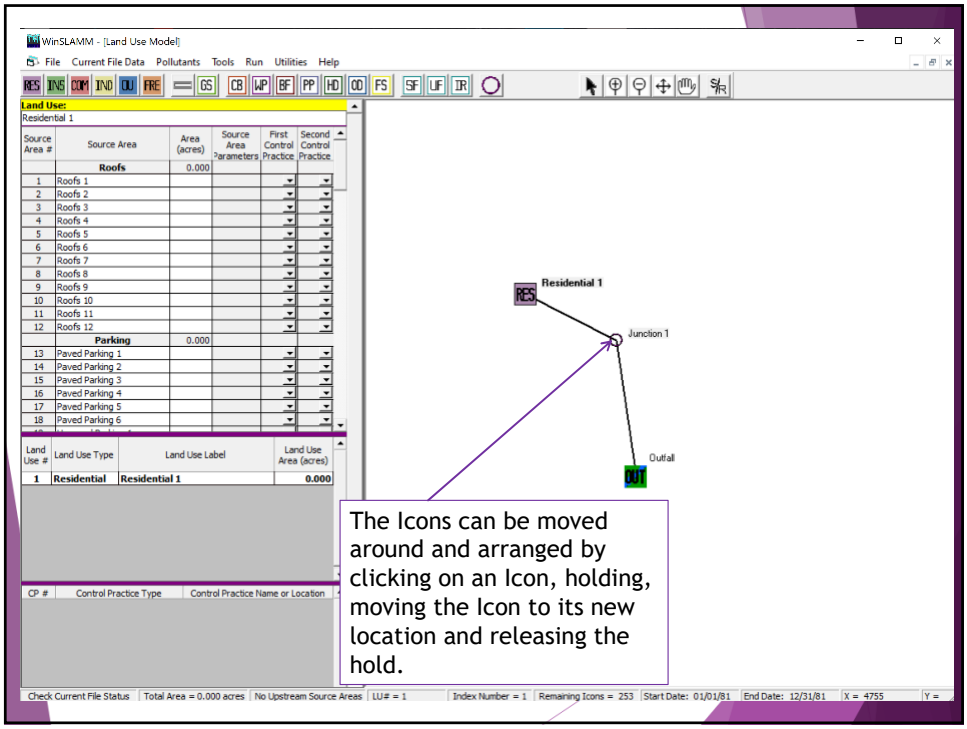
For example, if the source area is residential roof, click on the "RES" icon.
Next, click anywhere on the white map space.
The Residential Icon will appear.


WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Notice the "tails" of the icons.
Each "tail" must be connected to a junction.
A junction is represented by the "O" icon in the main tool bar.
Click on the "O", then click on the map space to add a junction.
Residential 1
Outfall
OUT

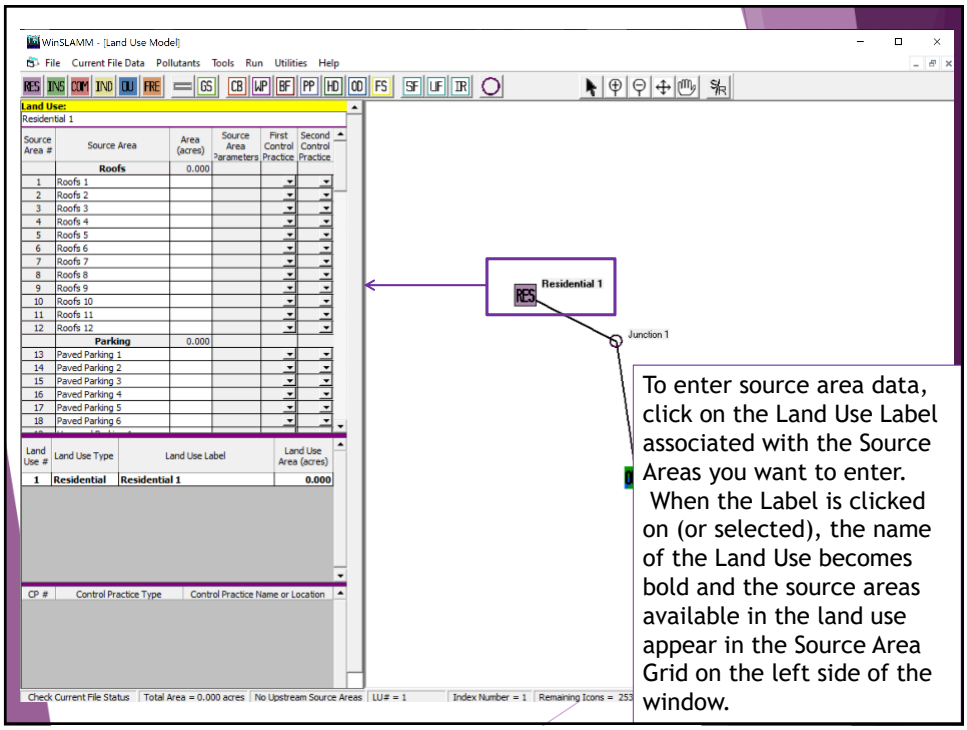

WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Junction:
Junction 1
To connect the Residential Land Use tail to the Junction, click and hold on the Residential Icon tail. While holding down, drag the tail over to the Junction Icon. Release the hold.
Residential 1
Junction 1
Outfall
OUT


WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Residential 1
Junction 1
Outfall
OUT
The Residential Icon is now connected to the Junction.
Add other land uses and connect them in a similar manner.
Each WinSLAMM model can analyze up to 255 Icons. An Icon is a Land Use, Junction, or Control Practice.
The status bar displays the number of Icons in each model file and the number of Icons remaining.
Remaining Icons = 253


WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Residential 1
Junction 1
Outfall
OUT
Each model file can only have one Outfall.
Each Icon must be routed to the Outfall.
To connect the Icons to the Outfall, click on the Outfall "tail" and drag it to the Junction just as you did for the Land Use tails.

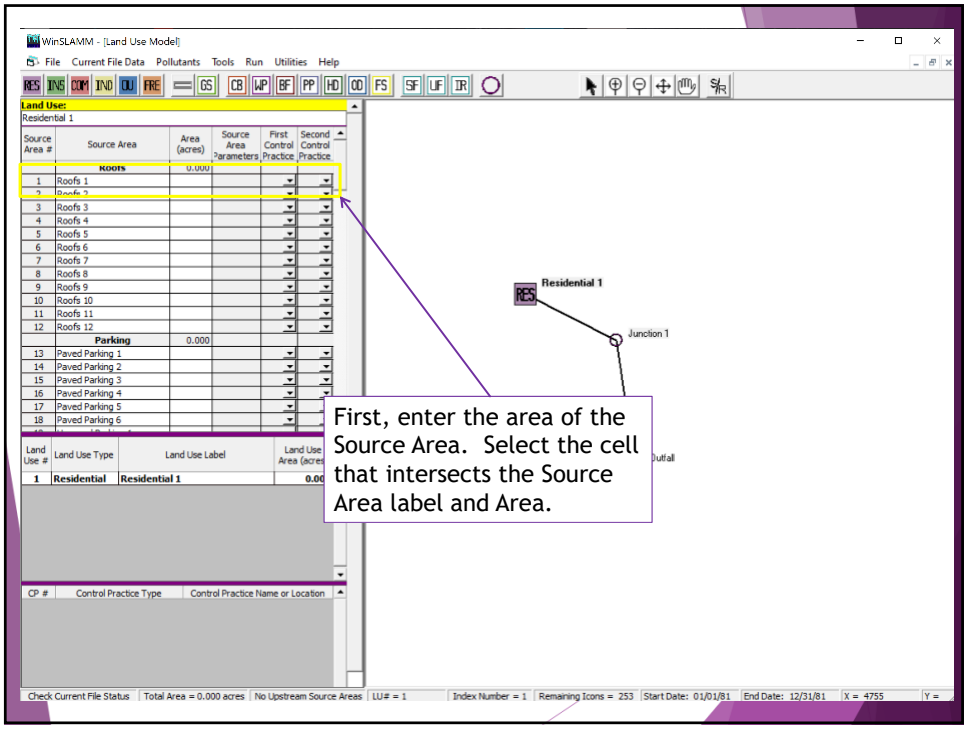


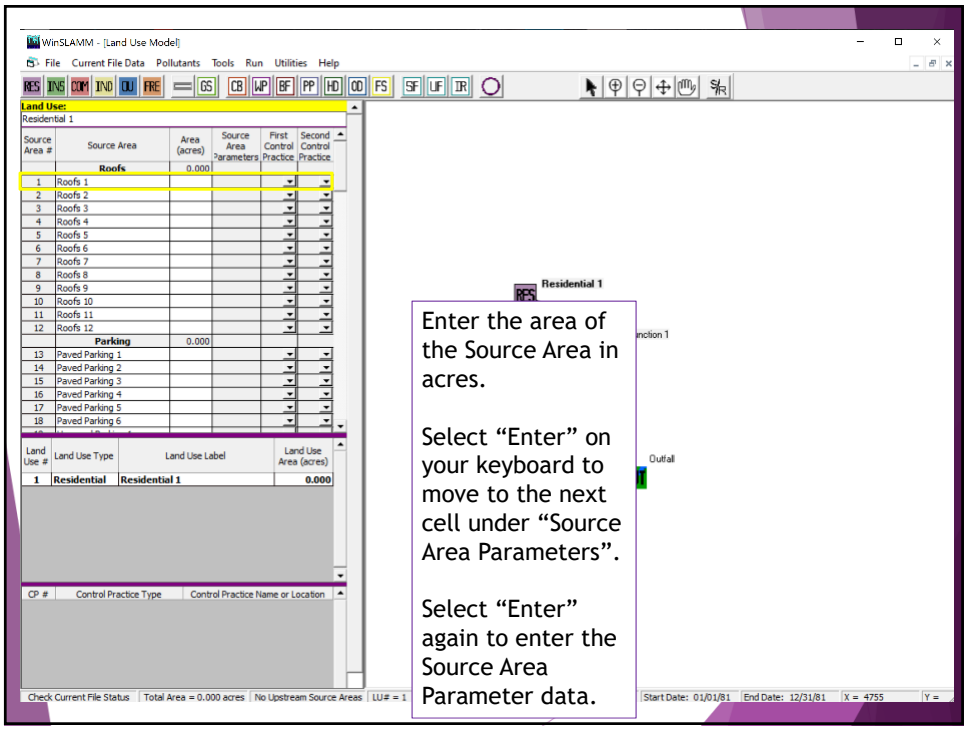

The Icons can be moved around and arranged by clicking on an Icon, holding, moving the Icon to its new location and releasing the hold.

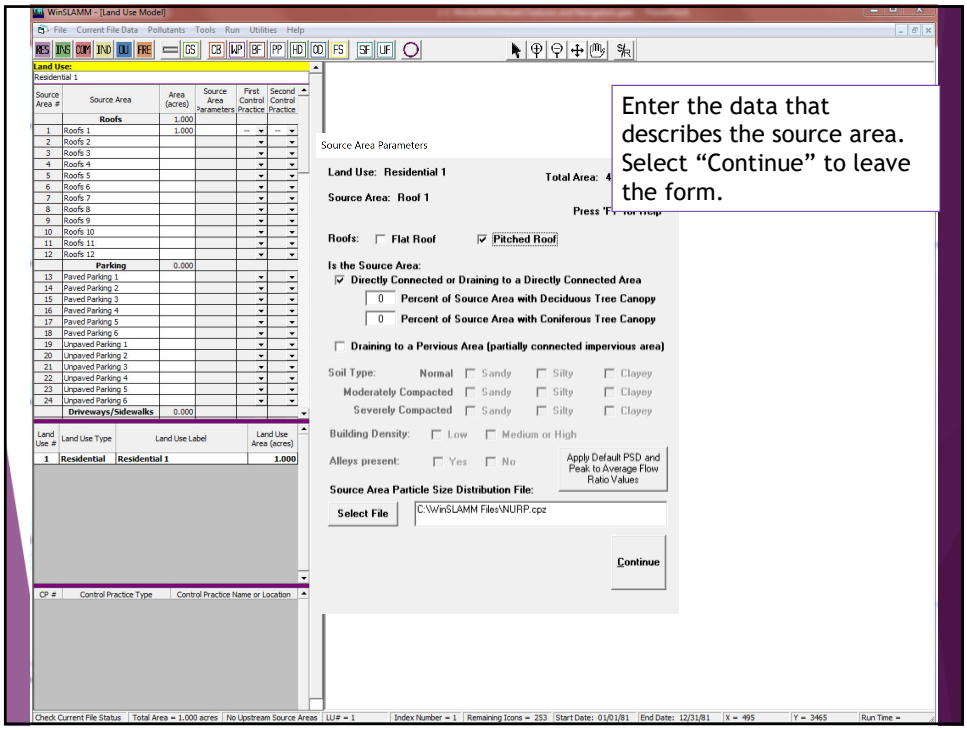



To enter source area data, click on the Land Use Label associated with the Source Areas you want to enter.

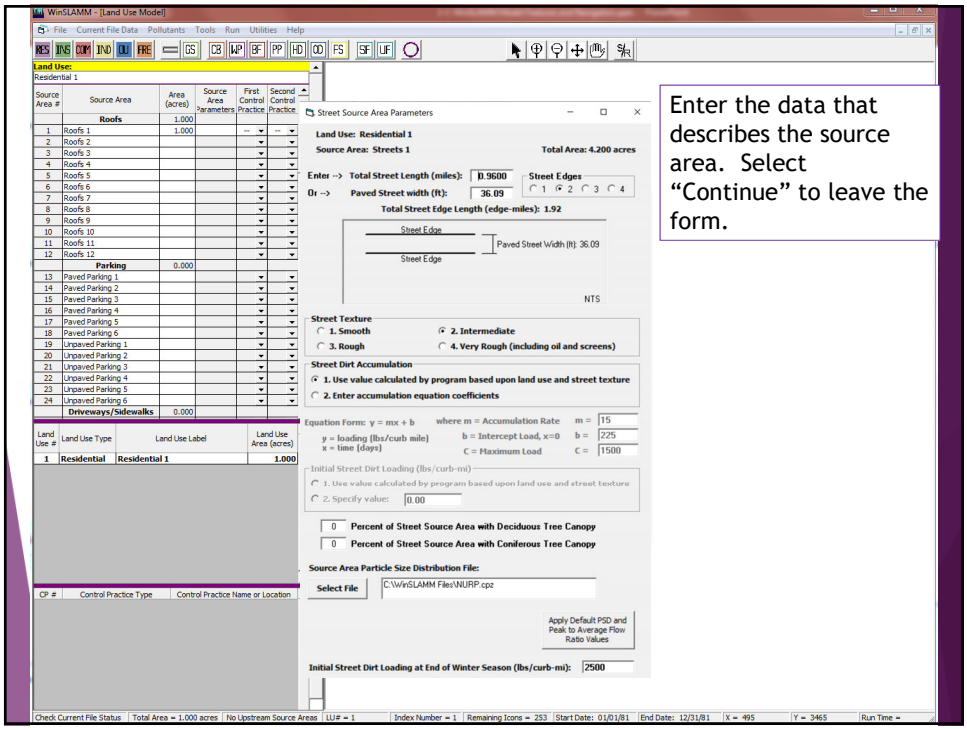
When the Label is clicked on (or selected), the name of the Land Use becomes bold and the source areas available in the land use appear in the Source Area Grid on the left side of the window.


WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Residential 1
Junction 1
Outfall
First, enter the area of the Source Area. Select the cell that intersects the Source Area label and Area.

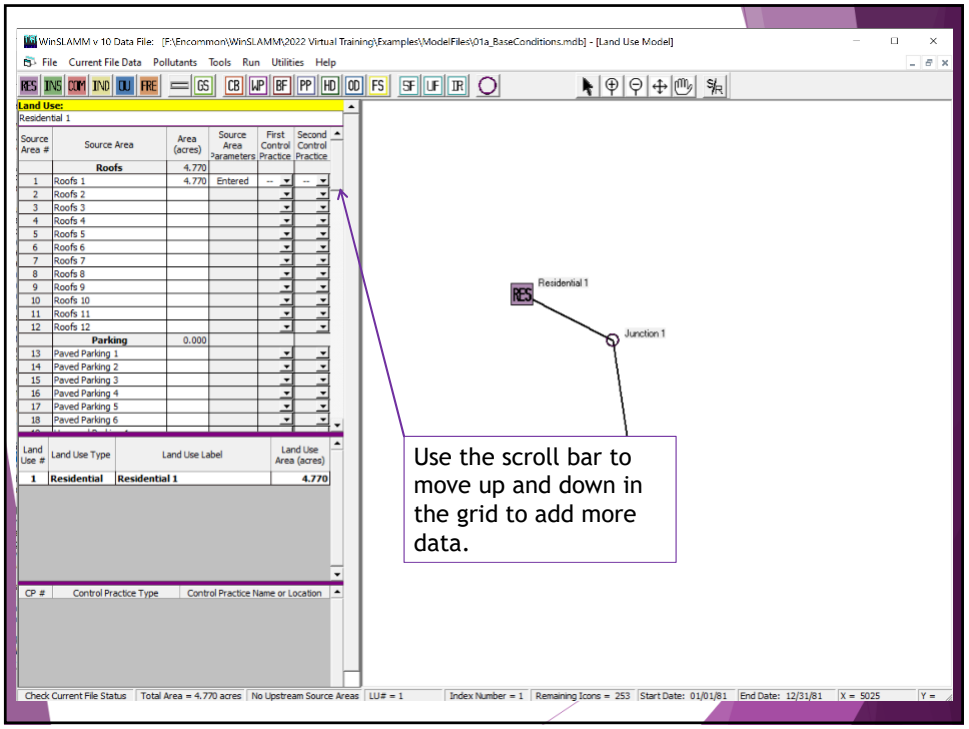

WinSLAMM - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Residential 1
Outfall
Enter the area of the Source Area in acres.
Select “Enter” on your keyboard to move to the next cell under “Source Area Parameters”.
Select “Enter” again to enter the Source Area Parameter data.

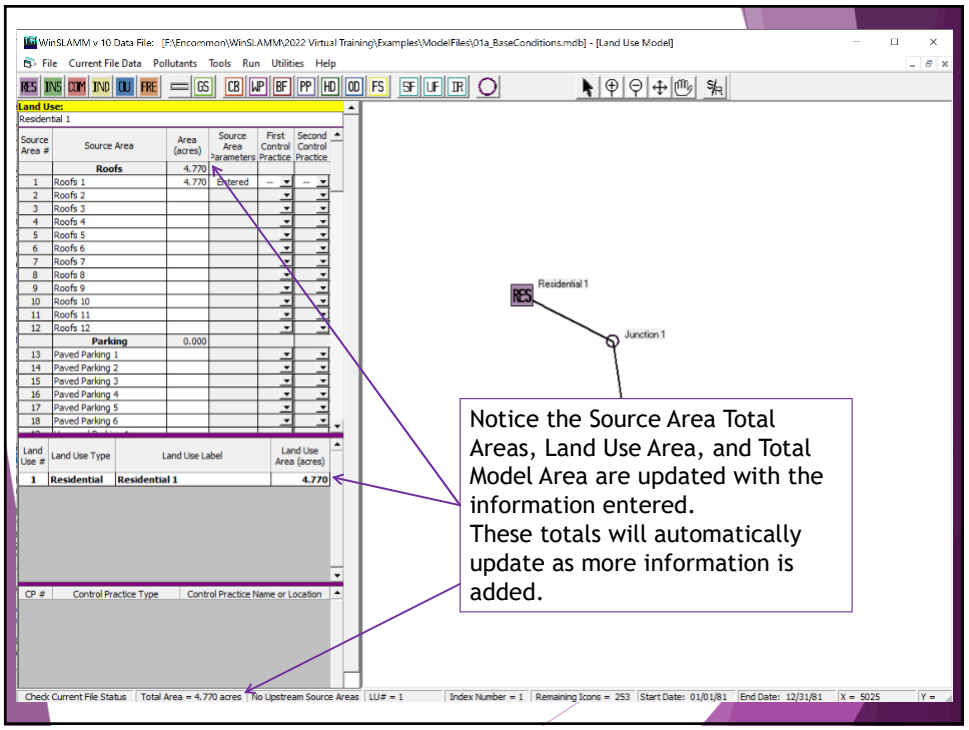


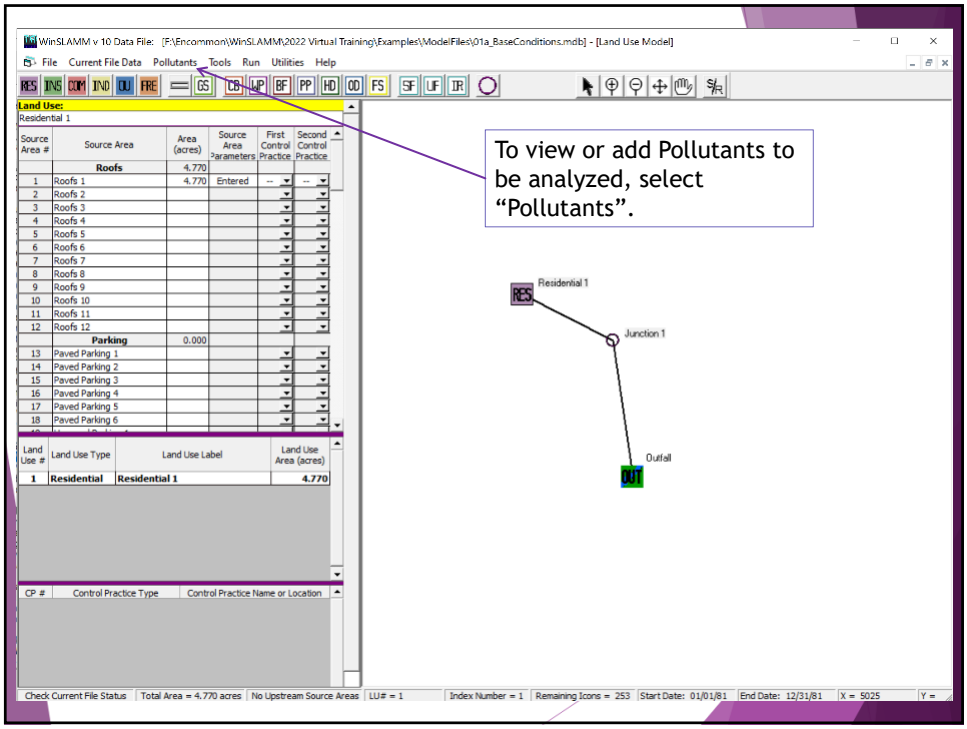

Enter the data that describes the source area. Select "Continue" to leave the form.

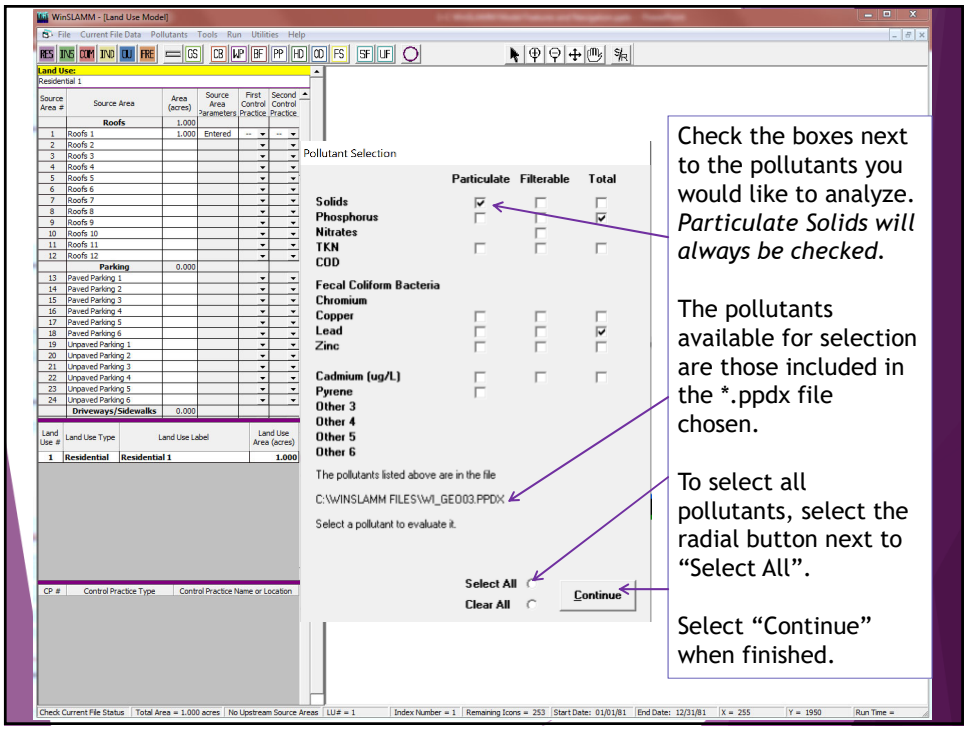


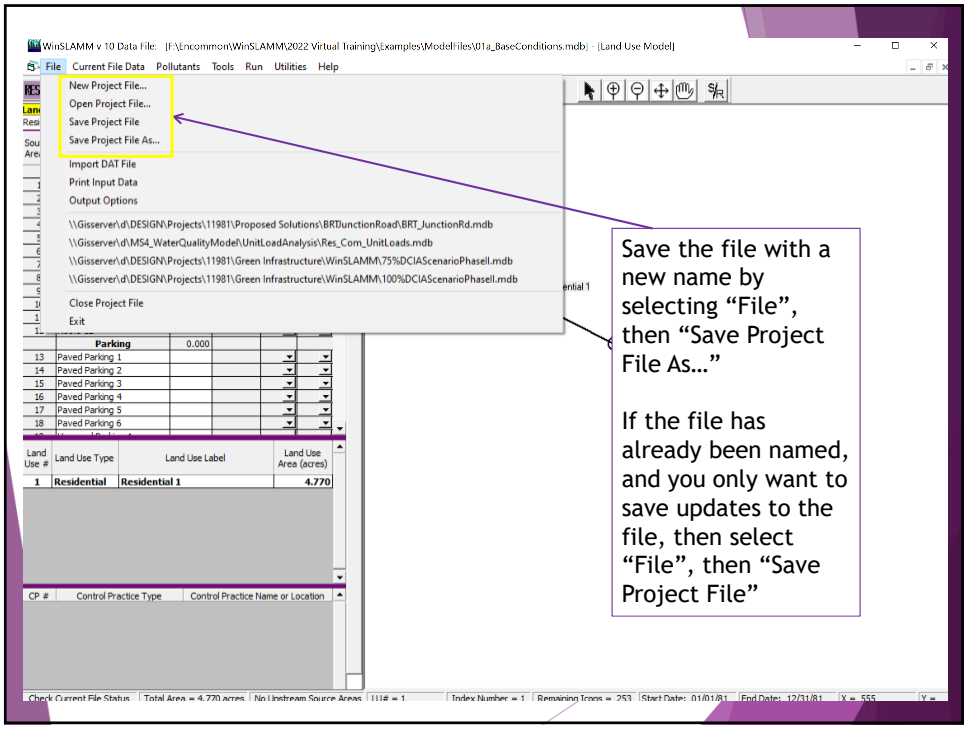

Enter the data that describes the source area. Select "Continue" to leave the form.

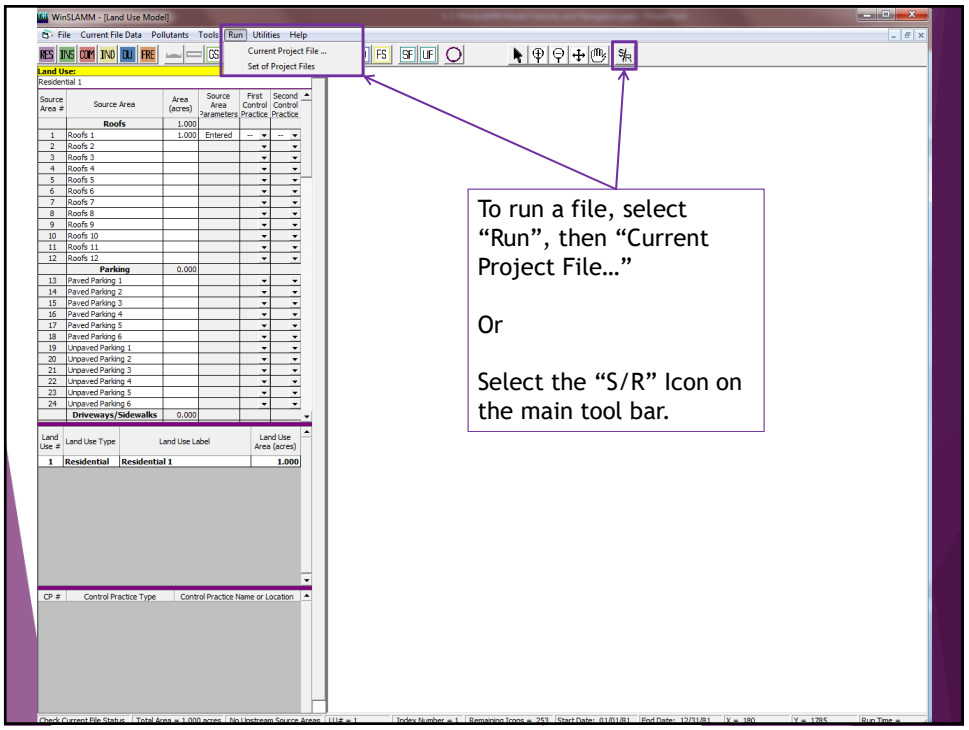

WinSLAMM v 10 Data File: [F:\Encommon\WinSLAMM\2022 Virtual Training\Examples\ModelFiles\01a_BaseConditions.mdb] - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Source Area #
Source Area
Area (acres)
Source Area Parameters
First Control Practice
Second Control Practice
Roofs
4.770
Roofs 1
4.770
Entered
Roofs 2
Roofs 3
Roofs 4
Roofs 5
Roofs 6
Roofs 7
Roofs 8
Roofs 9
Roofs 10
Roofs 11
Roofs 12
Parking
0.000
Paved Parking 1
Paved Parking 2
Paved Parking 3
Paved Parking 4
Paved Parking 5
Paved Parking 6
Land Use #
Land Use Type
Land Use Label
Land Use Area (acres)
1
Residential
Residential 1
4.770
CP #
Control Practice Type
Control Practice Name or Location
Residential 1
Junction 1
Use the scroll bar to move up and down in the grid to add more data.
Check Current File Status
Total Area = 4.770 acres
No Upstream Source Areas
LU# = 1
Index Number = 1
Remaining Icons = 253
Start Date: 01/01/81
End Date: 12/31/81
X = 5025
Y =

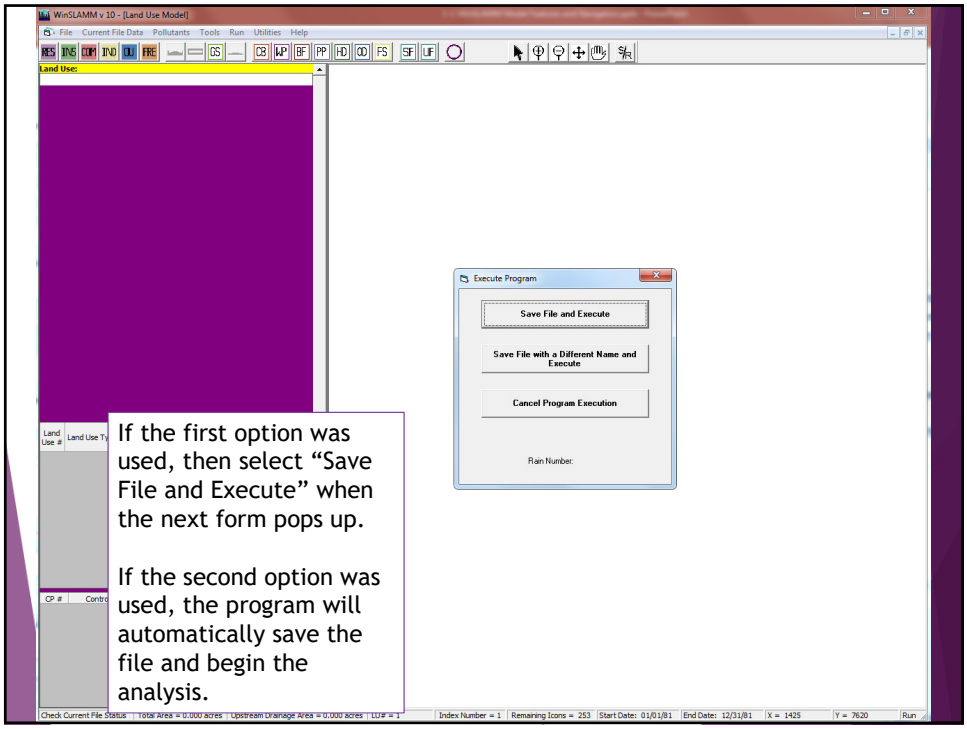

WinSLAMM v 10 Data File: [F:\Encommon\WinSLAMM\2022 Virtual Training\Examples\ModelFiles\01a_BaseConditions.mdb] - [Land Use Model]
File Current File Data Pollutants Tools Run Utilities Help
Land Use:
Residential 1
Source Area #
Source Area
Area (acres)
Source Area Parameters
First Control Practice
Second Control Practice
Roofs
4.770
Roofs 1
4.770
Entered
Parking
0.000
Land Use #
Land Use Type
Land Use Label
Land Use Area (acres)
1
Residential
Residential 1
4.770
CP #
Control Practice Type
Control Practice Name or Location
Residential 1
Junction 1
Notice the Source Area Total Areas, Land Use Area, and Total Model Area are updated with the information entered.
These totals will automatically update as more information is added.
Check Current File Status
Total Area = 4.770 acres
No Upstream Source Areas
LU# = 1
Index Number = 1
Remaining Icons = 253
Start Date: 01/01/81
End Date: 12/31/81
X = 5025
Y =

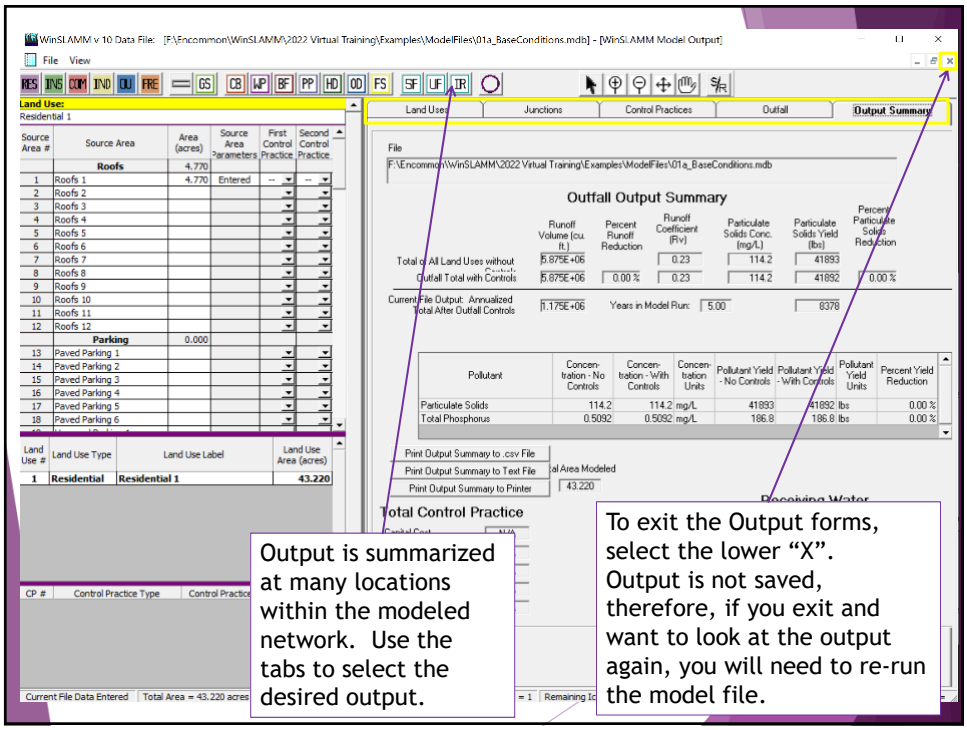

To view or add Pollutants to be analyzed, select "Pollutants".
Residential 1
Junction 1
Outfall
RES
OUT

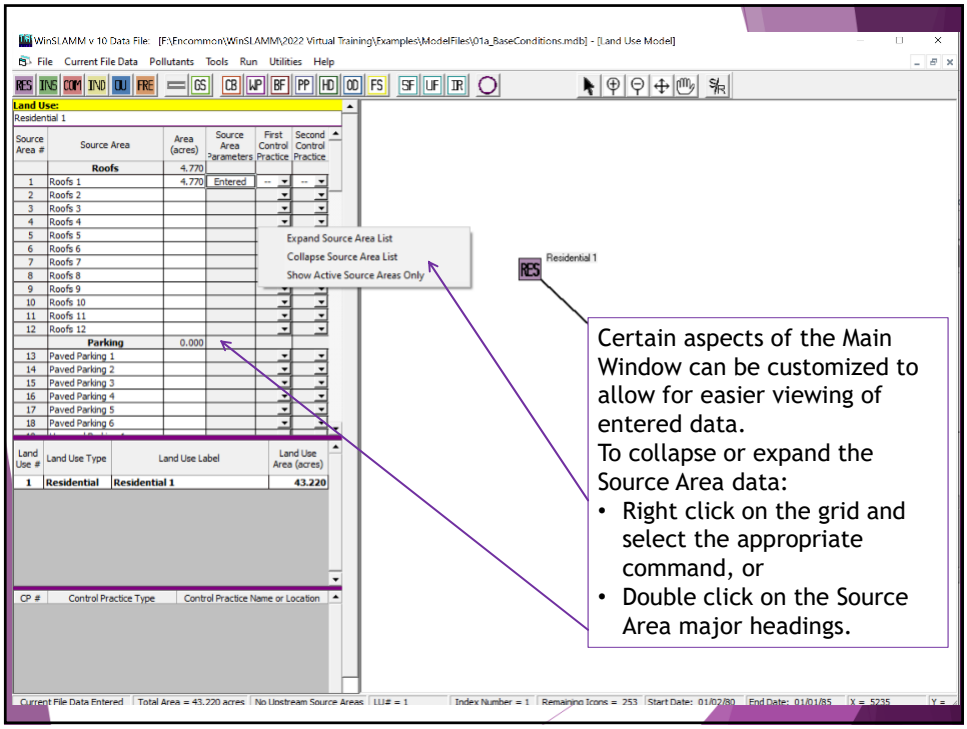

Pollutant Selection
Particulate
Filterable
Total
Solids
Phosphorus
Nitrates
TKN
COD
Fecal Coliform Bacteria
Chromium
Copper
Lead
Zinc
Cadmium (ug/L)
Pyrene
Other 3
Other 4
Other 5
Other 6
The pollutants listed above are in the file
C:\WINSLAMM FILES\WI_GE003.PPDX
Select a pollutant to evaluate it.
Select All
Clear All
Continue
Check the boxes next to the pollutants you would like to analyze. Particulate Solids will always be checked.
The pollutants available for selection are those included in the *.ppdx file chosen.
To select all pollutants, select the radial button next to "Select All".
Select "Continue" when finished.

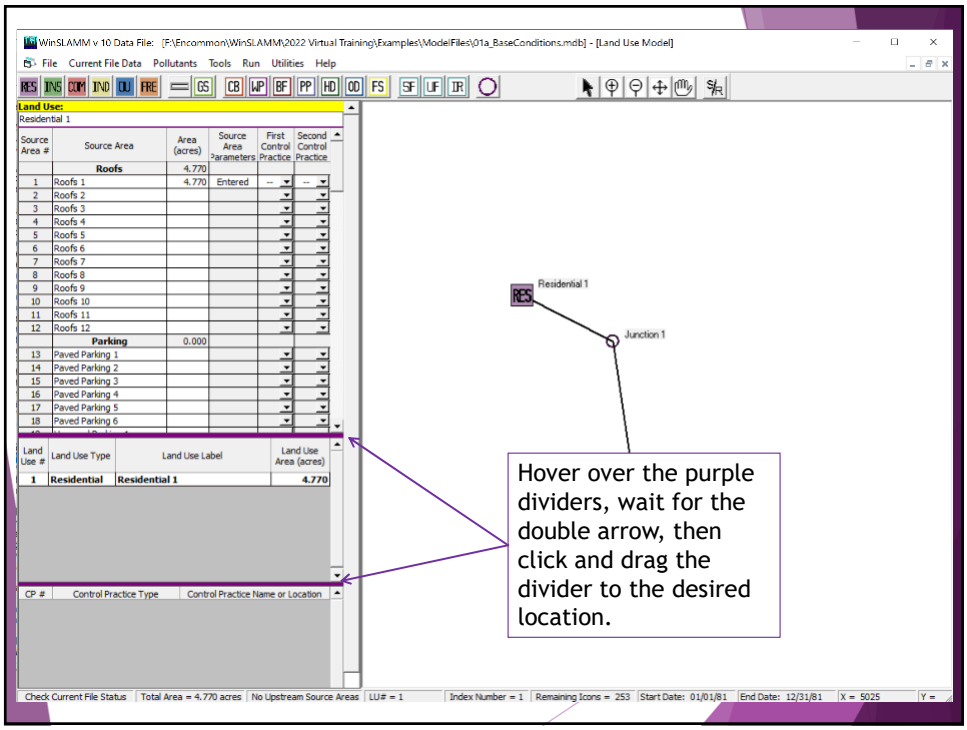

File
Current File Data
Pollutants
Tools
Run
Utilities
Help
New Project File...
Open Project File...
Save Project File
Save Project File As...
Import DAT File
Print Input Data
Output Options
Close Project File
Exit
Save the file with a new name by selecting “File”, then “Save Project File As…”
If the file has already been named, and you only want to save updates to the file, then select “File”, then “Save Project File”

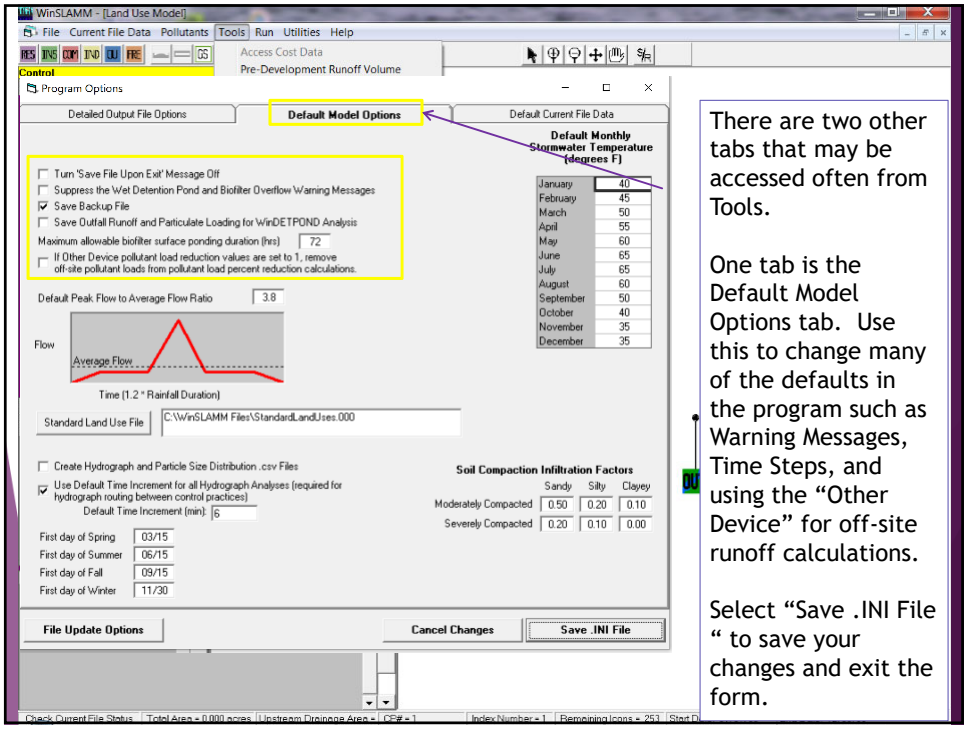

Current Project File ...
Set of Project Files
To run a file, select “Run”, then “Current Project File…”
Or
Select the “S/R” Icon on the main tool bar.


Execute Program
Save File and Execute
Save File with a Different Name and Execute
Cancel Program Execution
Rain Number:
If the first option was used, then select “Save File and Execute” when the next form pops up.
If the second option was used, the program will automatically save the file and begin the analysis.


Outfall Output Summary
Output is summarized at many locations within the modeled network. Use the tabs to select the desired output.
To exit the Output forms, select the lower “X”. Output is not saved, therefore, if you exit and want to look at the output again, you will need to re-run the model file.


Expand Source Area List
Collapse Source Area List
Show Active Source Areas Only
Residential 1
Certain aspects of the Main Window can be customized to allow for easier viewing of entered data.
To collapse or expand the Source Area data:
• Right click on the grid and select the appropriate command, or
• Double click on the Source Area major headings.

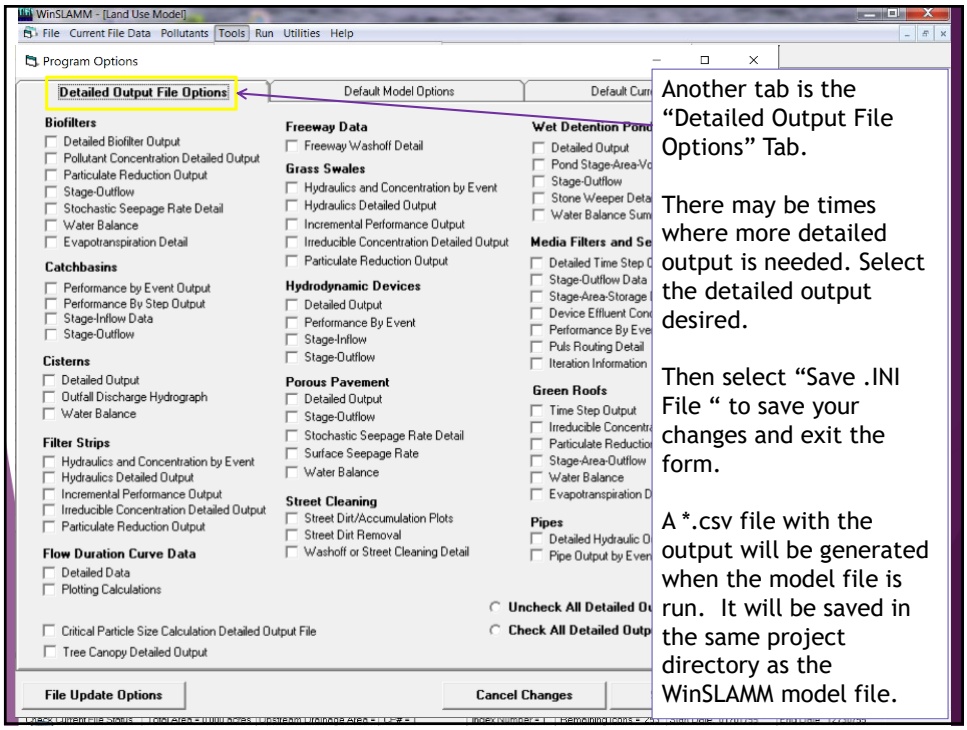

Residential 1
Junction 1
Hover over the purple dividers, wait for the double arrow, then click and drag the divider to the desired location.




There are two other tabs that may be accessed often from Tools.

One tab is the Default Model Options tab. Use this to change many of the defaults in the program such as Warning Messages, Time Steps, and using the "Other Device" for off-site runoff calculations.

Select "Save .INI File " to save your changes and exit the form.



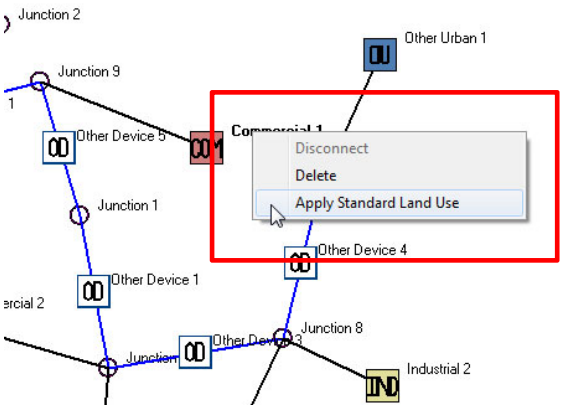

Another tab is the "Detailed Output File Options" Tab.

There may be times where more detailed output is needed. Select the detailed output desired.

Then select "Save .INI File " to save your changes and exit the form.

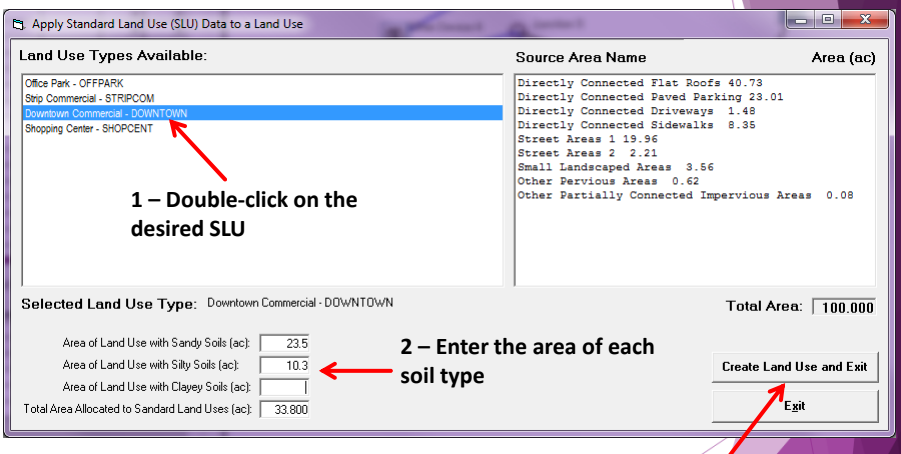
A *.csv file with the output will be generated when the model file is run. It will be saved in the same project directory as the WinSLAMM model file.

# Standard Land Uses




**To Access a Standard Land Use, select an Icons' Land Use Label, right-mouse click to get the pop-up menu, and then select the 'Apply Standard Land Use' option**

## Applying Standard Land Use data to a Land Use

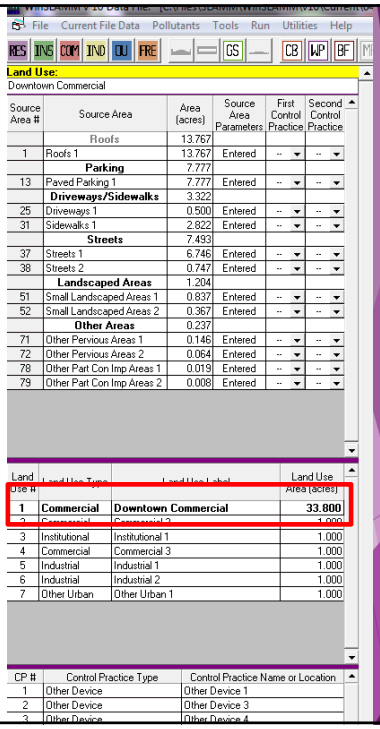



**1 – Double-click on the desired SLU**

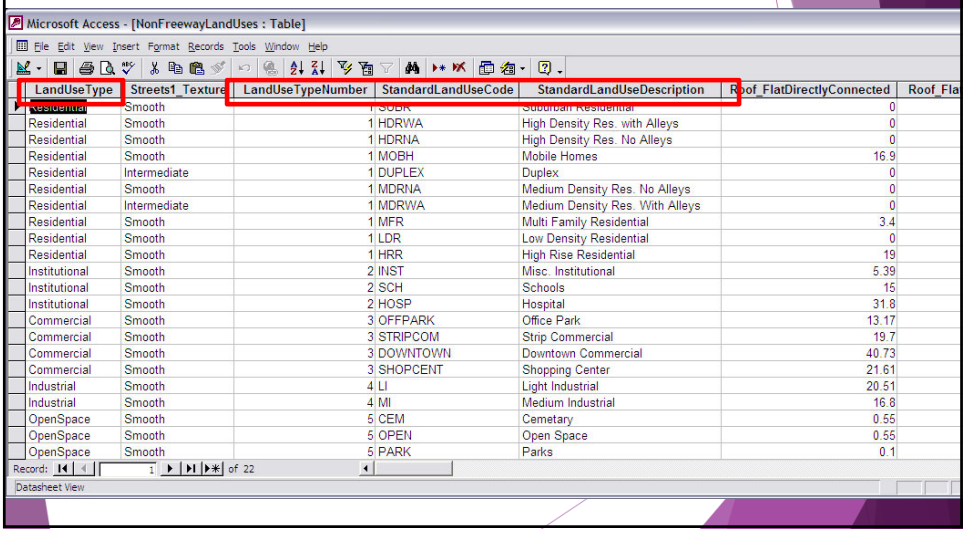
**2 – Enter the area of each soil type**

**3 – Press the 'Create Land Use and Exit' button**

## Standard Land Use Source Areas applied to the Downtown Commercial Land Use




## All Standard Land Uses are stored in an Access Database



For additional model information, go to www.winslamm.com

*Remember to Press the "F1" to access the Help File*

41