WIN-PST 3.1

User Help

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Windows Pesticide Screening Tool Version 3.1

Introduction

Getting Started

The Windows Pesticide Screening Tool (WIN-PST) User Guide describes how to use the WIN-PST application. For information about installing WIN-PST, see the Installation section in this user guide.

To learn more about using WIN-PST 3.1, see Starting WIN-PST.

If you have questions that are not answered in this user help, please Contact us!



United States Department of Agriculture Natural Resources Conservation Service

About the Windows Pesticide Screening Tool (WIN-PST)

The USDA NRCS West National Technology Support Center, Water Quality and Quantity National Technology Development Team, developed and supports the Windows Pesticide Screening Tool (WIN-PST). NRCS Pest Management Policy (November 2001) requires the use of WIN-PST or other NRCS-approved environmental risk analysis tools in supporting the development of the pest management component of a conservation plan.

WIN-PST is an environmental risk screening tool for pesticides. NRCS field office conservationists, extension agents, crop consultants, pesticide dealers and producers can use it to evaluate the potential of pesticides to move with water and eroded soil/organic matter and affect non-targeted organisms.

NRCS partners (such as private pest control advisors) now have access to this easyto-use science-based tool for considering environmental risk and making recommendations. WIN-PST goes beyond previous NRCS screening tools in considering the impact of water table depth, rainfall probability, pesticide application area, application method and rate class (Standard, Low, Ultralow).

WIN-PST users can specify pesticides by product name or active ingredient. Longterm human and fish toxicity data and ratings are also included in WIN-PST. These toxicity ratings can be combined with the off-site movement potential ratings to provide an overall rating of the potential risks from pesticide movement below the root zone and past the edge of the field.

WIN-PST is based on algorithms contained in:

Goss, D., and R. D. Wauchope (1990). The SCS/ARS/CES Pesticide Properties Database II: Using it with soils data in a screening procedure. In: Proceedings of the Third National Research Conference on Pesticides. Nov. 8-9, 1990 Richmond Virginia. Weigmann D. L. editor.

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Contact Us

For WIN-PST technical support issues contact:

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451 West Street

Amherst, MA 01002

Other Resources

Welcome to the Windows Pesticide Screening Tool (WIN-PST).

The following section provides links and references to additional resources.

Current WIN-PST Page:

http://www.wsi.nrcs.usda.gov/products/W2Q/pest/winpst.html

NRCS

http://www.nrcs.usda.gov/

National Technology Support Centers

East

http://www.nrcs.usda.gov/about/ntsc/east/index.html

Central

http://www.nrcs.usda.gov/about/ntsc/central/index.html

West

http://www.nrcs.usda.gov/about/ntsc/west/index.html

NRCS Pest Management

http://www.wsi.nrcs.usda.gov/products/W2Q/pest/pest_mgt.html

http://www.nrcs.usda.gov/technical/nutrient.html

Integrated Pest Management (IPM)

http://www.ipmcenters.org/index.cfm

http://www.ipminstitute.org/

http://northeastipm.org/nrcs.cfm

http://www.ipm.msu.edu/work-group/how-to.htm

http://www.ipm.msu.edu/work-group/aboutUs.htm

http://www.ipm.ucdavis.edu/

Labels and MSDS

http://www.cdms.net/LabelsMsds/LMDefault.aspx

http://greenbook.net/

Disclaimer

In accordance with USDA Natural Resources Conservation Service (NRCS) Pest Management Policy (<u>http://policy.nrcs.usda.gov/viewerFS.aspx?id=213</u>), the Windows Pesticide Screening Tool (WIN-PST 3.1) is designed to provide information that is needed to develop the Pest Management Component of an NRCS Conservation Plan.

Other use of WIN-PST 3.1 information may be out of context and inappropriate.

Please contact a member of the USDA-NRCS West National Technology Support Center, Water Quality and Quantity Team: <u>Contact us!</u> or your local NRCS representative (<u>http://www.nrcs.usda.gov</u>) for more information.

Uninstall WIN-PST

When you uninstall WIN-PST 3.1, the software application and installed data and Help files are deleted. After the uninstall, be sure to remove any unwanted files and folders that were created during the use of WIN-PST 3.1.

To remove WIN-PST 3.1 from your system, select Start>Control Panel>Add or Remove Programs:



Locate **Windows Pesticide Screening Tool 3.1** on the Add or Remove Programs screen. Click the **Remove** button to remove this program from your computer.



The Desktop

Starting WIN-PST 3.1

The Desktop is the first screen you see when you run WIN-PST. All functions and features are available from the WIN-PST Desktop.

Note: The first time you start WIN-PST 3.1 you will be asked to identify a <u>SSURGO Database</u> to use. A Sample SSURGO database is provided with the installation. The following example screen will display:

WIN-PST 3.1 Message
Start with the Sample SSURGO Database
First use SSURGO database selection.
Click Yes to use the Sample SSURGO database.
Click No to use another SSURGO database.
<u>H</u> elp <u>Yes No</u>

Click **Yes** to start with the Sample SSURGO database. Click **No** to proceed to Data Management and locate another SSURGO database.

To start WIN-PST, select Start>All Programs>Engineering Applications>WIN-PST 3.1>Start WIN-PST 3.1:

All Programs 👂	💼 Engineering Applications	🔸 💼 WIN-PST 3.1 🔸	📄 Start WIN-PST 3.1
🎒 start			

The WIN-PST 3.1 Desktop will display:

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			3058	1	BRIMFIELD		D	(null)	(null)	(nul)	F 3
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		Soils MUSI	Exclude PCT_CO in Queue rM Pe	NP <=		IP_NAME	edure Us	ins (* Begin	s With	iyaho SLP	5
		Soils MUSI Pesti PEST	Exclude PCT_CO in Queue rM Pe icides in Queue	MP <=	PC Code	Reg No	edure Us	ins (* Begin ier OM Usin	x With A	lydio SUP	Nethod
		Soils MUST Pesti PEST	Exclude PCT_CO in Queue (M Pe icides in Queue ICIDE	MP (#	PC Code	Reg No	edure Us	ins (* Begin ier OM Usin PSRP [a With Pepth H	iydeo SLP Avea	S Method
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		Boils MUST Pesti PEST	Exclude PCT_CO in Queue (M Pe Codes in Queue Icides in Queue	MP <=	PC Code	Reg No	edure U	ins (* Begi ier OM Use PSRP [e With Paper H	Area	S Method
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Since you can customize your Desktop, your screen may not appear exactly like the one above.

The Menus

A variety of pull-down menus are listed along the top of the Desktop. The menus list the WIN-PST commands. The menus and commands are discussed in this manual when needed for a particular procedure.

The Buttons

In the Desktop screen shown above, several buttons are displayed for your view. If any of these buttons are grayed instead of bold, those buttons are not available for use at the current time.

The Databases

WIN-PST 3.1 requires two Access database files. The installation of WIN-PST 3.1 installs a default Main database and a sample SSURGO database. Using WIN-PST, you can create additional Main database files and also attach to other SSURGO database files.

- 1. The Main database contains all of the Pesticides, Active Ingredients and Products data, and additional WIN-PST related information. The default Main database name is 'winpst31.mdb'. For more information, see <u>Main Database</u>.
- The sample SSURGO database contains Soils data. The default SSURGO database name is 'SSURGO.mdb'. For more information, see <u>SSURGO</u> <u>Database</u>.

For more information about the WIN-PST databases you are using, see <u>Database</u> <u>Information</u>.

Customizing Your Desktop

Certain features on the WIN-PST Desktop are customizable. For more information, see <u>User Options</u> in the Tools chapter.

Soils Tab

On the Select Soils and Pesticides screen, choose the **Soils** tab to see the **Soils grid** on the WIN-PST Desktop. The following example screen will display:

So	oils	Als F	Products Scenari	s Interaction	s					
	Surve	ey Area:	Hampshire Countie	s, Massachuse	atts, Eastern P	art: MA610 💌	R R	atings 🗵 Pro	perties 🔽	Managemeni
Г		MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPEG
	•	100C	25	Brimfield	FSL	D	3.5	2	0.17	
11		100C	25	Brimfield	FSL	C	3.5	2	0.17	
		100E	25	Brimfield	FSL	D	3.5	2	0.17	
		100E	25	Brimfield	FSL	C	3.5	2	0.17	V
		103C	10	BRIMFIELD		С	(null)	(null)	(null)	Г
		103C	10	BRIMFIELD		D	(null)	(null)	(null)	
		103E	10	BRIMFIELD		D	(null)	(null)	(null)	
		103E	10	BRIMFIELD		C	(null)	(null)	(null)	V
		305B	1	BRIMFIELD		D	(null)	(null)	(null)	
Se	ioils i	Exclude PCT_C in Queue	OMP <=		Ite Records W	Vhere:	ins (€ Begin serOM Use	s With	lydro SLF	
S	ioils i MUSYI	Exclude PCT_C in Queue M F	OMP <=		IP_NAME	Vhere: C Conta exture U	ins 🕫 Begin ser OM Use	is With Repth H	lydro SLF	
Si M	ioils i MUSYN	Exclude PCT_C in Queue M F	OMP <=		Ite Records W	/here: C Conta exture U	ins (° Begin serOM [Use	is With	lydro SLF	> [s
	ioils i MUSY/	Exclude PCT_C in Queue M F	OMP <= Percent SDIL		Ite Records V IP_NAME	/here: Conta exture U	ins Pegin	IN With T	ydro SLF	> [s:
S M	ioils i MUSYN	Exclude PCT_C in Queue M F Cides in Q CIDE	OMP <= 'ercent SOIL	PC Code	Reg No	Vhere: C Conta exture U PLP	er OM Use	IS With F	lydro SLF Area (> S:

See Data Grid Columns for additional information about the Soils grid.

See <u>Queue Introduction</u> for additional information about adding **Soils** to the Queue.

User Input Columns

The following columns allow user input in the Soils grid:

USER_OM - Percent organic matter in the first soil horizon.

USER_DEPTH - The Depth (inches) of the soil surface horizon.

SLOPEGR15 - Check if field slope greater than 15%.

CRACKSGR24 - Check if there are surface connected macropores (cracks) that go at least 24 inches deep.

 $\ensuremath{\textbf{HWT_LT_24}}$ - Check if High Water Table less than 24" under the surface.

Soils Tab Controls

The **Survey Area:** selection allows you to pick from a list of Soil Survey Areas associated with a SSURGO database. When you connect to a SURRGO database, you can select some or all of the Soil Survey Areas. For more information, see <u>Data Management</u>. The Soils data grid, as shown in the example above, contains Soils information for Hampshire Counties, Massachusetts, Eastern Part: MA610.

The Soils data grid can show or hide additional information based on the checkbox settings for:

Ratings checkbox - when checked, will show columns for:

SLP SSRP SARP

Properties checkbox - when checked, will show columns for:

HYDRO KFACT USER_OM USER_DEPTH

Management checkbox - when checked, will show columns for:

CRACKSGR24 SLOPEGR15 HWT_LT_24

Exclude allows you to enter a **PCT_COMP** numeric percentage value to filter the rows of information shown in the Soils grid. As an example, enter 10 to hide all rows that have a PCT_COMP value of 10 or less.

Locate Records Where will search for Soils Grid rows.

- 1. Pick a column name from the list to be used for the searched column values.
- 2. Select the **Contains** radio button to find all rows containing the value you are looking for, or select the **Begins With** radio button to find all rows that start with the value you are looking for.
- 3. In the right-side text box, enter the value you are looking for.

Note: Using the Locate Records selection process will immediately adjust the number of Soils grid rows displayed.

AIs (Active Ingredients) Tab

On the Select Soils and Pesticides screen, choose the **AIs** tab to see the **Active Ingredients grid** on the WIN-PST Desktop. The following example screen will display:

Ope	in New	Tools Window Help	1					
	Soils	Als Products Scenarios Interact	ions					
	Activ	ve Ingredients found: 647			V 1	Ratings 🔽 F	Properties	Management
		Name	PCCode	PH	HL	KOC	SOL	APP_ARE/
	•	1,2-Dichloropropane	029002	(null)	700	50	2700	Broadcast
		1,3-Dichloropropene	029001	(null)	10	32	2250	Broadcast
		2-(m-Chlorophenoxy)propion amide	021203	(null)	10	20	200000	Broadcast
		2,3,6-Trichlorophenylacetic acid, dimet	082605	7	180	20	500000	Broadcast
		2,3,6-Trichlorophenylacetic acid, sodiu	062602	7	180	20	500000	Broadcast
	Soils	List Products						Names
-	Soils MUS1	List Products in Queue (M Percent SDIL		Texture	User OM	User Depth	Hydro [§	SLP S
	Soils MUS1	List Products		Texture	User OM [User Depth	Hydro [§	SLP S
	Soils MUS1	List Products		Texture	User OM [User Depth	Hydro [§	SLP S
	Soils MUST	List Products in Queue Cides in Queue ICIDE PC Code	Reg No	Texture PLP	User OM	User Depth	Hydro S	SLP S:
	Soils MUST Pesti PEST	List Products in Queue M Percent SOIL cides in Queue ICIDE PC Code Save Scenario	Reg No	Texture PLP	User OM [User Depth	Hydro S Area Reports	Names

See <u>Data Grid Columns</u> for additional information about the **Active Ingredients** grid.

See <u>Queue Introduction</u> for additional information about adding **Active Ingredients** to the Queue.

User Input Columns

The following columns allow user input on the Active Ingredients grid:

APP_AREA - **Broadcast** application (default) - applied to more than 1/2 of the field; **Banded** application - applied to 1/2 of the field or less; **Spot** application - applied to 1/10th of the field or less.

APP_METH - **Surface applied** (default) - applied to the soil surface; **Soil incorporated** - with light tillage or irrigation; **Foliar application** - directed spray at nearly full crop/weed canopy.

APP_RATE - **Standard rate** (default) - a label rate greater than 1/4 lb active ingredient per acre (280 g/ha); **Low rate** - a rate of 1/10 to 1/4 lb active ingredient per acre (112 to 280 grams per hectare); **Ultra low**

rate - a rate of 1/10 lb or less active ingredient per acre (112 grams per hectare).

AIs Tab Controls

Locate Records Where will search for AIs Grid rows.

- 1. Pick a column name from the list to be used for the searched column values.
- 2. Select the **Contains** radio button to find all rows containing the value you are looking for, or select the **Begins With** radio button to find all rows that start with the value you are looking for.

Select the **Search Alternate Names** checkbox to locate Active Ingredients by Alternate Names. Search Alternate Names is limited to finding Alternate Names using the Contains search.

3. In the right-side text box, enter the value you are looking for.

Note: Using the Locate Records selection process will immediately adjust the number of AIs grid rows displayed.

Alternate Names

Select an Active Ingredient in the grid as shown in the example below:

Soils	ioils Als Products Scenarios Interactions									
Activ	re Ingredients found: 915	I₹ F	Ratings 🔽 Pr	operties 🔽	Management					
	Name	PCCode	PH	HL	KOC	SOL	APP_ARE/			
•	Glyphosate, isopropylamine salt	103601	(null)	47	24000	900000	Broadcast			
	Glyphosate-trimesium	128501	(null)	6	24750	3310000	Broadcast			
	Gossyphire	114103	(null)	1	1000	0.2	Broadcast			

Click the Alternate Names button to see the Alternate Names screen for the selected Active Ingredient as shown in the example below:

۵.	lternate Nam	e List for PCCode: 103601 AI: Glyphosate, isopropylamine salt		X
	PC_CODE	PC_NAME	CNAME_TYPE	EPA_CNAME_Type
•	103601	Glyphosate, isopropylamine salt	C	Other Common
	103601	Glycine, N-(phosphonomethyl)-, compd. with 2-propanamine (1:1)	S	Other Systematic
	103601	Glyphosate-isopropylammonium	S	ISO
	103601	Isopropylamine glyphosate (N-(phosphonomethyl)glycine)	S	Other Common
	103601	Isopropylamine salt of N-(phosphonomethyl) glycine	S	Other Systematic
	103601	N-(Phosphonomethyl)glycine, isopropylamine salt	S	Other Systematic
	103601	CP 70139	T	Trade
	103601	Gilfonox	T	Trade
	103601	Glycel	Т	Trade
	103601	MON 139	Т	Trade
	103601	MON 39	T	Trade
	103601	Rodeo	T	Trade
	103601	Rondo	T	Trade
	103601	Roundup	T	Trade

List Products

Select an Active Ingredient in the grid as shown in the example below:

Soils	ioils Als Products Scenarios Interactions										
Acti	ive Ingredients found: 915	5	Ratings 🔽 Pr	operties 🔽	Management						
	Name	PCCode	PH	HL	KOC	SOL	APP_ARE				
•	Glyphosate, isopropylamine salt	103601	(null)	47	24000	900000	Broadcast				
	Glyphosate-trimesium	128501	(null)	6	24750	3310000	Broadcast				
	Gossyplure	114103	(null)	1	1000	0.2	Broadcast				

Click the List Products button to see the Product List screen for the selected Active Ingredient as shown in the example below:

1	🍅 Pr	Product List for PCCode: 103601 AI: Glyphosate, isopropylamine salt							
		Name	EPA Reg No	PC_Pct					
l	•	1386 RESIDENTIAL HERBICIDE	2217-872	50					
l		AC 303757/AC 263499 HERBICIDE	7969-234	22					
l		ACCORD HERBICIDE	524-326	41.5					
I		ACCORD XL HERBICIDE	524-517	41					

Products Tab

On the Select Soils and Pesticides screen, choose the **Products** tab to see the **Products grid** on the WIN-PST Desktop. The following example screen will display:

Open Ne	iew Tools Window Help	ol - WIN-PST 3-1 - [Select So			L.	8
Soil	Is Als Products Sce	narios Interactions				
T,	fype:		 Products found: 31,769 		Manageme	mt
	Name	EPA Reg. No	PC_Name	PC_Code	PC_Pct	-
. Þ	"0007" VEGETATION K	ULLER 6186-52	Prometon (ANSI)	080804	1.5	-
	"ACME CRABGRASS K	ILLER" 2217-630	MSMA	013803	16.6	
	"ALL-5" WEED KILLER	3837-24	2,4-D, 2-ethylhexyl ester	030063	1.09	
	"ALL-5" WEED KILLER	3837-24	Bromacil (ANSI)	012301	0.61	
	"ANT COPS"	3095-24	Borax (B4NA207.10H2D) (1303-96-4)	011102	5	
	"ANT COPS"	3095-24	Boric acid	011001	4	
Soi	List Als	Name 💌 (Contains C Begins With			
Soi	List Als	Name 💌 (Contains C Begins With	Hudro S	LP [55
Soi	List Als ils in Queue JSYM Percent SQ	Name 💌 (Contains C Begins With	Hydro S	LP [SSI
Soi MU	List Als ils in Queue JSYM Percent SO	Name (Contains C Begins With	Hydro S	LP	SSI
Soi MU	List Als ils in Queue JSYM Percent SO	Name (Contains C Begins With	Hydio S	LP [SSF
	List Als ils in Queue JSYM Percent S0 sticides in Queue STICIDE	Name (Contains C Begins With	Hydro S	LP [SSF
Soi MU Pes	List Als ils in Queue JSYM Percent SO sticides in Queue sticiDE	IL 1	Contains C Begins With	Hydio S Area	LP	SSF
Soi MU Pes	List Als ils in Queue JSYM Percent SO sticides in Queue STICIDE	Name (Contains C Begins With	Hydro S Area	LP	SSF
Soi MU Pes PEs	List Als ils in Queue JSYM Percent SO sticides in Queue ISTICIDE elp Save Scenario	Name (Contains Regins With	Hydro S Area Reports	LP Method	SSF

See <u>Data Grid Columns</u> for additional information about the **Products** grid.

See <u>Queue Introduction</u> for additional information about adding **Products** to the Queue.

User Input Columns

The following columns allow user input on the Products grid:

APP_AREA - **Broadcast** application (default) - applied to more than 1/2 of the field; **Banded** application - applied to 1/2 of the field or less; **Spot** application - applied to 1/10th of the field or less.

APP_METH - **Surface applied** (default) - applied to the soil surface; **Soil incorporated** - with light tillage or irrigation; **Foliar application** - directed spray at nearly full crop/weed canopy.

APP_RATE - **Standard rate** (default) - a label rate greater than 1/4 lb active ingredient per acre (280 g/ha); **Low rate** - a rate of 1/10 to 1/4 lb active ingredient per acre (112 to 280 grams per hectare); **Ultra low rate** - a rate of 1/10 lb or less active ingredient per acre (112 grams per hectare).

Products Tab Controls

Locate Records Where will search for AIs Grid rows.

- 1. Pick a column name from the list to be used for the searched column values.
- 2. Select the **Contains** radio button to find all rows containing the value you are looking for, or select the **Begins With** radio button to find all rows that start with the value you are looking for.
- 3. In the right-side text box, enter the value you are looking for.

Note: Using the Locate Records selection process will immediately adjust the number of Products grid rows displayed.

List Active Ingredients

Select a Product in the grid as shown in the example below:

	Soils	Als Products Scenarios Interact	ions					
	Туре	ALL	3	Products found: 21,655	F	Management		
		Name	EPA Reg No	PC_Name	PC_Code	PC_Pct		
	•	ROUNDUP HERBICIDE	524-445	Glyphosate, isopropylamine salt	103601	41		
Add		ROUNDUP L & G CONCENTRATE G	524-370	Glyphosate, isopropylamine salt	103601	18		
~~~~		ROUNDUP L & G READY-TO-USE FA	71995-8	Glyphosate, isopropylamine salt	103601	0.96		
		ROUNDUP ORIGINAL II	524-454	Glyphosate, isopropylamine salt	103601	41		

Click the ListAls button to see the Active Ingredients screen for the selected Product as shown in the example below:

AI List for Product 00052400445										
	Name	PC_PCT	PCCode	PH	HL	KOC	SOL	¢		
•	Glyphosate, isopropylamine salt	41	103601	(null)	47	24000	900000	В		
ET .										
								_		

# Scenarios Tab

On the Select Soils and Pesticides screen, choose the **Scenarios** tab to see saved Scenarios on the WIN-PST Desktop. The following example screen will display:

😂 Win	dows Pesticide Screening Tool	- WIN-PST 3.1 - [Select 9	ioils and Pesticides]		_ 🗆 🗵
🍄 Op	en New Tools Window Help				_ # ×
	Soils Als Products Scena	tios Interactions			
	Category 1 al	Category 2	all 💌 Cate	gory 3 all	•
	Select a scenario:		Saved Soils associated wit	h selected scenario:	
	JobName Cat	egory 1 Category 2	JobName COMP_	NAM SSANAME STAT	E SS
₽dd					
			•		•
			Saved Chemicals associate	ed with selected scenario:	
			JobName AJ_NAME	PC_CODE CAS_NO	PC_PCT
	1	Þ			
					<u> </u>
	Soils in Queue				
	MUSYM Percent SUIL		Texture User UM User	Depth Hydro SLP	SSRF
Del	4				
	Pesticides in Queue				<u> </u>
	PESTICIDE	PC Code Reg No	PLP PSRP	PARP Area	Method
	•				
	Help Save Scenario			Reports 😰	Close 🌗
	Status: Ready			9/28/2007	10.55 AM

See <u>Queue Introduction</u> for additional information about adding **Scenarios** to the Queue.

See <u>Import Scenarios</u> for information about importing WIN-PST 3.0 Scenarios into the WIN-PST 3.1 Main database.

# Activities

- Save items in the in the Queue area to a new Scenario.
- Edit a Scenario.
- Delete one or more **Scenarios**.

# Overview

**Scenarios** are a saved set of previously selected Queue area items. When you create a **Scenario**, it must be give a unique name and optionally up to three Category descriptions. A **Scenario** is comprised of any combination of Soils and Pesticides that were added to the Queue area.

When the **Queue** is empty, the <u>Save Scenario</u> button is not active. Adding items to the Soils in Queue area or Pesticides in Queue area will activate the <u>Save Scenario</u> button.

# Saving a new Scenario

Click the Save Scenario D button to save the Queue area items to a new Scenario as shown in the example below:

🍪 Save Scen	ario	×
, > Name		
Category 1		
Category 2		
Category 3		
	Required. Save Cancel	

Enter a unique **Name** for the Scenario. The **Name** is required.

Optionally enter **Category 1**, **Category 2** and **Category 3** information that will further describe the new Scenario.

Click the **seve** button to save the new Scenario as shown in the example below:

📩 win	dows Pesti en New To:	cide Screenin ils Window	ig Tool - V Help	VIN-PST 3	.1 - [Select	Soils and I	estic	ides]						
	Soils Al	Products	Scenario	Interac	tions									
	Calego	al al			Category 2	al	_	2	• 0	ategory 3	al	_	_	•
	Scenarios					Soils fo	n: Sa	mple Rep	orts					
	Jo	bName	Calegor	y1 Ca	legory 2	C JobNan	e	COMP_N	NAM	SSANAME	STA	TE	SSA	D
	E 55	mple Reports	Example	6		Sample	Repo	Canton		Hampden a	n MA		610	
Add						Sample	Repo	Paxton		Hampden a	n MA		610	
						Sample	Repo	Windsor		Hampden a	n MA		610	
						Pestici	des fe	n: Sampl	eRep	•ts				-
						JobNam	•	AL_NAM	E	PC_CODE	PC_	PCT	Produ	× *
						Sample	Repo	Atrazine		080803	42.6		AATR	E
						Sample	Repo	Atrazine		080803	33		BICEP	P
						Sample	Repo	S-Metola	chior 1	108800	26.1		BICEP	P -
	4				2	Sample	Repo	Glyphose	de, i 1	103601	41		ROUM	N.
	Edit	Delete				4							2	1
	Soils in C	Jueue												
	MUSYM	Percent	SOIL			Texture	Us	er OM	User D	epth F	lydio	SLP		SSRF
	4218	80	Canton			FSL		6	7		B	!		
	2558	80	Windton			PSL LS		30	ŝ		Å	ĥ		1
		99	11 1 10100			6.0		*			~			
Del														
	Developed													-
	PESTICIDE	in Gueue		PC Code	Beabla	PIP	- 1	PCRP		PARP	Å.m.a		Mathead	
	AATREX 4	HERBICIDE :	Attaz	080803	00010000	H		H	_	1	Broadc	act S	urface A	_
	BICEP II M	AGNUM HERB	CIDE	080803	00010000	н	i	н		1	Broado	ast S	urface A.	
	BICEP II M	AGNUM HERB	CIDE	108800	00010000.	- H		н		1	Broadc	act S	urface A.	
	HUUNDUP	HENBICIDE	ulyph	103601	00052400.	. v (r)		(1)		1.60	Broadc	807	FORM	
	4													•
	Help	Save Scena	rio B							1	Reports	圓	Close	-
		Statur Rea	de .								4/28	/2008	1:25.6	M
		Ines Ines									1 4000		1	-

# **Editing a Scenario**

To edit a Scenario, first select a **Scenario** row in the Scenarios grid and then click the **Edit** button. The Update Scenario screen will display as shown in the example below:

🄯 Update Sc	enario	×							
	Update Scenario Description								
🕨 Name	Name Sample Reports								
Category 1	Examples								
Category 2									
Category 3									
	Required. Save Cancel								

Change the **Category 1**, **Category 2** or **Category 3** information as necessary. Click the save button to save the changes.

# **Deleting a Scenario**

You can select and delete multiple **Scenarios** at one time.

To select more than one Scenario row, select one row, then hold the Control key and select each of the other rows.

To select a continuous list of Scenario rows, select one row, then hold the **Shift** key and select the last row.

win to Co	dows Pesticide S en New Tools W	icreening Tool - Indow Help	WIN-PST 3.1 - [S	elect S	oils and Pest	icides]			×
	Soils Als	Products Scenar	ios Interactions						
	Category 1	al	- Cate	gory 2	al .		Category 3 al		•
	Scenarios				Soils for: T	wo Soils			
	JobName	e Calego	ry1 Calegory	2 C	JobName	COMP_NAM	SSANAME	STATE	SSAID
	S-ample R	leports Exampl	es		Two Soils	Brimfield	Hampden an	MA.	610
~**	Two Solid				Two Soils	Canton	Hampden an	MA	610
					Pesticides	for: Two Sols			
					JobName	AI NAME	PC_CODE	PC PCT	ProductLin
					Two Solis	2,4-08, dimet	030819	25.9	2,4-08 200
	1			-					
	Edit _D	elete							
	Soils in Queu	e							1
	MUSYM P	Percent SOIL	d		exture L	Jser OM User	Depth Hys	te SLP	SSRF
	4218	80 Canton			FSL	6	7 8	í í	î
Del									
	•								•
	Pesticides in	Queue							
	PESTICIDE	DISTRICT	PC Code Re	gNo	PLP	PSRP	PARP	Area	Method
	2,4-08 200 BHUA	ADLEAF HER	030819 0663	3000			L B	icadcast 5	utace A
	•								1
	Help Save	Scenario 🗎					Be	ports 🗐	Close 🐗
	Statu	Ready						4/25/2008	1:29 PM

The example below shows one selected Scenario row in the Scenarios grid:

To delete the selected Scenarios, click the **Delete** button. The Delete Scenario screen will display as shown in the example below:

🕸 Delete Scenario	<u>_                                    </u>
Delete Scenario Entries	
The following Scenarios will be deleted: 1 - Two Soils	
Delete Car	ncel

Click the **Delete** button to complete the delete process. The updated Scenarios page will display as shown in the example below:

Win	dows Pesticide Scre	ening Tool -	WIN-PST 3.	1 - [Select S	oils and Pestic	ides]				
00 Op	Calle Ale Dea	ow Help	ins I teterast	in l						
	Solis   Als   Plo	oucis ocera	to printeraci	ions (						
	Category 1 al		-	Category 2	al	-	Category 3 al		-	
	Scenarios				Soils for: Sa	mple Reports				
	JobName	Caleg	ory 1 Cat	egory 2 C	JobName	COMP_NAM	SSANAME	STATE	SSAID	
	Sample Repr	xts Examp	les 🛛		Sample Repo	Canton	Hampden an	MA	610	
A64					Sample Repo	Paston	Hampden an	MA	610	
					Sample Repo	Sample Repo Windsor Hampde			610	
					4				D.	
					Pesticides fe	or: Sample Rep	ports			
					JobName	AL_NAME	PC_CODE	PC_PCT	Produc *	
					Sample Repo	Atrazine	080803	42.6	AATRE	
					Sample Repo	Sample Repo Atrazine		33	BICEP	
			_		Sample Repo	Sample Repo S-Metolachior		26.1	BICEP	
				•	Sample Repo	Glyphosate, i	103601	41	ROUN	
	EditDele	te			4	_			<u> </u>	
	Soils in Queue									
	MUSYM Perc	ent SOIL			Texture Us	er OM User	Depth Hy	dio SLP	SSRF	
Del	1									
	Pesticides in Queue									
	PESTICIDE		PC Code	Reg No	PLP	PSRP	PARP	Area	Method	
	×									
	Help Save Se	enario 🗎					Be	eports 🗐	Close 🖏	
	Status:	1 Scenario de	leted OK.					4/25/2008	1:29 PM	

# Interactions Tab

Choose the Interactions tab in the WIN-PST Desktop. The following example screen is displayed:

😂 Win	ndows Pestici	de Screen	ing Tool - Y	VIN-PST 3.1	[Select	Soils and P	esticides]					-	
5 OP	en New Took	s window	нер		-1							-	161 ×
	Soils Als	Product	s Scenario	s Interactions	<u></u>								_
	Rainfall	C Low	θH	igh									
	Interactio	n				ILP	ISR	P	IARP		LH-H	l	н
_													
Add													
	1												FI I
	Soils in Qu	eue	Leon			7.1.		Lu. D		0.4.	Loup		0005
	MUSYM	Percent	SUL			Texture	User UM	User Di	epth	Hydio	SLP		SSHF
-													
Del													
	•												•
	Pesticides	in Queue											_
	PESTICIDE			PC Code	RegNo	PLP	PSRP	F	PARP	Area		Method	
	•												•
	Help	iave Scen	ario 🖪						[	Report	· 图	Close	4
	5	Status: Re	ady							9/28	3/2007	10.55	M

Rainfall - Probability of rainfall. Select Low or High (default). See Adjustments for more information.

# Data Grid Columns

WIN-PST has numerous Data Grids that display tabular data in rows and columns. In some cases, Data Grid column header names must be abbreviated for size limitations.

The Data Grids described on this page are:

- 1. Soils
- 2. Active Ingredients
- 3. Products
- 4. Interactions

**Soils** - The Soils Data Grid columns are:

#### MUSYM

Mapunit Symbol. Used in the COMP table from NASIS or the SSSD. The symbol used to identify the soil mapunit on the soil map. (SSSD User's Manual - Appendix A-17.)

PCT_COMP Component Percent.

**COMP_NAME** Component Name.

# TEXTURE

Soil Texture.

# HYDRO

Hydrologic Soil Group.

# USER_OM

A value that represents percent organic matter in the first soil horizon. The value comes from the Soils database and can be changed by the user based on the site conditions.

# USER_DEPTH

A value that represents the Depth of the soil surface horizon. The value comes from the Soils database and can be changed by the user based on the site conditions.

# KFACT

Soil Erodibility Factor.

# SLOPEGR15

Field slope greater than 15%.

# CRACKSGR24

Surface Connected Macropores (cracks) at least 24 inches deep.

Soils - Soils Data Grid columns continued

### HWT_LT_24

High Water Table less than 24" under the surface.

**SLP** Soil Leaching Potential.

SSRP

Soil Solution Runoff Potential.

SARP Soil Adsorbed Runoff Potential

H1_DEPTH Surface Layer Depth.

**OM_H** Organic Matter - High - Surface Layer.

**OM_L** Organic Matter - Low - Surface Layer.

PHH pH - High - Surface Layer. PHL pH - Low - Surface Layer.

**ROCKDEPH** Rock Depth - High.

**ROCKDEPL** Rock Depth - Low.

**SEQNUM** Sequence Number.

SHRINKSW Shrink-Swell Potential.

**SLOPE_H** Slope - High.

**SLOPE_L** Slope - Low.

**SSANAME** Soil Survey Area Name. Soils - Soils Data Grid columns continued

WTBEG Water Table Beginning.

WTDEPH Water Table Depth - High.

WTDEPL Water Table Depth - Low.

WTEND Water Table End.

WTKIND Water Table Kind

#### Active Ingredients - The AIs Data Grid columns are:

#### Name

Active Ingredient Name.

#### PCCode

EPA Pesticide Chemcial Code.

PH

pH of associated properties.

HL

Field Half Life.

#### кос

Soil Organic Carbon Sorption Coefficient.

### SOL

Solubility in Water.

## APP_AREA

A user-selectable value for the Application Area:

**Broadcast** application (default) - applied to more than 1/2 of the field.

**Banded** application - applied to 1/2 of the field or less. **Spot** application - applied to 1/10th of the field or less.

# APP_METH

A user-selectable value for the Application Method:

Surface applied (default) - applied to the soil surface
Soil incorporated - with light tillage or irrigation.
Foliar application - directed spray at nearly full crop/weed canopy.

#### Active Ingredients - AIs Data Grid columns continued

#### APP_RATE

A user-selectable value for the Application Rate:

Standard rate (default) - a label rate greater than 1/4 lb active ingredient per acre (280 g/ha).
Low rate - a rate of 1/10 to 1/4 lb active ingredient per acre (112 to 280 grams per hectare).

**Ultra low rate** - a rate of 1/10 lb or less active ingredient per acre (112 grams per hectare).

#### PLP

Pesticide Leaching Potential.

#### PSRP

Pesticide Solution Runoff Potential

**PARP** Pesticide Adsorbed Runoff Potential

HumanTox Human Toxicity Value - Long Term

HumanToxType Human Toxicity Type

#### MATC

Maximum Acceptable Toxicant Concentration - Fish.

#### STV

Sediment Toxicity Value - Fish.

# EATHuman

Exposure Adjusted Toxicity Value - Human.

#### EATMATC

Exposure Adjusted Toxicity Value - MATC - Fish.

# EATSTV

Exposure Adjusted Toxicity Value for Sediment Toxicity - Fish.

Products - The Products Data Grid columns are:

Name Product Name.

**EPA Reg. No.** EPA Product Registration Number.

PC_Name Active Ingredient Name. Products - Products Data Grid columns continued

# PC_Code

EPA's Pesticide Chemical Code.

# PC_Pct

Active Ingredient Percent.

## APP_AREA

A user-selectable value for the Application Area:

**Broadcast** application (default) - applied to more than 1/2 of the field.

**Banded** application - applied to 1/2 of the field or less. **Spot** application - applied to 1/10th of the field or less.

#### APP_METH

A user-selectable value for the Application Method:

Surface applied (default) - applied to the soil surfaceSoil incorporated - with light tillage or irrigation.Foliar application - directed spray at nearly full crop/weed canopy.

# APP_RATE

A user-selectable value for the Application Rate:

**Standard rate** (default) - a label rate greater than 1/4 lb active ingredient per acre (280 g/ha).

**Low rate** - a rate of 1/10 to 1/4 lb active ingredient per acre (112 to 280 grams per hectare).

**Ultra low rate** - a rate of 1/10 lb or less active ingredient per acre (112 grams per hectare).

#### Type_Code

The Type Code.

Interactions - The Interactions Data Grid columns are:

Interaction Interaction of Soil and Pesticide. ILP Soil / Pesticide Interaction Leaching Potential. ISRP Soil / Pesticide Interaction Solution Runoff Potential. IARP Soil / Pesticide Interaction Adsorbed Runoff Potential. LH-H Leaching Hazard - Human. LH-F Leaching Hazard - Fish. SRH-H Solution Runoff Hazard - Human. SRH-F Solution Runoff Hazard - Fish. **ARH-F** Adsorbed Runoff Hazard - Fish.

# Data Management

# **Data Management - Introduction**

The Data Management screen contains a number of tab selection screens that allow you to work with various types of WIN-PST data. The tab selections are:

- 1. **Soils** See <u>Soils</u> for detailed information on viewing or changing your current SSURGO database location.
- 2. Active Ingredients See <u>Active Ingredients</u> for detailed information regarding assigning Alternate Names.
- **3. Products -** See Products for detailed information regarding Product selections.
- 4. **Main Database** See Main Database for detailed information on viewing or changing your current MAIN database location.

To begin, choose Open New, Data Management from the menu bar:



# Data Management - Soils

Start **Data Management** as described in the <u>Introduction</u>. On the **Data Management** screen, choose the **Soils** tab to show SSURGO Database and Soil Survey Area information for your current SSURGO database. Use the **Soils** tab to:

- 1. View your current SSURGO database location.
- 2. View the selected and cached Soil Survey Areas in your current SSURGO database.
- 3. Use the **Browse** button to change to another SSURGO database.
- 4. Use the **Reset Cached** button to clear cached soils data for one or more Soil Survey Areas.
Select the Data Management, Soils tab as shown in the example below:

	ctive	Ingredients P	oducts   Ma	in Database						
Soil S	urw	ey Geographic ase location	(SSURGO) Program F	database iles/USDA'WIN-PST 3.1'Sam	ple'SSURG	0.mdb		•	Browse	1
S	ize	25.00 MB	Created	10/31/2006 1:35:24 PM	# Selected	0 #	Cached 2	Re	eset Cacheo	1
<b>v</b>	Us	e Sample SSUR	GO database	8	Count	Cached	Version	Version	Bate	_
	Hampden and Hampshire Counties, Massachusett				499	Y	3	7/25/2006 8:37:46 PM		
Ċ	] н.	ampden and H	ampshire	Counties, Massachusett	206	Y	3	7/18/2006 4:42:34 AM		i
•	1								2	1
1	Main	database: C:\F	Program Files	UISDAW/IN-PST 31\WinPs	131.mdb					

On the example screen above, the **Database location** contains the location and file name of the Sample SSURGO Database.

Sample SSURGO Database information Location: C:\Program Files\USDA\WIN-PST 3.1\Sample Database: SSURGO.mdb

The **Soils** tab displays additional information about the SSURGO Database including:

Size - the size of the SSURGO Database in MB.

Created - Date and time the file was created.

# Selected - The number of selected (checked) Soil Survey Areas.

# Cached - The number of cached Soil Survey Areas.

Each Soil Survey Area in the SSURGO Database is listed with:

Soil Survey Area - The Soil Survey Area name.

Count - The number of soils data rows.

Cached - A 'Y' if it is cached in the Main Database.

Version - The Version number.

Note: Older SSURGO Database files may not contain this information.

Version Date - The Version Date.

Note: Older SSURGO Database files may not contain this information.

#### Selecting Another SSURGO Database

If you are not currently using the Sample SSURGO database and you want to use the Sample SSURGO database, you can quickly change to it by selecting the checkbox for **Use Sample SSURGO database** a **Use Sample SSURGO database** s shown below:

In the examples below, several SSURGO database files were placed in the following location:



The location, C:\SoilsData, contains two SSURGO database files:

**soildb_MA_2002.mdb** - Contains multiple Massachusetts Soil Survey Areas.

soildb_OR_2002.mdb - Contains a single Oregon Soil Survey Area.

On the **Data Management**, **Soils** tab, click the **Browse** button to locate a SSURGO database file:

Specify Soil Da	atabase Path and File:	? 🔀
Look in:	🔁 SolisData 💌 🗢 🖻 📸 📰 -	
My Recent Documents Desktop	Solidb_MA_2002.mdb	
My Computer	File name: solidb_0R_2002.mdb	Open
Maces	Files of type: MS Access	Cancel

Select the SSURGO database file and click ______ to continue.

Data	base location C:	(SSURGU) o SoilData'isoi	ldb_OR_2002.mdb				• Brow	se
Size	51.97 MB	Created	8/11/2006 1:52:12 PM	# Selected	# Cad	hed 0	Reset Cac	hed
□ Us	e Sample SSUR	GO database						
S	ioil Survey Are	a		Count Ca	ched Ve	ersion 1	Version Date	_
	enton County,	Oregon: OR	:003	471				
1								1.01

The screen will display the selected SSURGO database information as shown in the example above. This Oregon example shows a single Soil Survey Area that is not cached.

Click the left-side checkbox to select a Soil Survey Area for use. You can select any number of Soil Survey Areas to use, regardless if they are cached or not cached. Selected Soil Survey Areas that are not cached will be calculated and cached automatically.

Click the **Save** button to exit the **Data Management** screen and continue with the selected Soil Survey Areas.

Click the **Cancel** button to exit the **Data Management** screen without making any selection changes.

#### **Data Management - Active Ingredients**

Start **Data Management** as described in the <u>Introduction</u>. On the **Data Management** screen, choose the **Active Ingredients** tab to show Alternate Name assignments. Use the Active Ingredients tab to:

- 1. View your current assigned Alternate Names.
- 2. Change assigned Alternate Names.

Select	the	Data	Management	Active	Ingredients	tab [.]
001001	the	Dutu	management,	ACTIVE	ingi calcints	iuo.

oils Active Ingredients	Products   Main Database		
Reset Management			
Application Area	Application Method	Application Rate	Reset
Al Name Preferences			
PC CODE 12470	1 *		Set Name
AI		Alternative Names for this Al:	
(**)-Dimethylethyl (**)-Trifbloro-4-nil (*)-Trifbloro-4-nil (*)-(Pentafluoropi)-3-6 (1alpha,2alpha,5al (1R-cis)-1-Methyl- (2-Hydroxyethyl)d (2-Hydroxyethyl)d (2-Hydroxyethyl)d (2-Hydroxyethyl)d (2-Hydroxyethyl)d (2-Hydroxyethyl)d (3-6 di-tert-Butyl- 4	(5.5-dimethyl-2-thioxo-1.3.2-d lidene)-a-D-glucofuranose (")- tro-m-cresol (") = alpha,alpha, henylymethyl (1R-trans)-3-(2,2- chlorovinyl)-2,2-dimethyl-cyclk arboxylic acid, 2-hydroxy-, coj pha)-2,6,6-Trimethylbicyclo?3. 2-(1-methylethenyl)cyclobuta limethylammonium (5-bromo- thylenediaminetriacetic acid yl)benzene 4-hydroxybenzylidene)malono ▶		

#### **Data Management - Products**

Start **Data Management** as described in the <u>Introduction</u>. On the **Data Management** screen, choose the **Products** tab to show Current Selections. Use the Products tab to:

- 1. View your Current Selections.
- 2. Change Current Selections.

Select the Data Management, Products tab:

Reset Management	n Method 🔽 App	plication Rate	Reset
Available Selections	<	>	Current Selections
"AUT COPS" "ANT COPS" "AS IS" "ATTACK" "B-29" "BAN-22" "BARON-"316" "BUG-OUT" WATER BASED INSECTICIDE "BUG-OUT" WATER BASED INSECTICIDE "BUULLS EVE WASP & HORNET SPRAY"			

## Data Management - Main Database

Start **Data Management** as described in the <u>Introduction</u>. On the **Data Management** screen, choose the **Main Database** tab to show location and cached information for your current Main database. Use the Main Database tab to:

- 1. View your current Main database location and other information.
- 2. Use the **Browse** button to locate another Main database.
- 3. Use the Change DB button to change to another Main database
- 4. Use the **Delete Cached** button to clear cached soils data for one or more Soil Survey Areas.

Select the Data Management, Main Database tab as shown in the example below:

	Databa	se location	C: Program Fil	es/USDA/WIN-PST 3	.1WinPst31.mdb		<ul> <li>Browse</li> </ul>
		Size	17.53 MB	Created 3	/7/2008 8:45:22 AM	🔽 Use defaul	Main database
	Da	ta version	Template vers	sion 3.1; data update	e 1		
			Pest Properties	s 02/21/2008	Humantox	02/21/2008	Change DB
			EPA Registration	n 01/28/2008	Fishtox	02/21/2008	
Ca	Area	SURGO I	nformation le name		Location		Add Date
	ma608	SSURGO	31.mdb	E:\WINPST\Dev\W	INPST_Solution\WINPST	_Project\Sample	3/7/2008 9:45:15 AM
	ma610	SSURGO	31.mdb	E:\WINPST\Dev\WI	INPST_Solution\WINPST	_Project\Sample	3/7/2008 9:45:15 AM
5							

#### Change The Main Database

If you are not currently using the default Main database and you want to use the default Main database, you can quickly change to it by selecting the checkbox for **Use default Main database** as shown below:

🔽 Use default Main database

In the examples below, a Main database file was created in the following location:

Address 🛅 C:\MainData			۵ 🔁 💌
Folders	×	Name A	Size
😂 MainData	-	MainRegion1.mdb	17,092 KB
	<b>_</b>	•	•

The location, MainData, contains one WIN-PST 3.1 Main database file:

MainRegion1.mdb - A Main database with one cached Soil Survey Area.

Click the Browse button to locate a Main database file:

Specify Main Da	stabase Path and	File:			<u>? ×</u>
Look in	🗀 MainData		•	🗢 🗈 💣 💷	
My Recent Documents Desktop My Documents	MainRegion1	ndb			
My Computer My Network Places	File name: Files of type:	MainRegion1.mdb		•	Open Cancel

Select the Main database file and click **Open** to continue.

000	abase location	C: MainData Main	Region1.mdb			▼ Browse
	Size	17.50 MB	Created	3/10/2008 3:46:16 PM	Use default Ma	ain database
	Data version	Template version	a 3.1; data upo	late 1		
		Pest Properties	02/21/20	08 Humantox	02/21/2008	Change DB
		EPA Registration	01/28/20	08 Fishtox	02/21/2008	
Cacheo	ISSURGO	nformation				
	ea	File name		Locati	ion	Add Date
AP						
An ma01	19 soildb_M/	4_2002.mdb		C:\SoiData		3/17/2008 2:08:061

The screen will display the selected Main database information as shown in the example above.

Click the **Change DB** button to change to this Main database and the Soils tab screen will display with the new Main database name showing at the bottom of the screen as shown in the example below:

Dat	abase location C:(Program Files/USBA/MN-PST 3.1/Sample/SSURGO.mdb   Browse
Size	25.00 MB Created 10/31/2006 1:35:24 PM # Selected 1 # Cached 0 Reset Cached
<b>V</b>	Ise Sample SSURGO database
	Soil Survey Area Count Cached Version Date
	Hampden and Hampshire Counties, Massachusett 475
	Nampden and Nampshire Counties, Massachusett 188
•	

The above example shows one Soil Survey Area selected from the Sample SSURGO database.

You can use the **Browse** button to select another SSURGO database.

Be sure to select one or more of the Soil Survery Areas from the SSURGO database and click the **Save** button to exit **Data Management**.

## <u>Databases</u>

### Database Information

WIN-PST 3.1 requires two Access database files. During the installation of WIN-PST 3.1, a default Main database and a Sample SSURGO database are installed. Using WIN-PST, you can create additional Main database files and also attach to other SSURGO database files.

- The Main database contains all of the Pesticides, Active Ingredients and Products data, and additional WIN-PST related information. The default Main database name is 'winpst31.mdb'. For more information, see <u>WIN-PST</u> <u>Database</u>.
- The Sample SSURGO database contains Soils data. The Sample SSURGO database name is 'SSURGO.mdb'. For more information, see <u>SSURGO</u> <u>Database</u>.

To see information about your current Main database, click on Help, Database Information, WIN-PST Main database:



The example below shows information about the default WIN-PST 3.1 Main database.

WIN-PST 3.1 Message	
WIN-PST Main Database Information	
Name: WinPst31.mdb Location: C:\Program Files\USDA\WIN-PST 3.1 Size: 18.00 MB Created: 2/22/2008 8:09:10 AM	<b>^</b>
Pesticides Version Information	
Data version: Template version 3.1; data update 1 Pest Properties: 02/21/2008 Humantox: 02/21/2008 Fishtox: 02/21/2008 EPA Registration: 01/28/2008	•
<u>H</u> elp	lk

To see information about your current SSURGO database, click on Help, Database Information, SSURGO database:

٩	Open New	Tools	Window	Help	
	Soils	Als	Product	About User Help	
				Database Information	WIN-PST Main database
					SSURGO database

The example below shows information about the Sample SSURGO database.

WIN-PST 3.1 Message	
SSURGO Database Information	
Name: SSURGO.mdb Location: C:\Program Files\USDA\WIN-PST 3.1\Sample Size: 25.00 MB Created: 10/31/2006 2:35:24 PM	
Help	Ok

### SSURGO Database

WIN-PST uses a SSURGO database to obtain soils information. Data from the Soil Data Mart is distributed in what is referred to as "SSURGO" format.

During the WIN-PST 3.1 installation, a Sample SSURGO database is installed. The Sample SSURGO database is provided to help you quickly start using WIN-PST 3.1 and it only contains two Soil Survey Areas:

- 1. Hampden and Hampshire Counties, Massachusetts, Western Part: MA608
- 2. Hampden and Hampshire Counties, Massachusetts, Eastern Part: MA610

The first time you start WIN-PST 3.1 you will be asked to identify the SSURGO database to use. At any time, you can easily select the Sample SSURGO database on the Soils tab in Data Management as shown in this example:

🔁 Data Management	×
Soils Active Ingredients Products Main Database	
Soil Survey Geographic (SSURGO) database Database location C:/Program Files/USDA/WIN-PST 3.1/Sample/SSURGO.mdb	
Size 25.00 MB Created 10/31/2006 1:35:24 PM # Selected 2 # Cached 2 Reset Cached	
Vise Sample SSURGO database	

Soil survey data can be downloaded from the Soil Data Mart at:

http://soildatamart.nrcs.usda.gov

Data for a soil survey area includes a tabular component and a spatial component. The tabular component is typically imported into a database for querying, reporting and analysis. The spatial component is typically viewed and analyzed using a Geographic Information System (GIS).

## WIN-PST Template SSURGO Error Message

Connecting to a 'SSURGO template database' will result in the following example error message:

WIN-PST 3.1 Message	
SSURGO Database Error	
The Template SSURGO database is empty. Location: C:\SoilData File: soildb_CA_2002.mdb	
Help	Ok

To correct this error condition, follow the steps in section 'Using a Soil Data Mart SSURGO database.

### Using a Soil Data Mart SSURGO database

If you receive a Template SSURGO error message when you attempt to connect to a SSURGO database file, the SSURGO database is still a 'SSURGO template database' and it must have the tabular soil data imported into it. This section explains the tabular soil data import process.

When soil data is exported from the Soil Data Mart, the end result is always a single zip file, regardless of what export options were selected.

In a SSURGO template database, the SSURGO database structure has already been created. Tabular soil data can be imported by running a macro that resides in the database. In order to use this database, you have to have Microsoft Access installed on your PC.

The examples below use a temporary directory location of C:\Work and a 'soil_ca021.zip' file.

*Note*: Be sure to substitute your directory location and file name.

#### Step 1 - Unzip

The file 'soil_ca021.zip' is a SSURGO export file downloaded from the Soil Data Mart.

😂 C:\Work		
Eile Edit View Favorites Iools Help		
🔇 Back 🔹 🕤 👻 🏂 Search 🌔 Fold	ers 🔯 🌶 🗙 🍤 📰 -	
Address C:\Work		
Folders ×	Name 👻	Size
🞯 Desktop 🔺	🤤 soil_ca021.zip	5,337 KB
🗉 🚞 My Documents		
🗉 😼 My Computer		
🗉 🍶 31⁄2 Floppy (A:)		
Local Disk (C:)		
🗉 🧰 Work		
E 😂 DVD Drive (D:)		

A SSURGO export file can be unzipped using WinZip or an equivalent application. When an export file is unzipped, the following directory hierarchy is produced in the directory to which the export file was unzipped:

soil_ssasymbol (e.g., soil_ca021, soil_co630, soil_ky033, soil_ne075)

tabular

spatial

#### Step 2 - Unzip the Microsoft Access database

The file 'soildb_CA_2002.zip' is a zipped Microsoft Access database, into which the tabular soil data can be imported. This file will only exist if the person who generated this export requested its inclusion. The embedded Microsoft Access database is referred to as a 'SSURGO template database'.



Unzip the soildb_CA_2002.zip' into the same directory to which the export file was unzipped.

#### Step 3 - Import the tabular data

Open the unzipped database 'soildb_CA_2002.mdb'.

😂 C:\Work\soil_ca021		
Ele Edit View Favorites Io	ols <u>H</u> elp	
🔇 Back 🝷 🕤 🖌 🎊 🔎 Search	🏷 Folders 🛛 🐼 🗙 🍤 🛄 -	
Address 🗀 C:\Work\soil_ca021		
Folders	× Name	Size
E Se Local Disk (C:)	soildb_CA_2002.zip	1,785 KB
	soil_metadata_ca021.xml	34 KB
The soil call 21	soil_metadata_ca021.txt	41 KB
T A DVD Drive (D:)	🔚 readme.txt	6 KB
	🔲 🛅 tabular	
	Cia spatial	
	soildb_CA_2002.mdb	11,748 KB

Enter the directory location of the 'tabular' data and click the OK button.

Ele Edit 3	new Insert Format Records Loois Window Help
i 🔽 • I 🔛 🐮	1 🗃 🕰 🍄   X 🖦 🛍   🤊   🧶   24 X   🌫 🧃 🝸   🗛   📼 🕨   🛅 •   🥥 🧝
soildb_CA	_2002 : Database (Access 2002 - 2003 file format)
C. € 550	RGO Import (Template Version 32)
	Note: This function imports the tabular data contained in a soil data download into this database. For detailed instructions, please select the Reports tab of the Database window, open the report titled "How to Understand and Use this Database", and read the section titled "Importing Data".
13	C:\Work\soil_ca021\tabular
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Enter the directory location where the files to be imported reside. Enter both the the letter of the drive and the fully qualified path to the directory on that drive. For example "d:\tmp\soil_mt627\tabular\". The closing backslash is optional.

Following the tabular data import, click the Exit button to close Microsoft Access.

Microsoft	kcess
Ele Edit	View Insert Format Records Iools Window Help
ا - 🖌	🎗 🎯 🕰 💝 🗼 🛍 🔊 (응) 실 것 (장 酒 マ (용) (>> >> 🖄 🗐 - ( @ 🥊
soildb_t	A_2002 : Database (Access 2002 - 2003 file format)
Circle Cope	Soil Reports (Template Version: 32)
Ot	Soil Survey Area Name
	Glenn County, California
ø	Map Unit Symbol Map Unit Name
3 3 3 3 3 4 4 4 6 6 6 6 6 1 6 1 6	AaA     Altamont clay, 0 to 3 percent slopes       AaC     Altamont clay, 3 to 15 percent slopes       AaD     Altamont clay, 3 to 15 percent slopes       AaE     Altamont clay, 30 to 50 percent slopes       AbC     Altamont clay, 30 to 50 percent slopes       AbC     Altamont clay, 30 to 50 percent slopes       AbC     Altamont rocky clay loam, 15 to 30 percent slopes       AcE     Altamont rocky clay loam, 30 to 50 percent slopes       AcE     Altamont rocky clay loam, 30 to 50 percent slopes       AdC     Altamont soils, 3 to 15 percent slopes       AdD     Altamont soils, 15 to 30 percent slopes
	Acreage and Proportionate Extent of the Soils
	Include Minor Soils Include Report Description
	Generate Report Exit System Reports
	If you are new to this database, please select the Reports tab of the Database window and open the report titled "How to Understand and Use this Database".

The SSURGO database is ready for use with WIN-PST and can be moved to another more permanent directory location if necessary.

#### Main Database

WIN-PST requires two Access database files, a Main database and a SSURGO soils database.

The Main database is the primary database for the WIN-PST application. It is used for the overall operation of the application and it also contains Pesticides, Active Ingredients and Products data. A 'default' Main database, named 'winpst31.mdb, is created when WIN-PST 3.1 is installed. This 'default' Main database comes preconfigured to work with the installed Sample <u>SSURGO Database</u> and it contains cached soils information. See <u>Caching Introduction</u> for more information on caching soils information.

Additionally, the Main database also stores saved Scenarios. See the <u>Scenarios Tab</u> for more information.

You can continue to use the 'default' Main database or you can create additional Main database files as necessary. See <u>Create Database</u> for more information on creating a new Main database.

WIN-PST uses one Main database file at a time. See <u>Change Main Database</u> for more information on how to change to another Main database. See <u>Database Information</u> for more information about your current Main and SSURGO databases.

## Change Main Database

WIN-PST 3.1 requires a valid Main database to operate properly. Use the <u>Create</u> <u>Database</u> feature to create additional Main database files or use the 'default' Main database created during the installation of WIN-PST. For more information, see <u>Database Information</u>.

When you change the Main database, you will also need to select a <u>SSURGO</u> <u>Database</u>.

For detailed information on changing the Main database, see Data Management, <u>Main</u> <u>Database</u>.

## Change SSURGO Database

WIN-PST requires two Access database files, the WIN-PST Main database and a SSURGO soils database. For more information, see <u>SSURGO Database</u>.

WIN-PST 3.1 requires a valid SSURGO database to operate properly. For more information about WIN-PST databases, see <u>Database Information</u>.

For detailed information on changing the SSURGO database, see Data Management, <u>Soils</u>.

# Caching Soils Data

## **Caching Introduction**

WIN-PST uses soils data taken directly from a <u>SSURGO Database</u>. Before WIN-PST can use the SSURGO soils data, a lengthy calculation process is required.

Caching is a new feature in WIN-PST 3.1. When you initially select one or more SSURGO Database Soil Survey Areas, the calculation process runs once and the calculated results are cached in the Main Database for future rapid retrieval. You can select one or more Soil Survey Areas from a SSURGO Database for your use.

When you cache soils data, information about the source SSURGO Database file is also saved. If you delete or change the source SSURGO Database file, WIN-PST will automatically remove all cached soils information that came from the source SSURGO Database file. In this way, WIN-PST will only keep current SSURGO soils data cached.

When WIN-PST is installed, the default Main Database contains cached soils data for the Sample SSURGO Database. If you change to another SSURGO database, you can delete the cached soils data for the Sample SSURGO Database.

See Soils for more about the Data Management, Soils tab.

To see your current cached soils information, go to the Data Management, Soils tab.

oil Su Da	arvey Geographic (SSURGO) database Abase location C: Program Files USDA WIN-PST 3.1 Samp	ole'SSURG	0.mdb		- Browse
Se	e 25.00 MB Created 10/31/2006 1:35:24 PM	# Selected	1 0 #	Cached 2	Reset Cached
◄	Use Sample SSURGO database				
	Soil Survey Area	Count	Cached	Version	Version Date
	Hampden and Hampshire Counties, Massachusett	499	Y	3	7/25/2006 8:37:46 PM
	Hampden and Hampshire Counties, Massachusett	206	۷	3	7/18/2006 4:42:34 AM
L					
1					•

The following example Data Management screen will display:

On the example screen above, the **Database location** contains the location and file name of the Sample SSURGO Database.

Sample SSURGO Database information Location: C:\Program Files\USDA\WIN-PST 3.1\Sample Database: SSURGO.mdb

The Data Management screen displays additional information about the SSURGO Database including:

Size - the size of the SSURGO Database in MB.

**Created** - Date and time the file was created.

# Selected - The number of selected (checked) Soil Survey Areas.

# Cached - The number of cached Soil Survey Areas.

Each Soil Survey Area in the SSURGO Database is listed with:

Soil Survey Area - The Soil Survey Area name.

Count - The number of soils data rows.

Cached - A 'Y' if it is cached in the WIN-PST Main Database.

 $\ensuremath{\text{Version}}$  - The Version number. Note: Older SSURGO Database files may not contain this information.

 $\ensuremath{\text{Version}}$  Date - The Version Date. Note: Older SSURGO Database files may not contain this information.

#### Data Management: Caching

**Reset Cached** - The **Data Management**, **Soils** tab shows SSURGO Database and Soil Survey Area information for your current SSURGO database. On the **Soils** tab, you can use the **Reset Cached** button to delete cached information stored in the Main database for one or more Soil Survey Areas in your current SSURGO database.

**Delete Cached** - The **Data Management**, **Main Database** tab shows Main Database and all cached SSURGO information for your current Main database. A Main database can store cached information for numerous SSURGO databases. On the **Main Database** tab, you can use the **Delete Cached** button to delete cached information stored in the Main database for one or more Soil Survey Areas from one or more SSURGO databases.

#### **Reset Cached - Current SSURGO Database**

The following example **Data Management**, **Soils** tab screen shows the Sample SSURGO database with two cached Soil Survey Areas:

ata N	tanage	ment								
SING	Active	Ingredients P	roducts Mai	n Database						
_=Se	oil Surve	ey Geographic	(SSURGO) d	latabase						_
	Datab	ase location C:	Program Fil	les/USDA/WIN-PST 3.1/Sam	nple'SSURGO.mdb					
	Size	25.00 MB	Created	10/31/2006 1:35:24 PM	# Selected	104	Cached 2	Re	set Cached	
	Vs Us	e Sample SSUR	GO database	1	, , ,					
	S	oil Survey Are	a -		Count	Cached	Version	Version	sion Date	
	D H	Hampden and Hampshire Counties, Massachusett				Y	3 7/25/2006 8:37:46 PM			
		ampden and H	lampshire C	counties, Massachusett	206	Y	3	7/18/2006	4:42:34 AM	
	( Main	databases CA	Dearen Eler	LICDANUEN DOT 2 1996-D-	21 mdb					
Help	main	i Gacabase: C. V	riogram riles	USDA WINFST S. I WINFS	.51.IIIQD				Cancel 5	Save

**Click the left-side checkbox** for each Soil Survey Area to reset as shown in the example screen below:

Da nov	Rabase location C:/Program Files/USDA/WIN-PST 3.1/Sam	ple'SSURG	0.mdb		* Browse
Se V	25.00 MB Created 10/31/2006 1:35:24 PM Use Sample SSURGO database	# Selecte	d 0 #	Cached 2	Reset Cached
	Soil Survey Area	Count	Cached	Version	Version Date
	Hampden and Hampshire Counties, Massachusett	499 Y		3	7/25/2006 8:37:46 PM
	Hampden and Hampshire Counties, Massachusett	206	۷	3	7/18/2006 4:42:34 AM

Click the Reset Cached button and the following example message will display:

WIN-PST 3.1 Message
Reset Cached Soil Survey Areas
Continue to reset the 2 selected Soil Survey Areas?
Yes No

Click the **Yes** button to reset (delete) the cached Soil Survey Area data from the Main database. The **Soils** tab screen will show that the cached information was reset as shown in the example below:

Database location C:/Program Files/USDA/WIN-PST 3.1/Samp	le'SSURG	0.mdb		• Browse
Size 25.00 MB Created 10/31/2006 1:35:24 PM	# Selected	0 #	Cached 2	Reset Cached
✓ Use Sample SSURGO database				
Soil Survey Area	Count	Cached	Version	Version Date
Hampden and Hampshire Counties, Massachusett	499			
Hampden and Hampshire Counties, Massachusett	206			
4				,
				-

#### **Delete Cached - Current Main Database**

The following example **Data Management**, **Main Database** tab screen shows the default Main Database that contains cached SSURGO soils information:

	Databa	co location						Browne
	Databa	se iocación	C:Program Files	USDAWN-PS	ST 3.1 WinPr	st31.mdb		* Drowse
		Size	17.53 MB	Created	3/7/2008 8	3:45:22 AM	Use default Mai	n database
	De	ita version	Template version	n 3.1; data up	date 1			
			Pest Properties	02/21/2	800	Humantox	02/21/2008	Change DB
			EPA Registration	01/28/2	008	Fishtox	02/21/2008	
Ca	ched S	SURGOI	nformation					
	Area		File name			Locati	ion	Add Date
$\Box$	or003	soildb_OF	R_2002.mdb		C:\SoiData	1		3/19/2008 1:22:37 F
	ma608	SSURGO	.mdb		C:\Program	Files\USDA\WII	N-PST 3.1\Sample	3/19/2008 12:20:57
	ma610	SSURGO	l.mdb		C:\Program	Files\USDA\WII	N-PST 3.1\Sample	3/19/2008 1:20:59 F

The above example shows:

- Area or003 One Soil Survey Area cached from the soildb_OR_2002.mdb SSURGO database located at C:\SoilData
- Area ma608 and ma610 Two Soil Survey Areas cached from the SSURGO.mdb Sample SSURGO database located at C:\Program Files\USDA\WIN-PST 3.1\Sample

Click the left-side checkbox for each Soil Survey Area to delete:

	ain datab	ase						
	Databa	se location	C: Program Files	USDAWN-PS	ST 3.1'WinF	st31.mdb		Browse
		Size	17.53 MB	Created	3/7/2008	8:45:22 AM	🗸 Use default Mair	n database
	Da	ta version	Template versio	n 3.1; data up	date 1			
			Pest Properties	02/21/2	008	Humantox	02/21/2008	Change DB
			EPA Registration	01/28/2	008	Fishtox	02/21/2008	
Ca	ched St	SURGO	nformation		1			
	Area		File name			Locat	ion	Add Date
	or003	soildb_OF	R_2002.mdb		C:\SoiDat	à		3/19/2008 1:22:37 F
	ma608	SSURGO	.mdb		C:\Program	n Files\USDA\WI	N-PST 3.1\Sample	3/19/2008 12:20.57
	ma610	SSURGO	l.mdb		C:\Program	n Files\USDA\W1	N-PST 3.1\Sample	3/19/2008 1:20:59 P
				Delete Cae	had (2)			

The above example shows that **Area ma608** and **ma610**, from the Sample SSURGO database, are selected. The **Delete Cached** button is enabled and shows that (2) areas are selected.

Click the **Delete Cached (2)** button to continue and the following example message will display:

WIN-PST 3.1 Message
Delete Cached Soil Survey Areas
Continue to delete the 2 selected Soil Survey Areas?
Yes No

Click the **Yes** button to delete the cached Soil Survey Area data from the Main database. The **Main Database** tab screen will show that the cached information was deleted as shown in the example below:

	Databa	se location	C:'Program Files'	USDA'WIN-PS	T 3.1WinPst31.mdb		Browse
		Size	17.53 MB	Created	3/7/2008 8:45:22 AM	Use default Mair	database
	Da	ta version	Template version	3.1; data up	date 1	-	
			Pest Properties	02/21/20	Humantox	02/21/2008	Change DB
			EPA Registration	01/28/20	008 Fishtox	02/21/2008	
Ca	ched St Area	SURGOI	nformation File name		Loc	ation	Add Date
	or003	soildb_0P	R_2002.mdb		C:\SoiData		3/19/2008 1:22:37

## Working with the Queue

#### Queue Introduction

The **Queue**, located on the bottom half of the Select Soils and Pesticides screen, is a holding area for items that you select from the **Soils**, **Active Ingredients**, and **Products** grids. You can also add **Scenarios** to the Queue. The **Queue** is a convenient way to combine selected Soils, Active Ingredients and Products.

Selected Soils items added to the Queue go into the **Soils in Queue** area, and selected Active Ingredients (AIs) and Products go into the **Pesticides in Queue** area.

Reports and Exports work directly with the items contained in the Queue. You can also save the contents of the Queue into a Scenario for easy retrieval at a later time.

On the Select Soils and Pesticides screen you will find the <u>Soils Tab</u>, <u>Als Tab</u>, <u>Products Tab</u>, <u>Scenarios Tab</u> and <u>Interactions Tab</u>. All of these tab screens share the same **Queue** area.

The screen below shows an example Soils tab with the shared Queue area at the bottom:

Ope	en New	Tools Win	dow Help		There are not	ils and result				-181
	Soils	Als Pr	oducts Scenario	s Interaction	:					
	Surv	ey Area:	ampshire Countie	es, Massachuse	itts, Eastern P	art: MA610 💌	🔽 Ra	itings 🔽 Pro	perties 🔽 M	Nanagement
		MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPEG .
	•	100C	25	Brimfield	FSL	D	3.5	2	0.17	
1		100C	25	Brimfield	FSL	C	3.5	2	0.17	
d		100E	25	Brimfield	FSL	D	3.5	2	0.17	
		100E	25	Brimfield	FSL	C	3.5	2	0.17	<b>V</b>
		103C	10	BRIMFIELD		C	(null)	(null)	(null)	Г
		103C	10	BRIMFIELD		D	(null)	(null)	(null)	
		103E	10	BRIMFIELD		D	(null)	(null)	(null)	
		103E	10	BRIMFIELD		C	(null)	(null)	(null)	<b>V</b>
		305B	1	BRIMFIELD		D	(null)	(null)	(null)	T
	Soils	PCT_CO	MP <=	COM	IP_NAME	<ul> <li>Contair</li> </ul>	ns 🖲 Begin	s With		
4	Soils MUSY	PCT_CO in Queue M Pe	MP <=	[CON	IP_NAME	Contair esture Us	ns 🗭 Begin er OM 🛛 Use	s With F	ydio SLP	SSI
	Soils MUSY	PCT_CO	MP <=	COM	IP_NAME	Contair	ns (* Begin	s With	ydro SLP	SSI
a	Soils MUSY Pesti PEST	PCT_CO in Queue M Pe cides in Qu ICIDE	MP <=	PC Code	Reg No	Contai exture Us	er OM   Use	r Depth H	ydro SLP	SSF Method
4	Soils MUSY Pesti PEST	PCT_CO in Queue M Pe cides in Qu ICIDE	MP <= rcent   SOIL	PC Code	Reg No	Contain	ns (* Begin er OM   Use PSRP	s With	ydio SLP Area	Method
-	Soils MUSY Pesti PEST	PCT_CO in Queue M Pe cides in Que ICIDE	MP <=   rcent   SOIL eue	PC Code	Reg No	Contain  exture Us  PLP F	ns (* Begin er OM   Use PSRP	r Depth H	ydio SLP Area	Method

The upper left-side contains the *M* button. Clicking the **Add** button will add selected items to the Soils or Pesticides areas of the Queue.

The lower left-side contains the button. Clicking the **Del** button will delete selected items from the Soils in Queue or Pesticides in Queue area.

You can also quickly delete all of the items in the **Soils in Queue** area, **Pesticides in Queue** area, or both areas. **Right-click** the **Del** button and select from the context menu as shown in the example below:

Dal	Clear Soils Queue	
Dei	Clear Pesticides Queue	
	Clear Both	

The **Soils in Queue** is a holding area for items that you select from the Soils grid:

Soils in Qu	eue		
MUSYM	Percent	SOIL	
<			

The **Pesticides in Queue** is a holding area for items that you select from the Active Ingredients (AIs) and Products grids:

Pesticides in Queue		
PESTICIDE	PC Code	Reg No
- 16		
<		

### **Queue Maintenance**

#### Activities

- Add one or more new items to the Queue.
- Delete one, some or all items from the **Queue**.
- Items in the **Queue** cannot be modified. Edit items in the Soils, Active Ingredients or Products grids before selecting and adding them to the Queue.

#### **Overview**

The **Queue** is a shared area for holding selected Soils and Pesticides. The <u>Queue</u> <u>Introduction</u> page identifies and describes the various parts of the Queue. This document describes adding and deleting Queue items.

When the **Queue** is empty, the Save Scenario and Reports buttons are not active. Adding items to the Soils in Queue area or Pesticides in Queue area will activate the Save Scenario and Reports buttons.

#### Adding Soils

Selected Soils items from the Soils grid and saved Scenarios can be added to the **Soils in Queue** area. The example below shows one selected Soils row in the Soils grid:

200	en New	Tools Wind	low Help		L General Lana					_10
	Soils	Als Pro	ducts Scenari	os Interaction	e]					
	Surv	rey Acea:	ampthire County	es, Massachuse	etts, Eastern P	at MAS10 -	₩ R	atings 🖂 Pro	operties 🖂	Management
		MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPEG_
		401D	80	Brookfield	FSL	B	6	2	0.2	1
	•	421B	80	Canton	FSL	B	6	7	0.2	
ы		421C	80	Canton	FSL	B	6	7	0.2	Г
		4228	80	Canton	FSL	8	6	7	0.2	
		422C	80	Canton	FSL	8	6	7	0.2	Г
		4220	80	Canton	FSL	B	6	7	0.2	₹
		447E	40	Canton	FSL	B	6	7	0.2	1
		103C	45	Charlton	FSL	8	3.5	2	0.2	
		103E	45	Charlton	FSL	8	3.5	2	0.2	P .
	Soils MUSY	in Queue	cent SOIL	Icos	IP_NAME	Conta	er OM User	Depth H	xaho SLP	SS
	Soils	in Queue M Per	cent SOIL	Icos	Te	sture Us	er OM User	Depth Hj	idio SLP	55
	Soils MUSY	in Queue M Per	MP C+  12		Te	• Conta	erOM User	Depth Hj	rdro SLP	55
-1	Soils MUST	in Queue M Peri	MP (* )12 cent   SOIL		Te	Conta	er OM User	Depth Hy	ndeo SLP	55
4	Soils MUSH Pestic PESTI	in Queue M Peri cides in Qu	cent SOIL	PC Code	Reg No 1	eture Usi	er OM User	Depth Hy PARP	ndeo SLP	SS Method
4	Soils MUSYI Pestia PESTI	M Per	eeve 12	PC Code	Reg No 1	esture Use	er OM User	PARP	de SLP Area	SS Method
4	Soils MUSYI Pestia PESTI Help	M Peri	eue	PC Code	Reg No 1	edure Us	er OM User	PARP	Atea	Method

Click the *button to add the selected Soils row to the Soils in Queue* area as shown in the example below:

wind			the second s		and the second se		and a state of the			
Ope	n New	Tools Win	xdow Help							كلع
	Soils	Als P	oducts Scenari	os Interaction	u					
	Surv	rey Aces:	Hampshire Counti	es, Massachus	etts, Eastern F	at MA510	₩ R	atings 🖓 Pr	operties 🗖	7 Managemen
		MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPEG
	•	4218	. 80	Canton . · ·	F\$L ·····	B • • • • • •	6	7	0.2 · · · ·	
		421C	80	Canton	FSL	B	6	7	0.2	Г·
64	_	4228	80	Canton	FSL	8	6	7	0.2	
		422C	80	Canton	FSL	8	6	7	0.2	Г
		4220	80	Canton	FSL	B	6	7	0.2	4
		447E	40	Canton	FSL	B	6	7	0.2	7
		103C	45	Charlton	FSL	B	3.5	2	0.2	
		103E	45	Charlton	FSL	8	3.5	2	0.2	4
		4068	80	Charlton	FSL	8	6	2	0.2	
		PCT_CO	DMP <= 12		ate Records V	C Conta	ins 🕫 Begi	ns With		
F	Soils MUSY/	PCT_CI in Queue M Pe	DMP <= 12	[CO	ate Records V	where:	ns (* Begi	Depth H	ydeo (SLI	P [55
-	Soils MUSY7 4218	PCT_CI in Queue M Pe	0MP <= 12 rcent SOIL 80 Canton		ATE Records V	vhere: Conta sture Use FSL	ns 🕫 Begi r OM   User S	Depth H	ydro SU B I	P 5
wi	Soils MUSYI 4218	Exclude PCT_CI in Queue M Pe	DMP <= 12 rcent SOIL 80 Canton		ate Records V	vNeee. Conta solure Use FSL	ns (* Begi n OM   User 6	Depth H	ydło <u>SU</u> B I	P [5: I
-	Soils MUSY 4218 4 Pestic PESTI	Exclude PCT_CC in Queue M Pe cides in Q CDE	ome <= 12 rcent SOIL 80 Canton weue	PC Code	Reg No 1	Nhere: Conta solure Use FSL PLP F	no Pegi KOM User SRP	Depth H	ydro SU B I Area	P S:
- - - -	Soils MUSY 4218 • Pestic PESTIC	EXClude PCT_CC in Queue M Pe cides in Q CDE	Internet Soll	PC Code	Ale Records V MP_NAME	vites: Conta oture Use SL	ns Pegin	w With Depth H	pdeo SLI B I Area	P SS I Method
9	Soils MUSIN 4218 Pestic PESTIN Help	EXCLUSE PCT_CC in Queue M Pet cides in Q CDE	omer ( 12 roomt ( SOIL 80 Carlon weue	PC Code	Ale Records V MP_NAME	vites: Conta oture Use SL PLP F	ns Pegin rOM User S	Na With Depth H	pde SL B I Area	P 55 I Method

You can select and add multiple Soils rows at one time as shown in the example below.

To select more than one Soils row, select one row, then hold the **Control** key and select each of the other rows.

To select a continuous list of Soils rows, select one row, then hold the **Shift** key and select the last row.

Sur	vey Avea: 👖	Hampshire Counti	es, Massachus	etts, Eastern P	Pat: MA510 💌	₩ R	atings 🔽 Pri	operties 🔽	Managem
	MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPE
	301D	80	Montauk	FSL	С	4	6	0.32	2
	3028	80	Montauk	F\$L	C	4	6	0.32	
	302C	80	Montauk	FSL	C	4	6	0.32	Г
	3020	80	Montauk	FSL	C	4	6	0.32	7
	332E	40	Montauk	FSL	C	6	6	0.24	2
	103E	15	PAXTON		C	(null)	(null)	(null)	<b>V</b>
•	3058	85	Paston	FSL.	C	3.5	8	0.24	
	3050	85	Pavton	FSL	C	3.5	8	0.24	
	and the second s		-		-	-	-		_
Soils	3068 Exclude PCT_CI in Queue	85 DMP <= [12	Paston	FSL ate Records V MP_NAME	C where:	6 ins (* Begi	8 ns With	0.2	2
Soils	3068 Exclude PCT_CI in Queue M Pe	85 DMP <= 12 rcent   SOIL	Paton	FSL ate Records \ MP_NAME	C where: Conta sture Use	6 ins (* Begi x OM   Use	8 ns With Depth H	0.2 ydło SLP	2
Soils MUSY 4218	3068 Exclude PCT_CO in Queue M Pe	85 DMP <= 12 Incent SOIL 80 Carton	Paton	FSL ate Records V MP_NAME Te	C where: Conta solure Use FSL	6 ins (* Begi w OM User 6	8 ns With Depth H	0.2 ydło SLP B I	2
Soils MUSY 4218	 Exclude PCT_CC in Queue M Pe	85 DMP <= 12 rcent SOIL 80 Canton		FSL ate Records V MP_NAME Te	C where: Conta solute Use FSL	6 ins (* Begi ar OM User 6	8 ns With Depth H	o.2 pdilo SLP B I	2
Soils MUS1 4218	 Exclude PCT_CC in Queue M Pe	85 DMP <= 12 rcent SOIL 80 Canton	Paton	FSL ale Records V MP_NAME Te	C Where: Conta solute Use	6 ins (* Begi m OM User 6	8 Depth H	o.2 ydeo SLP B I	2
Soils MUS1 4218	3068 PCT_CI in Queue M Pe	85 DMP <= 12 Incent SOIL 80 Canton	Parton	FSL ale Records V MP_NAME Te	C where: T Conta solure Use FSL	6 ins (* Begi n OM User 6	8 Depth H	o.2 ydio SLP B I	2
Soils MUSS 4218	3068 PCT_CI in Queue M Pe	85 DMP <= 12 Incent SOIL 80 Carlon		FSL ale Records V MP_NAME	C where: Conta solure Use FSL	6 ins (* Begi m OM   User 6	8 ns With Depth H	o.2 pdio SLP B I	2

Click the button to add the two selected Soils rows to the **Soils in Queue** area as shown in the example below:

Oper		and other than the first of	eening roor-	W15-P51 3.1	[Select So	is and Pestici	des]			
	n New	Tools Wind	dow Help							@_X
	Soils	Als Pr	oducts Scenar	os Interaction	a					
	Surv	rey Acea:	lampshire Counti	es, Massachus	elts, Eastern P	at MA610 💌	R R	atings 🖂 Pri	operties 🔽 I	Management
		MUSYM	PCT_COMP	COMP_NAM	TEXTURE	HYDRO	USER_OM	USER_DEP	KFACT	SLOPEG .
		392E	40	Montauk	FSL.	C	6	6	0.24	2
- 1		103E	15	PAXTON		С	(null)	(null)	(null)	4
ы	>	3058	85	Paston	FSL	C	3.5	8	0.24	
_		305C	85	Pavton	FSL	С	3.5	8	0.24	
		3068	85	Pavton	FSL	с	6	8	0.2	
		3060	80	Paston	FSL.	C	6	8	0.2	
		3078	80	Paston	FSL	C	6	8	0.2	
		307C	80	Pavton	FSL	С	6	8	0.2	
		3070	80	Pavion	FSL	С	6	8	0.2	V +
										•
3	Soils	in Oursen								
		in Queue	- Law							1
	MUST	M Per	cent SOIL		Te	siture Use	r OM User	Depth H	xaho SLP	SSRF
F	MUSY1 4218	M Per	cent SOIL 30 Canton		T	sture Use	r OM User 6	Depth Hj	de SLP	SSRF
	MUSY1 4218 3058 3925	M Per	cent SOIL 30 Canton 15 Pauton 40 Montau	k	T	sature Use FSL FSL 3 FSL 3	r OM User 6 15 6	Depth H 7 8 6	ndeo <mark>SLP</mark> B I C L C L	SSRF I H H
	MUSY1 4218 3058 3925	M Per	cent SOIL 30 Canton 15 Paston 40 Montau	k.	T	ssture Use FSL FSL 3 FSL 3	6 6 6 6 6	Depth H 7 8 6	rdeo <u>SLP</u> B I C L C L	I H H
-1	MUSY1 4218 3058 3925	M Per	cent SOIL 30 Carton 15 Parton 40 Monta	k.	T	seture Use FSL FSL 3 FSL 3	6 6 15 6	Depth H 7 8 6	deo SUP 8 I C L C L	SSRF H H
-	MUSY1 4218 3058 3928 •	M Per	cent SOIL 30 Canton 15 Pailon 60 Montau	k	Te	seture Use FSL FSL 3 FSL 3	6 6 6 6	Depth Hj 7 8 6	deo SLP B I C L C L	SSRF H H
-	MUSY1 4218 3058 3925 • Pestia PESTI	dides in Qu	cent SOIL 30 Canton 15 Pailon 60 Monto. acue	k. PC Code	Reg No	soluce Use FSL 3 FSL 3 FSL 9 PLP P	KOM User 6 15 6 SRP	Depth H 7 8 6 PARP	xiteo SUP B I C L C L Area	SSR H H Method
- -	MUSY1 4218 3058 3925 4 Pestia PESTI	dides in Qu	cent SOIL 30 Carton 15 Paeton 60 Montau	k. PC Code	Reg No	extrue Use FSL S FSL S PUP P	OM User 6 15 6 SRP	Depth H 7 8 6 PARP	xdeo SLP B I C L C L Area	SSR
-	MUSY 4218 3058 3905 4 Pestie PESTI	cides in Qu	cent SOIL 30 Canton 15 Pauton 10 Montau aeue	k. PC Code	Reg No	sture Use FSL 3 FSL 3 FSL 9 PLP P	OM User 6 5 6 SRP	Depth H 7 8 6 PARP	deo SLP B I C L C L	SSRI H H H Method
	MUSY 4218 3058 3925 • Pestia PESTI	dides in Qu	oent SOIL 30 Canton 15 Paston 10 Montau aeue	k. PC Code	Reg No	oduze Use FSL 3 FSL 3 FSL 9 PLP P	COM User 6 5 6 SRP	Depth H 7 8 6 PARP	deo SLP B I C L C L	SSRF H H H
	MUSY 4218 3058 3925 • Pentio PESTI	cides in Os	oent SOIL 30 Canton 35 Parton 40 Montos aeue	k PC Code	Reg No	odure Use FSL 3 FSL 3 FSL 9 PLP P	COM User 55 6 SRP	Depth H 7 8 6 9 9 8	xbo SLP B I C L C L Area	SSRF H H Method
	MUSYI 4218 3058 3925 • Pestie PESTI	M Per	cent SOIL 80 Canton 15 Patton 80 Montas	k PC Code	Reg No	oture Use FSL 3 FSL 3 PLP P	SRP	PARP	deo SLP B I C L C L Area	SSRF H H Method
	MUSY1 4218 3058 3925 4 Pestia PESTI	dides in Qs cides Save S	cenatio Parton	k. PC Code	Reg No	oture Use FSL 3 FSL 3 PLP P	COM User 6 15 6 SRP	Depth H 8 6 PARP	eports	SSRF H H Method Close

## Adding AIs and Products

Selected Pesticides items from the Active Ingredients (AIs) and Products grids and saved Scenarios can be added to the **Pesticides in Queue** area. Selecting and adding Active Ingredients (AIs) and Products items are very similar and this section only shows a Products row example.

The example below shows one selected Products row in the Products grid:

Type       ALL       Products found: 21,655       Management         Name       EPA RegNo       PC_Name       PC_Code       PC_Pct         AATREX.NINE.0 HERBICIDE       100.497       Attacive       000003       42.6         AATREX.NINE.0 HERBICIDE       100.497       Attacive       000003       42.6         AATREX.NINE.0 HERBICIDE       100.565       Attacive       000003       42.6         AA BRAND COPPER SULFATE CRY       1278.8       Copper sulfate pentahydiate       024401       93         AB BRAND COPPER SULFATE CRY       1278.8       Copper sulfate pentahydiate       024401       93         ABACIDE       7945.19       Abamectin       122804       1         ABACIDE 2       7945.19       Abamectin       122804       1.9         ABACIDE 2       7945.27       Abamectin       122804       1.9         List Alls       Locate Records Where:       Imagement       Imagement       Imagement         MUSYM       Percent       SOIL       Texture       User Depth       Hydio       SUP         4218       80       Carton       FSL       6       7       8       1       1         2558       80       Windtor       LS       3	So	oils	Als Product	Scenario	s Interact	tions							
Name     EPA Reg No     PC_Code     PC_Pct       AATREX ALHERBIDDE     100497     Attaine     008003     42.5       AATREX NINE 0 HERBICIDE     100585     Attaine     008003     68.2       AB BRAND COPPER SULFATE CRY     1278.8     Copper sulfate pentahydiate     024401     99       AB BRAND COPPER SULFATE CRY     1278.8     Copper sulfate pentahydiate     024401     99       ABADDE     7946-19     Abarrectin     122804     1       ABADDE     7946-19     Abarrectin     122804     1       ABADDE 2     7946-19     Abarrectin     122804     1.9       List Als     Locate Records Where:     Image: Contains     © Begins With     MAT       Soils in Queue     Image: Contains     © Begins With     MAT       MUSYM     Percent     SOIL     Texture     User Depth     Hydio       4218     80     Carton     FSL     6     7     B     I       4218     80     Carton     FSL     3.5     0     C     I       4259     80     Windror     LS     3     9     A     H       2558     80     Windror     LS     3     9     A     H       4     PESTICIDE <t< th=""><th></th><th>Type</th><th>ALL</th><th></th><th></th><th></th><th colspan="3">🔽 Managemen</th><th>ient</th></t<>		Type	ALL				🔽 Managemen			ient			
AATREX AL HERBICIDE         100.497         Attache         000003         42.6           AATREX NINE 0 HERBICIDE         100.565         Attache         000003         68.2           A& BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           A& BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           AB BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           ABADDE         7946-19         Abaraccin         122804         1           ABADDE 2         7946-19         Abaraccin         122804         1           ABADDE 2         7946-19         Abaraccin         122804         1.9           Locate Records Where:         Locate Records Where:         Image: Contains         F Begins With         FAT           Uit Als         Locate Records Where:         Image: Contains         F Begins With         FAT           Soils in Queue         Image: Contains         F Begins With         FAT         E           4218         80         Canton         FSL         6         7         B         I           3258         80         Windtor         LS			Name			EPA Reg N	to PC_N4	ame		PC_Co	de PC	_Pot	
Add         AATREX NINE 0 HERBICIDE         100585         Anaxime         000003         68.2           AB BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           AB BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           AB BRAND COPPER SULFATE CRY         1278-8         Copper sulfate pentahydiate         024401         99           ABADDE         7946-19         Abamectin         122804         1           ABACIDE 2         7946-27         Abamectin         122804         1           ABACIDE 2         7946-27         Abamectin         122804         1.9           Locate Records Where:	. 1	•	AATREX 4L HER	BICIDE		100-497	Atrazin	•		080803	42	6	r
AB BRAND COPPER SULFATE CRY 1278-8 Copper sulfate perifahydiate 024401 99 AB BRAND COPPER SULFATE CRY 1278-8 Copper sulfate perifahydiate 024401 99 ABADDE 7946-13 Abamectin 122804 1 ABADDE 2 7946-27 Abamectin 122804 1.9  ABADDE 2 7946-27 Abamectin 122804 1.9  Locate Records Where: List Als Defended to the set of	чIГ		AATREX NINE (	HERBICIDE		100-585	Atrazin	•		080803	88.	2	
AB BRAND COPPER SULFATE CRY 1278-8 Copper sulfate perifatydate 024401 99 ABADDE 2 7946-19 Abamectin 122804 1 ABADDE 2 7946-27 Abamectin 122804 1.9  ABADDE 2 7946-27 Abamectin 122804 1.9  List Als List Als Locate Records Where: List Als Percent SOIL Texture User OM User Depth Hydro SLP SS AC L H ASS Percent SOIL Feature Persticides in Queue PESTICIDE PC Code Reg No PLP PSRP PARP Area Method			AB BRAND COP	PER SULFA	TE CRY	1278-8	Copper	sullate pental	hydrate	024401	99		
ABAODE 7946-19 Abarrectin 122804 1 ABAODE 2 7946-27 Abarrectin 122804 1.9 ABAODE 2 7946-27 Abarrectin 122804 1.9  Locate Records Where: List Als Percent SOIL Texture User OM User Depth Hydro SLP SS 4218 80 Carton FSL 6 7 B I 1 4218 80 Carton FSL 5 7 B I 1 4258 80 Window LS 3 9 A H L  Perticides in Queue PESTICIDE PC Code Reg No PLP PSRP PARP Area Method			A8 BRAND COP	PER SULFA	TE CRY	1278-8	Copper	sullate pental	hydrate	024401	99		
ABADDE 2 7945-27 Abarrectin 122804 1.9  ABADDE 2 7945-27 Abarrectin 122804 1.9  Locate Records Where: List Als Locate Records Where: Contains  Begins With AAT  Soils in Queue  MUSYM Percent SOIL Texture User OM User Depth Hydro SLP 53 4218 80 Carton F5L 5 7 B I 1 4218 80 Carton F5L 5 7 B I 1 2558 80 Window LS 3 9 A H L  Perticides in Queue  Pesticides in Queue  PESTICIDE PC Code Reg No PLP PSRP PARP Area Method			ABACIDE			7946-19	Abame	ctin		122904	1		
List Als Locate Records Where: List Als Locate Records Where: Name C Contains  Begins With AAT Soils in Queue MUSYM Percent SOIL Texture User OM User Depth Hydro SLP SS 4218 80 Carton FSL 6 7 8 I 1 305 805 Patron FSL 35 8 C L H 2558 80 Windoor LS 3 9 A H L  Pesticides in Queue PESTNODE PC Code Reg No PLP PSRP PARP Area Method			ABACIDE 2			7946-27	Abame	ctin		122904	1.9		
4218         80         Canton         FSL         6         7         B         I         I           3058         05         Parton         FSL         35         8         C         L         H           2558         00         Windtor         LS         3         9         A         H         L           Vet             Pesticides in Queue         Pesticides in Queue         PESTICIDE         PC.Code         Reg No         PLP         PSRP         PARP         Area         Method		L	ist.Als		Locate	Records Whe	C Conta	ins (° Bey	gins With AAT				۲ ۱
And a set of the set o	Se M		ist Als	SOIL	Name	Records Whe	re: C Conita Texture	ins (* Be	gins With AAT	Hudeo	[ SLP		55
el    Pesticides in Queue   PESTICIDE   PC.Code   Reg.No  PLP  PSRP  PARP  Area  Method	50 MI 42	L pils in USYM 218	ist Als	SOIL	Locate	Records Whe	Conta Conta Texture FSL	ins @ Bey User OM	gins With AAT	Hydro	SUP	-	55
Pesticides in Queue      PESTICIDE     PC Code Reg No PLP     PSRP     PARP     Area Method	Se MI 42 30 25	L pills in USYM 218 258 258	ist Als n Queue Percent 80 85 80	SOIL Canton Pauton Windsor	Name	Records Whe	C Conta C Conta Texture FSL FSL LS	ins (* Be User OM 6 35 3	gins With AAT	Hydro B C A	SLP I L H		555 I H L
Pesticides in Queue PESTICIDE PC Code Reg No PLP PSRP PARP Area Method	50 MI 42 30 25	L Dills in USYM 218 258 258	ist Als n Quese Percent 80 85 80	SOIL Canton Panton Windsor	Name	Records Whe	re. C Conta Texture FSL FSL LS	User OM	gins With AAT	Hydro B C A	SLP I H		SSS I H
resindue recoon negros rur irane reen enco	50 50 12 30 25 1	L Dills in USYM 218 258 258	ist Als	SOIL Canton Paeton Windsor	Name	Records Whe	C Conta Texture FSL FSL LS	ins Per User OM 6 35 3 3	gins With AAT	Hydeo B C A	I L H	T	555 I H L
	50 M 42 30 25 4 Pe	L Dills in USYM 218 58 58 58 58	ist Als	SOIL Carton Pailon Windsor	Locate   Name	Records Whe	Texture FSL FSL LS	User OM 6 35 3	gina With AAT	Hydro B C A	SLP I H		SSI H

Click the button to add the selected Products row to the **Pesticides in Queue** area as shown in the example below:

🖒 Win 🏠 Op	dows Po en New	esticide Screenir Tools Window	ng Tool - WIN-PST : Help	3.1 - [Select So	ils and Pesticides	1			
	Sols	Als Product	Scenarios Intera	ctions					
	Тур	e ALL		1	Products for	ind: 21,655	F	Manager	ent.
		Name		EPA Reg No	PC_Name		PC_Code	PC_Pct	
	•	BICEP II MAGNI.	JM HERBICIDE	100-817	Atrazine		080803	33	_
~		BICEP II MAGNU	JM HERBICIDE	100-817	S-Metolachior		108800	26.1	
		BICEP LITE II M	AGNUM HERBICIDE	100-827	Atrazine		080803	28.1	
		BICEP LITE II M	AGNUM HERBICIDE	100-627	S-Metolachior		108800	35.8	
		BICEP MAGNUM	6	100-886	Atrazine		080803	33.7	
		BICEP MAGNUM	4	100-886	S-Metolachior		108800	26.1	1
	4								•
	Soils MUSY1	M Percent	SOIL	T	exture User ON	4 User Depth	Hydro S	UP	SSR
	421B	M Percent 80	Canton		FSL 6	7	B 1	ΟP ]	<u>558</u>
	3058	85	Pavton		FSL 3.5	8	C L		н
	2000	80	Windson		LS 3	3	A H	1	
Del									
	Pestic	ides in Queue	,						-
	PESTI	CIDE	PC Code	Reg No	PLP PSRF	PARP	Area	Method	T
	AATOS	EX 4L HERBICIDE :	Ahaz 080803	00010000	н н	1	Broadcast	Surface A	
	Aning								
	(Anine								
	AATING								
									1
	Help	Save Scena	nio 🕒				Reports -	Close	

See the previously explained Adding Soils section for more information on selecting and adding more than one row.

# **Adding Scenarios**

Selected **Scenarios** can be added to the Queue areas. The Soils and Pesticides items in the selected **Scenario** will be added to the **Soils in Queue** and **Pesticides in Queue** areas.

The example below shows	a selected Scenario:
-------------------------	----------------------

A	soms resulting screening	3 1001 - WINH	PST 3.1 - [Sele	ct Soils and Pest	acides]			
C Op	en New Tools Window H	telp						
	Soils Als Products	Scenarios	nteractions					
	Category 1 al		Calegory	2 al	•	Category 3 al	1	
	Scenarios			Soils for: T	wo Soils			
	JobName	Category 1	Category 2	C JobName	COMP_NAM	SSANAME	STATE	SSAID
	Sample Reports	Examples		Two Soils	Brimfield	Hampden an	MA	610
~**	Two Sols			Two Soils	Canton	Hampden an	MA	610
				Pesticides	for: Two Sols			÷
				JobName	AL NAME	PC_CODE	PC_PCT	ProductLi
				Two Sols	2.4-08, dimet	030819	25.9	2,4-08 20
	MUSYM Percent	SOIL		Texture U	Jser OM User	Depth Hy	dio SLP	SSF
Deal	Soils in Queue MUSYM Percent	SOIL		Texture L	Jser OM User	Depth Hy	deo SLP	SSE
Del	Soils in Queue MUSYM Percent	SOIL		Texture U	Jser OM User	Depth Hy	deo SLP	SSF
Del	Soils in Queue MUSYM Percent * Pesticides in Queue	SOIL		Texture	Jser OM User	Depth Hy	deo SLP	SSF
Del	Soilt in Queue           MUSYM         Percent           4         Pesticides in Queue           PESTICIDE         Pesticides	SOIL	ode Reg N	Texture L	Jser OM User PSRP	Depth Hy	dio SLP Area	SSF
Del	Soils in Queue MUSYM Percent Pesticides in Queue PESTICIDE	SOIL	ode Reg N	Texture I	Jser OM User	Depth Hy PARP	dro SLP Area	SSF
Del	Soils in Queue MUSYM Percent Pesticides in Queue PESTIODE	SOIL PC C	ode Reg N	Texture I	Jser OM User	Depth Hy	dro SLP Area	SSF
Del	Soils in Queue MUSYM Percent Pesticides in Queue PESTIQDE	SOIL PC C	ode Reg N	Texture U	Joer OM User	PARP	dio SLP	SSF
Del	Soils in Queue MUSYM Percent    Pesticides in Queue PESTICIDE	SOIL PC C	ode Reg N	Texture   L	Joer OM User	Page P	dio SLP	SSF 
Del	Soils in Queue       MUSYM       Pesticides in Queue       FESTICIDE       I       Help	PC C	ode   Reg N	Texture	Jser OM User	PARP	Area	SSF

Click the *button to add the selected Scenario to the Queue areas as shown in the example below:* 

the states	on hims. Tool	ue screenas	g Tool - WIN-	PST 3.1 - [Sele	et so	oils and Pesti	cides]			-10
p op	Soils Als	Products	Scenarios 1	nteractions	-					219
	Categor	y1 al		Category	2 2	al .		Category 3 al		
	Scenarios					Soils for: To	vo Soils			
	Job	Name	Calegory 1	Category 2	C	JobName	COMP_NAM	SSANAME	STATE	SSAID
	San	ple Reports	Examples			Two Soils	Brimfield	Hampden an	MA	610
44	First	Solis	1		ч	Two Soils	Canton	Hampden an	MA	610
						•				
						Pesticides	for: Two Solls			
						JobName	AI_NAME	PC_CODE	PC_PCT	Product
						Two Solis	2,4-08, dimet	030819	25.9	2,4-08 2
	4 Edit	Delete		_	Þ	4				
	Soils in Q	ueue			_					
	MUSYM	Percent	SOIL		T	exture U	ser OM User	Depth Hys	to SLP	55
	100E	25	Brimfield			FSL	3.5	2 D	V V	н
	4218									
	1210	80	Lanton			FSL	6	7 8		1
		90	Canton			FSL	6	7 8		1
Nel	1	80	Canton			FSL	6	7 8		1
Nel	Pesticides	so in Queue	Canton			FSL	6	7 8		
-	Pesticider     PESTICIDE	in Queue	PC C	ode Reg No	2	PLP	6 PSRP	PARP 0	Area	Method
Del	Pesticides PESTICIDE 2.408 2008	i in Queue	ER 030	ode Reg No 319 0663300	» [	PLP	e PSRP	PARP   L B	Area Area	Method rface A
)el	Pesticides     PESTICIDE     2.4-08 2008	in Queue	Canton PCC €R. 030	ode Reg Ni 319 0663300	<u>»</u>	PLP	6 PSRP	PARP   L B	Area Area	Method rface A
2	Pesticides     PESTICIDE     2.4-08 2008     Help 5	in Queue ROADLEAF H	Canton PCC €R	ode Reg No 319 0663300	a [	PLP	6 PSRP	PARP B	Area noadcast Su	Method Alace A

Only one Scenario can be selected and added to the Queue at a time.

You can continue selecting additional Scenarios and adding their contents to the Queue area. The Queue area will accumulate the contents of all the added Scenarios.

### **Deleting Queue Soils and Pesticides**

Items in the Queue can be removed in two ways:

- 1. Selecting and deleting individual Soils or Pesticides items, or
- 2. Clearing all items in the **Soils in Queue**, **Pesticides in Queue** or both Queue areas.

The example below shows a selected Soils in Queue row:

	Soils in Qu	eue									
	MUSYM	Percent	SOIL		Texture		User OM	Uper Depth	Hydro	SUP	SSRF
	4218	80	Canton		FSL	_	6	7	8	1	1
	3058	85	Paston		FSL		3,5	8	c	ι	н
_	2558	80	Windson		LS		3	9	A	н	L
Del	-										
	-										<u> </u>
	Pesticides	in Queue				_					
	PESTICIDE		PC Code	Reg N	o PLP		PSRP	PARP	Are	8	Method
											1 1
	-					-					

Click the *button to delete the selected row from the* **Soils in Queue** area.

Use the same process to select and delete rows from the **Pesticides in Queue** area.

You can select and delete multiple rows at one time.

To select more than one row, select one row, then hold the **Control** key and select each of the other rows.

To select a continuous list of rows, select one row, then hold the **Shift** key and select the last row.

Right-click the button to see the three selections available for clearing items from the Queue areas. The example below explains the second way to delete Queue items:

	Soils in Qu	Jeue								
	MUSYM	Percer	R SOIL			Texture	User OM	User Depth	Hydro SL	JP SSR
	4218	80	Canto	n		FSL	6	7	B I	1
	3058	85	Pavto	n		FSL	3.5	8	C L	н
	2558	80	Wind	bor		LS	3	9	A H	L
De						_				
-	Clear Sols Queu	,	<u> </u>							
			e							
	Clear Pesticides	Queue		PC Code	Reg No	PLP	PSRP	PARP	Area	Method
	-		: Abaz	080803	00010000	н	н	1	Broadcast	Surface A
	Clear Both		BICIDE	080803	00010000	н	н		Broadcast	Surface A
_	EICEP II MAI	(NUM HE)	REICIDE	108800	00010000	н	н	1	Broadcast	Surface A
	ROUNDUPH	<b>IERBICIDE</b>	: Glyph	103601	00052400	V (f)	1.03	1 (1)	Broadcast	Foliar
	1.1									_
	•									

To delete all of the **Soils in Queue** items, right-click the button and select Clear Sols Queue. All of the items in the **Soils in Queue** area will be removed. To delete all of the **Pesticides in Queue** items, right-click the button and select **Clear Pesticides Queue**. All of the items in the **Pesticides in Queue** area will be removed.

To delete all of the **Soils in Queue** and **Pesticides in Queue** items, right-click

the button and select	Clear Both	. All of the items in the <b>Soils in</b>
Queue and Pesticides in	Queue areas w	vill be removed.

## **Reports and Exports**

#### **Reports and Exports Introduction**

WIN-PST produces a number of reports and offers several export formats.

**Note**: The Reports button is active when you have added Soils, Active Ingredients or Products to the Queue. The content for all reports comes directly from the items in the Queue.

See <u>Queue Maintenance</u> for more information.

The WIN-PST reports are:

- 1. Soil Sensitivity to Pesticide Loss Rating Report (Soils)
- 2. Pesticide Active Ingredient Rating Report (Pesticides)
- 3. Soil / Pesticide Interaction Loss Potential and Hazard Rating Report (Interactions)

The WIN-PST exports are:

- 1. SoilData (Soils)
- 2. ChemData (Pesticides)
- 3. InteractionData (Interactions)

To see the **Reports** (and Exports) screen, click the **Reports** button on the **Select Soils and Pesticides** screen. The following example screen will display:

Reports	2
Rainfall is HIGH	
User Data Cooperator	
Tract Field	
Select Reports	
Pesticides.rpt     Soils.rpt	Preview 👌
Interactions.rpt	Print 📇
	PDF 📆
Printer Microsoft Office Document Image Writer	•
PDF location C:\WIN-PST 3.1\Reports\	
Export	
AI-Product Path\Filename:	
C:\WIN-PST 3.1\Exports\ChemData.xls	2
Soils Path\Filename:	access 1
C:\WIN-PST 3.1\Exports\SoilData.xls	
Interactions Path/Filename:	1
C:\WIN-PST 3.1\Exports\InteractionData.xls	
C Text Only C Excel Only C Both	Export
	Close 🖏

Create a Report explains how to create a WIN-PST report.

Create an Export explains how to create a WIN-PST export file.

## **Create a Report**

The top half of the **Reports** screen relates to report creation. On this screen you can:

- 1. Assign User Data to the report.
- 2. Select one or more report types for creation.
- 3. Customize each type of report to show specific data elements.
- 4. Select a Printer.
- 5. Select a PDF folder location.
- 6. Preview, Print or create a PDF report file.

**Note**: Reports are derived from the items in the Queue. The Queue must contain one or more Soils in order to produce a Soils Report. The Queue must contain one or more Pesticides in order to produce a Pesticides Report. The Queue must contain one or more Soils and Pesticides in order to produce an Interactions Report.

Reports Bainfall is HIGH	×
User Data Cooperator Tract Field	
Select Reports	Preview 👌 Print 😅 PDF 🕵
Printer Microsoft Office Document Image Writer PDF location C:\WIN-PST 3.1\Reports\	

The example **Reports** screen above shows default settings without User Data and without Selected Reports selections.

#### **User Data**

To add **User Data** to a report:

- Select the User Data checkbox.
- Enter Cooperator, Tract and Field data as necessary. These fields are optional.

To remove **User Data** from a report:

• De-select the User Data checkbox.

## **Select Reports**

The following example shows selected checkboxes for all report types and all report type data elements:



Use the **Select Reports** checkboxes to select report types and specific report type data elements.

## Viewing a Report

After selecting one or more report types and optional User Data, click the **Preview a** button. All of the selected report types will display as shown in the example below:



The above example shows a preview screen for each of the three report types selected. To see a partially hidden report, click on any visible portion of the report to bring it to the front.

Be sure to close each preview screen when you are done.

## **Printing a Report**

After selecting one or more report types and optional User Data:

- 1. Select a destination printer: Printer Microsoft Office Document Image Writer
- 2. Click the <u>Print</u> button and the selected report types will be sent to the destination Printer.

### **Creating a Report PDF file**

PDF file creation will group selected report types together by assigning an incremental sequential number to the output file names. In the example below, all of the output file names start with '001-'. The sequential number added to the file names will increment each time you create PDF files.

After selecting one or more report types and optional User Data:

- 1. Select a destination folder: PDF location C:\wIN-PST3.1\Reports\
- 2. Click the PDF button to begin file creation for the selected report types.
- 3. When complete, the output PDF files will display as shown in the following example:

WIN-PST 3.1 Message
PDF Files Created
Output PDF location: C:\WIN-PST 3.1\Reports\ 001-Pesticides 001-Soils 001-Interactions
Ok

## Create an Export

The bottom half of the **Reports** screen relates to the creation of export files. On this screen you can:

- 1. Select one or more export types for file creation.
- 2. Select one or more export formats for file creation.
- 3. Select a file folder location for each export type.

**Note**: Exports are derived from the items in the Queue. The Queue must contain one or more Soils in order to produce a Soils export. The Queue must contain one or more Pesticides in order to produce a Pesticides export. The Queue must contain one or more Soils and Pesticides in order to produce an Interactions export.

Reports		×
Rainfall is HIGH		
User Data		
Export	l	
	Al-Product Path\Filename:	
	C:\WIN-PST 3.1\Exports\ChemData.xls	
	Soils Path\Filename:	
	C:\WIN-PST 3.1\Exports\SoilData.xls	
	Interactions Path\Filename:	
	C:\WIN-PST 3.1\Exports\InteractionData.xls	
	C Text Only C Excel Only C Both	

The bottom of the example **Reports** screen above shows default settings without any Export selections.

Note: The Export button is active when you select one or more Export types.

The

## Export

To add an Export file:

• Select the checkbox on the left of the export type.

To remove an Export file:

• De-select the checkbox on the left of the export type.

## **Select Reports**

The following example shows selected checkboxes for all report types and all report type data elements:



Use the **Select Reports** checkboxes to select report types and specific report type data elements.

## Viewing a Report

After selecting one or more report types and optional User Data, click the **Preview a** button. All of the selected report types will display as shown in the example below:



The above example shows a preview screen for each of the three report types selected. To see a partially hidden report, click on any visible portion of the report to bring it to the front.

Be sure to close each preview screen when you are done.

## **Printing a Report**

After selecting one or more report types and optional User Data:

- 1. Select a destination printer: Printer Microsoft Office Document Image Writer
- 2. Click the <u>Print</u> button and the selected report types will be sent to the destination Printer.
# **Creating a Report PDF file**

PDF file creation will group selected report types together by assigning an incremental sequential number to the output file names. In the example below, all of the output file names start with '001-'. The sequential number added to the file names will increment each time you create PDF files.

After selecting one or more report types and optional User Data:

- 1. Select a destination folder: PDF location C:\wIN-PST3.1\Reports\
- 2. Click the PDF button to begin file creation for the selected report types.
- 3. When complete, the output PDF files will display as shown in the following example:

WIN-PST 3.1 Message
PDF Files Created
Output PDF location: C:\WIN-PST 3.1\Reports\ 001-Pesticides 001-Soils 001-Interactions
Ok

# **Soils Report**

The Soils Report title is Soil Sensitivity to Pesticide Loss Rating Report as shown in the following example:

<u>ار</u>	١٢	íC.	Σċ	Conservatio	n Service					4/21/200	S 9:	57AM	Page 1 of 1
				Soil S	ensitivity	to Pe	esticide	e Loss	s Ratii	ng Repo	ort		
pdən	and	Hamp	shire	Counties, Mass	achusətts, Ea	astern P	art: MAG	10					
										Leaching	R.	unoff	_
Musy	m	Seq	% 80	Name	Texture	Hydro	Kfactor	Depth 7	001%		Solution	Adsorbe	đ
	G	Lda (nec Hij	Slope ; ropores; ph Wate	penter then 15% Felse desper then 24": Felse r Table within 24": Felse		5	0.2	ŕ	č			·	
305	8	1	85	Paxton	FSL	С	0.24	8	3.5	L	н	н	
	G	ula (nec He	Slope ; ropores; ph Wate	pealer than 15%. False damper than 24°: False r Table within 24°: False									
255	в	1	80	Windsor	LS	А	0.17	9	3	н	L	L	
	G	uda (mec Hij	Slope ; ropores) ph Wate	penter then 15%: Felse desper then 24": Felse r Table within 24": Felse									
				LEGEN	D								
High Interm Low Very L	edia .ow	te											
titions T T T	that here he h he f	affect r are su igh wai eid sioj	atings inface ter tab pe is g	connected macropole of comes within 24' greater than 15%.	ores (cracks) th of the surface	at go at i during tr	ieast 24 ind he growing	ches dee; season.	0.				
PIIS	oli Ra	atings:		Sell Leasting Fri									
aching		ion.		<ul> <li>Soil Leaching Pot</li> <li>Soil Solution Pup</li> </ul>	ensial M Detection								

# Soils Legend

- H -- High
- I -- Intermediate
- L -- Low
- V -- Very Low

Conditions that affect ratings:

- -- There are surface connected macropores (cracks) that go at least 24 inches deep. m w
  - -- The high water table comes within 24" of the surface during the growing season. -- The field slope is greater than 15%.
- S

SPISP II Soil Ratings:

Leaching -- Soil Leaching Potential Runoff - Solution -- Soil Solution Runoff Potential Runoff - Adsorbed -- Soil Adsorbed Runoff Potential

# **Pesticides Report**

The **Pesticides Report** title is **Pesticide Active Ingredient Rating Report** as shown in the following examples:

	-7	Conse	rvatio	n Serv	vice				4/21/200	5 9	57AM	Pa	ge 1 of 2
			Pest	icide A	Active In	gredien	t Rating	) Repo	rt				
lotive Ingredient Common Name	рH	Solubility in Water (ppm)	Half Life (days)	KOC (mLíg)	Human Toxcicity (ppb)	Fish To MATC* (ppb)	xicity STV	SPISP II Leaching	Pesticde F —— Ra Solution	Ratings noff <u> </u>	Expos Toxici — Wate Human	ure Adju ty Catego r — Fish	sted ory Sedimen Fish
AATREX 4L HERBIC	IDE												
42.6% Atrazine Reg No: 00010000497 PC_Code: 080003 Method: Surface App Area: Broadcast Rate: Standard	Ned	33	60	100	3.00	29.58	2,958.04	н	н	r	н	I	v
BICEP II MAGNUM H	IERE	ICIDE											
33% Atrazine Reg No: 00010000817 PC_Code: 080803 Method: Surface App Area: Broadcast Rate: Standard	alled	33	60	100	3.00	29.58	2,958.04	н	н	I.	н	I	v
26.1% S-Metolach Reg No: 00010000817 PC_Code: 108800 Nethod: Surface App	lor	480	43	137	700.00	40.99	5,615.33	۰	H	I	v	ı	v

PC_Code: 103601 900000 47 24000 700.00 168.01 4,032,263.73 V (f) I (f) I (f) V L V Method: Foller

Area: Broadcast

Rate: Standard

	Pesticide Active Ingredient Rating Report										
Active Ingredient Common Name	рH	Solubility in Water (ppm)	Half Life (days)	KOC (mLig)	Human Toxcicity (ppb)	Fish Toxicity MATC* STV (ppb)	SPISP II Pesticde Ratings Leaching Ranoff Solution Advarbed	Exposure Adjusted Toxicity Category — Wrier — Sedment Human Fish Fish			

LEGEND
X eXtra high
H High
I Infermediate
L Low
V Very low
Conditions that affect ratings:
(none) Broadcast application (default); applied to more than 1/2 the field
b Banded application; applied to 1/2 the field or less
p Spot application; applied to 1/10 of the field or less
(none) Surface applied (default); applied to the soil surface
I Soll incorporated; with light tillage or irrigation
f Follar application; directed spray at nearly full crop/weed canopy
(none) Standard application rate (default); greater than 1/4 lb/acre
I Low rate of application; 1/10 to 1/4 lb/acre
<ul> <li>Ultra Low rate of application; 1/10 lb/acre or less</li> </ul>
SPISP II P-Ratings:
Leaching Pesticide Leaching Potential
Runoff Solution Pesticide Solution Runoff Potential
Runoff Adsorbed Pesticide Adsorbed Runoff Potential

# **Pesticides Legend**

- X -- eXtra high H -- High
- I -- Intermediate
- L -- Low
- V -- Very low

Conditions that affect ratings:

(none) b p	<ul> <li>Broadcast application (default); applied to more than 1/2 the field</li> <li>Banded application; applied to 1/2 the field or less</li> <li>Spot application; applied to 1/10 of the field or less</li> </ul>
(none) I f	<ul> <li>Surface applied (default); applied to the soil surface</li> <li>Soil incorporated; with light tillage or irrigation</li> <li>Foliar application; directed spray at nearly full crop/weed canopy</li> </ul>
(none) I <ul></ul>	<ul> <li>Standard application rate (default); greater than 1/4 lb/acre</li> <li>Low rate of application; 1/10 to 1/4 lb/acre</li> <li>Ultra Low rate of application; 1/10 lb/acre or less</li> </ul>

#### SPISP II P-Ratings:

Leaching -- Pesticide Leaching Potential Runoff Solution -- Pesticide Solution Runoff Potential Runoff Adsorbed -- Pesticide Adsorbed Runoff Potential

# **Interactions Report**

The Interactions Report title is Soil / Pesticide Interaction Loss Potential and Hazard Rating Report as shown in the following examples:





# Interactions Legend

- X -- eXtra high
- H High
- I Intermediate
- L Low
- V -- Very low

Conditions that affect ratings:

(none) b p	<ul> <li> Broadcast application (default); applied to more than 1/2 the field</li> <li> Banded application; applied to 1/2 the field or less</li> <li> Spot application; applied to 1/10th of the field or less</li> </ul>
(none) i f	<ul> <li>Surface applied (default); applied to the soil surface</li> <li>Soil incorporated; with light tillage or irrigation</li> <li>Foliar application; directed spray at nearly full crop/weed canopy</li> </ul>
(none) I <ul></ul>	<ul> <li>Standard application rate (default); greater than 1/4 lb/acre</li> <li>Low rate of application; 1/10 to 1/4 lb/acre</li> <li>Ultra Low rate of application; 1/10 lb/acre or less</li> </ul>
m w s	<ul> <li>There are surface connected macropores (cracks) that go at least 24 inches deep.</li> <li>The high water table comes within 24" of the surface during the growing season.</li> <li>The field slope is greater than 15%.</li> </ul>
<none> <dry> applicatio</dry></none>	Default condition for all climates that have rainfall/irrigation after pesticide application Exception for arid climates that have a low probability of rainfall and no irrigation after pesticide on

SPISP II I-Ratings:

Leaching -- Soil / Pesticide Interaction Leaching Potential Solution -- Soil / Pesticide Interaction Solution Runoff Potential Adsorbed -- Soil / Pesticide Interaction Adsorbed Runoff Potential

# <u>Tools</u>

# Introduction

The **Tools** menu allows you to perform various setup and configuration tasks.

The **Tools**, **Options** menu selection provides customization for your database files, reports and export file locations, tool tip settings, site conditions, colors and cached soils data.

To begin, choose **Tools**, **Options** from the menu bar:

	😂 Windows Pesticide Screening Tool - WIN-PST 3.1								
•	😂 Op	en New	Tools	Window	Help				
Γ		Soils	Opt	ions		iarios	Interactions		
L			Dat	abase Utili	ty				
L			Upo	late Pestic	ides				

The **Tools**, **Database Utility** menu selection provides functionality to create a new WIN-PST Main database or import saved Scenario information from another WIN-PST Main database.

To begin, choose **Tools**, **Database Utility** from the menu bar:

٢	🍲 Windows Pesticide Screening Tool - WIN-PST 3.1								
٩	Op	en New	Tools	Window	Help				
		Soils	Opt	ions		arios	Interactions		
			Dat	abase Utili	ty				
			Upo	late Pestic	ides				

The **Tools**, **Update Pesticides** menu selection provides functionality to update your WIN-PST main database with the latest pesticides information.

To begin, choose Tools, Update Pesticides from the menu bar:

K	🕸 Windows Pesticide Screening Tool - WIN-PST 3.1								
3	<b>3</b>	Оре	n New	Tools	Window	Help			
Γ		ſ	Soils	Opt Dat	ions abase Utili	FU.	iarios	Interactions	
L				Upc	late Pestic	.y ides			

## **User Options**

Start Tools, Options as described in the Introduction.

## Databases

Choose the **Databases** tab to see your database file names and locations:

💀 WIN-PS1	l Options				
Databases	Locations 1	⊺oolTips   Site Conditi	ons Colors Cached		
Main data IV Use o	abase location default Main da	Itabase			
C:\Progra	m Files\USDA\	WIN-PST 3.1 WinPst3	1.mdb		
Size	18.36 MB	Last updated	3/10/2008 3:46:16 PM		
-Soil Surv	ey Geographic	: (SSURGO) database	e location		
Use 9	Sample SSUR(	GO database			
C:\Progra	m Files\USDA\	WIN-PST 3.1\Sample\	SSURGO.mdb		
Size	25.00 MB	Created	10/31/2006 1:35:24 PM		
				Save	Close
Status:	Ready				//

If you are not currently using the default Main database and you want to use the default Main database, you can quickly change to it by selecting the checkbox for **Use default Main database** as shown below:

🔽 Use default Main database

To locate another Main database, click the button within the Main database location area.

If you are not currently using the Sample SSURGO database and you want to use the Sample SSURGO database, you can quickly change to it by selecting the checkbox for **Use Sample SSURGO database** as shown below:

▼ Use Sample SSURGO database

To locate another SSURGO database, click the button within the Soil Survey Geographic (SSURGO) database location area.

# Locations

Choose the Locations tab to see your output Reports and Exports folder locations:

🚭 WIN-PST Options	
Databases Locations ToolTips Site Conditions Colors Cached	
Default Reports/Exports folders	1
Use default Reports folder	
C: WMN-PST 3.1 Reports	
✓ Use default Exports folder	
C:WVIN-PST 3.1\Exports	
Save	<u>C</u> lose
Status: Ready	//

If you are not currently using the default Reports folder and you want to use the default Reports folder, you can quickly change to it by selecting the checkbox for **Use default Reports folder** as shown below:

Use default Reports folder

To locate another Reports folder, click the button.

If you are not currently using the default Exports folder and you want to use the default Exports folder, you can quickly change to it by selecting the checkbox for Use default Exports folder as shown below:

☑ Use default Exports folder

To locate another Exports folder, click the button.

# Tool Tips

Choose the **ToolTips** tab to see your Tool Tip display settings:

win-PST Options	5					
Databases Location	is To	olTips Site	Conditions Colors	Cach	ed	
Grid Column Heade	rs —					
Popup delay	1	(seconds)	Remains visible	5	(seconds)	
Other Controls (but	tons, a	checkboxes,	labels, etc.)			
Popup delay	1	(seconds)	Remains visible	5	(seconds)	
<u>,                                     </u>					Save	<u>C</u> lose
Status: Ready						//

Tooltips are graphical elements that provide help related information in a small pop-up display when you hover your mouse over a form area. The following are two examples of WIN-PST 3.1 tooltips:

Example tooltip for the column USER_DEP:

US	SER_DEP	KFACT	SLOPEGR1	CRACKSGR	HWT_LT_
2		0.17			
2	of the soi	pplied value I surface ho	e (inches) that rej irizon.	presents the De	
2		0.17	<b>v</b>		

Example tooltip for the button Add:

	1		100C	25	Brimfield	FSL
Add			100E	25	Brimfield	FSL
			100E	25	Brimfield	FSL
			1000	35	Brookfield	ESL
1	Sele	ect a So Hick H	ils, Active Ingr	edients (AIs), i to copy it	or Products rov	V SL
	inte	o the Qi	ueue area belo	w.		SL
			401C	80	Brookfield	FSL

You can separately adjust your tooltip settings for grid column header cells and other form controls.

In the Grid Column Headers area, use the **Show tooltips** checkbox to enable tooltips (checked) or disable tooltips (not checked). You can also adjust the **Popup delay** (how quickly the tooltip will display when you hover your mouse) and the **Remains visible** (how long the pop-up stays visible) settings.

In the Other Controls area, use the **Show tooltips** checkbox to enable tooltips (checked) or disable tooltips (not checked). You can also adjust the **Popup delay** (how quickly the tooltip will display when you hover your mouse) and the **Remains visible** (how long the pop-up stays visible) settings.

# **Site Conditions**

Choose the **Site Conditions** tab to see your Rainfall setting:

💀 WIN-PST Options		
Databases Locations ToolTips Site Conditions Colors Cached		
Rainfall O Low O High		
	Save	<u>C</u> lose
Status: Ready		

Use the **Rainfall** radio button to set your default to Low or High.

# Colors

Choose the **Colors** tab to see your text and alternating row display colors:

win-PST Options	
Databases   Locations   ToolTips   Site Conditio	ns Colors Cached
Soils Grid Row Color Name Gainsboro	Alternate Row Color Name WhiteSmoke
Text Color Name Navy	
Data Management Grid Row Color Name AliceBlue	Alternate Row Color Name White
Text Color Name Black	
Status: Ready	<u>Save</u> <u>Close</u>

Use the Soils Grid area to adjust the Soils Tab grid row colors and text color.

Use the **Data Management Grid** area to adjust the <u>Soils</u> grid row colors and text color.

# Cached

Choose the **Cached** tab to see the cached soils data in your Main database:

💀 WIN-PST	Options				
Databases	Locations   ToolTips	Site Condit	ions Colors	Cached	
🔲 Area	File name			Location	Adc
🔲 ma019	soildb_MA_2002.mdb	)	C:\SoilData		3/17/2008:
🔲 ma608	SSURGO.mdb		C:\Program	Files\USDA\WIN-PST 3.	3/18/2008
🗆 ma610	SSURGO.mdb		C:\Program	Files\USDA\WIN-PST 3.	4/8/2008 9:
		Dele	te Cached		
				Save	Close
Status: R	eady				///

The above example shows:

- Area ma019 One Soil Survey Area cached from the soildb_MA_2002.mdb SSURGO database located at C:\SoilData
- Area ma608 and ma610 Two Soil Survey Areas cached from the SSURGO.mdb Sample SSURGO database located at C:\Program Files\USDA\WIN-PST 3.1\Sample

Click the left-side checkbox for each Soil Survey Area to delete.

Click the **Delete Cached** button to delete the selected Soil Survey Areas.

Cached data can also be deleted using the Data Management Caching process.

## **Create Database**

The **Database Utility** can be used to create a new WIN-PST3.1 Main database. The new database will only contain Pesticides, Active Ingredients, and Products data. No soils data will be associated with the new database. The first time you start using a new Main database, you will need to select a SSURGO database for soils data. See <u>Change Main Database</u> for more information.

Start Tools, Database Utility as described in the Introduction.

# **Create A New Main Database**

The following **Tools**, **Database Utility** example screen will display:

😂 Database Utility 💶 🔲 🔀
WIN-PST 3.1 Database Utility
Use this Database Utility to:
<ol> <li>Import WIN-PST Scenario data into a WIN-PST 3.1 Main database</li> <li>Create a new WIN-PST 3.1 Main database</li> </ol>
C Import WIN-PST Scenario data
Import from Main database file
Database
Prefix 3.0- (Optional prefix for JobName)
Size Last updated # Scenarios
Find WIN-PST 3.0
New Main database location and file name
Location:
File:
Help Proceed Close
Status: Ready - Create a new WIN-PST 3.1 Main database

Select the **Create a new 3.1 Main database** radio button as shown in the example above.

Click the Folder icon a on the right side of the Location: to specify a location for the new Main database file. The following example shows the selection of a MainData folder:

Browse For Folder	? ×
Folder location for new 3.1 database	
Cinks Cinks Cin MainData Cin MainDatabases	•
Folder: MainData	
Make New Folder OK Cano	:el

Click  $\mathbf{OK}$  to continue with the selected location.

Enter a Main database file name in the File: textbox as shown in the following example:

😂 Database Utility 📃 🔲 🗵
WIN-PST 3.1 Database Utility
Use this Database Utility to:
<ol> <li>Import WIN-PST Scenario data into a WIN-PST 3.1 Main database</li> <li>Create a new WIN-PST 3.1 Main database</li> </ol>
C Import WIN-PST Scenario data
Import from Main database file
Database
Prefix 3.0- (Optional prefix for JobName)
Size Last updated # Scenarios
Find WIN-PST 3.0
New Main database location and file name
Location: C:WainData
File: MainRegion1
Help Proceed Close
Status: Ready - Create a new WIN-PST 3.1 Main database

Click **Proceed** to continue.

A message will display showing the created Main database information as shown in the example below:

WIN-PST 3.1 Message
Create a new WIN-PST 3.1 database
Database created - C:\MainData\MainRegion1.mdb Click <b>Ok</b> to continue.
Ok

Click Ok to continue.

Click Close to exit the Database Utility.

# **Import Scenarios**

WIN-PST can save selected combinations of Soils, Active Ingredients, and Products into Scenarios. Each Scenario is given a JobName and optionally, up to 3 category descriptions. The Database Utility can import WIN-PST Scenario data from another WIN-PST Main database. Importing Scenario data can come from a WIN-PST 3.0 Main database or from a WIN-PST 3.1 Main database. The import process will capture all Scenarios.

*Note*: In order to better identify the imported Scenario data, use a **Prefix** value to alter the imported Scenario JobNames.

Start Tools, Database Utility as described in the Introduction.

The following **Tools**, **Database Utility** example screen will display:

😂 Database Utility	_ 🗆 🗵
WIN-PST 3.1 Database Utility	
Use this Database Utility to:	
<ol> <li>Import WIN-PST Scenario data into a WIN-PST 3.1 database</li> <li>Create a new WIN-PST 3.1 Main database</li> </ol>	
Activity     Create a new WIN-PST Scenario data     Create a new WIN-PST 3.1 database	ise
Import from WIN-PST database file	
Database	_
Prefix 3.0- (Optional prefix for JobName)	
Size Last updated # Scenarios	
Find WIN-PST 3.0	
WIN-PST 3.1 database location and file name	
Location:	
File:	
Help Proceed	Close
Status: Ready - Import WIN-PST Scenario data	/

Select the **Import WIN-PST Scenario data** radio button as shown in the example above.

If you have WIN-PST 3.0 installed and you want to find the location of the 3.0 Main database, click the 'Find WIN-PST 3.0' button. The following example shows WIN-PST 3.0 installation information:

WIN-PST 3.1 Message	
Find WIN-PST 3.0 Installation	
WIN-PST 3.0 installation information: Installation location: C:\Program Files\usda\WIN-PST 3\ Executable location: C:\Program Files\usda\WIN-PST 3\WIN-PST.exe WinPst MDB location: C:\Program Files\usda\WIN-PST 3\SSURGO.mdb SSURGO MDB location: C:\Program Files\usda\WIN-PST 3\SSURGO.mdb	
Ok	

Use the Database selection to locate the WIN-PST database file to import Scenario data from. Click the browse button to located a WIN-PST database file. Select the database file and click **Open**:

WIN-PST Acces	s database file				? 🛛
Look in:	C WIN-PST 3		•	🗢 🗈 💣 💷-	
My Recent Documents Desktop My Documents	Exports Reports				
My Computer	File page	winnet wells			0.000
Places	Files of type:	Access database (*.mdb)			Cancel

After selecting the database file, a message will display showing the number of Scenarios found as shown in this example below. Click **OK** to continue:

WIN-PST 3.1 Message	
WIN-PST Scenario data	
3 Scenarios found	
Click <b>0k</b> to continue.	
	01
	UK

The selected database file will display showing the Size, Last Updated and # of Scenarios. Click **Proceed** to continue with the import process.

😂 Database Utility	
WIN-PST 3.1 Database Utility	
Use this Database Utility to:	
<ol> <li>Import WIN-PST Scenario data into a WIN-PST 3.1 database</li> <li>Create a new WIN-PST 3.1 Main database</li> </ol>	
C Create a new WIN-PST 3.1 database	
Import from WIN-PST database file	
Database C: Program Files/USDAW/N-PST 3twinpst.mdb	
Prefix 3.0- (Optional prefix for JobName)	
Size 62.07 MB Last updated 8/26/2005 1:27:12 PM # Scenarios 3	
Find WIN-PST 3.0	
WIN-PST 3.1 database location and file name	
Location:	
File:	_
Help Proceed C	lose
Status: 3 Scenarios found - Click Proceed to import.	11

A 'Proceed With Import' message will display showing the source and destination databases. The example below shows 3 Scenarios ready to import from the default location WIN-PST 3.0 Main database into the default WIN-PST 3.1 Main database:

### Import information

Location: C:\Program Files\USDA\WIN-PST 3 Database: winpst.mdb # Scenarios: 3

#### Updating information

Location: C:\Program Files\USDA\WIN-PST 3.1 Database: WinPst31.mdb

Click **Yes** to continue with the import process or click **No** to exit.

WIN-PST 3.1 Message				
Proceed With Import				
Importing from database: C:\Program Files\USDA\WIN-PST 3\winpst.mdb # Scenarios: 3 Updating database: C:\Program Files\USDA\WIN-PST				
3.1\WinPst31.mdb Click <b>Yes</b> to import or click <b>No</b> to Exit.				
Yes No				

A 'Scenario Import Completed' message will display. Click **OK** to continue.



The Status bar will show an imported OK message. Click **Close** to exit the Database Utility and return to WIN-PST.

😂 Database Utility 🧧	
WIN-PST 3.1 Database Utility	
Use this Database Utility to:	
<ol> <li>Import WIN-PST Scenario data into a WIN-PST 3.1 database</li> <li>Create a new WIN-PST 3.1 Main database</li> </ol>	
Create a new WIN-PST 3.1 databas     Create a new WIN-PST 3.1 databas	e
Import from WIN-PST database file	_
Database C: Program Files/USDAW/IN-PST 3/winpst.mdb	
Prefix harris. (Optional prefix for JobName)	
Size 62.07 MB Last updated 8/26/2005 1:27:12 PM # Scenarios 3	3
Find WIN-PST 3.0	
WIN-PST 3.1 database location and file name	
Location:	
File:	
Help Proceed	Close
Status: 3 Scenarios imported DK.	//

In WIN-PST, click on the **Scenarios** tab to see the imported data. In the example below, a 'Prefix' of 3.0- was applied to the imported Scenario JobNames.

🐸 Windows Pesticide Screening Tool - WIN-PST 3.1 - [Select Soils and Pesticides] 🛛 📐 📃										
🍅 Op	en New Tools Wind	low Help							-	a x
	Soils Als Pro	ducts Scenarios I	nteractions							
	Category 1		Category	2		- 04	egory 3		-1	1
			• •••••	-		<u> </u>	- Jun ) e   all		-	_
	Scenarios				Soils for: 3.0	-Scenario 1				
	JobName	Category 1	Category 2	С	JobName	COMP_NAM	SSANAME	STATE	SSAID	
	3.0-Scenario	1 (nul)	(nul)	In	3.0-Scenario	Barnstable	BARNSTABL	MA	1	
Add	3.0-Scenario	2 (nul)	(nul)	(n	3.0-Scenario	Benyland	BARNSTABL	MA	1	
	3.0-Scenario	3 Herbicides &	Soybean	(n	3.0-Scenario	Enfield	BARNSTABL	MA	1	_
					4					
					Pesticides fo	ar 3.0-Scenar	01			-
					JobName	AL NAME	PC_CODE	PC_PCT	Produc	stLir
					3.0-Scenario	Alachlor (AN	090501	45.1	ALACH	LOI
					3.0-Scenario	Atrazine (AN	080803	42.6	AATRE	×4
					3.0-Scenario	Acetochlor (A	121601	81.15	ACETO	СН
	4			▶						
	Edit Dele	te			•					<u> </u>
	Soils in Queue									
	MUSYM Per	cent SOIL			Texture U:	ser OM Use	Depth Hy	dro SLP	4	SSRF
Del										-
	S									~
	Pesticides in Que	iue	5.4. D			ocon	0400	A	Mark and	_
	PESTICIDE	PC1	lode   Hegi	NO	PLP	PSRP	PARP	Area	Method	_
	<									>
	Save Scenario	31					Be	eports	Close	-
				_						
	Status:	Ready						11/28/2007	2.47 P	M

# **Update Pesticides**

Start Tools, Update Pesticides as described in the Introduction.

The following example screen is display:

🕸 Update Pesticides	<u> </u>
WIN-PST Update Pesticides Process	
Locate the downloaded WinPstUpdPest.mdb file	
Click the Help button for additional information.	
WIN-PST Update Pesticides database file	
Database	_
Size Last updated Statu	z
Help	d Close
Status: Ready	

Use the Database selection to locate the WIN-PST Update Pesticides database file. After selecting the database file, the Size, Last updated date and Status will display, and the Proceed button will activate as shown in the example below. Click **Proceed** to begin the Update Pesticides process or click Close to exit.

🄯 Update Pesticides	
WIN-PST Update Pesticides I	Process
Locate the downloaded WinPstUpdP	Pest.mdb file.
Click the Help button for additional i	information.
WIN-PST Update Pesticides database file	
Database C:\DownLoaded-Data\WinPstUpdPest.mdb	_
Size 30.26 MB Last updated 11/14/2007 9:26:27 AM	1 Status OK
Help	Proceed Close
Status: Click Proceed to begin the Update Pesticides process	» ///

During the update process, the Status bar will show the progress of the database tables being updated as shown in the example below:

🔯 Update Pesticides	
WIN-PST Update Pesticides Process	
Locate the downloaded WinPstUpdPest.mdb file.	
Click the Help button for additional information.	
WIN-PST Update Pesticides database file	
Database C:\DownLoaded-Data\WinPstUpdPest.mdb	_
Size 30.26 MB Last updated 11/14/2007 9:26:27 AM Status O	ж
Help	Close
Status: 5 - Table: FORMULA updating	//

When the Update Pesticides process is done, the Status bar will display 'completed OK' as shown in the example below. Click **Close** to exit and return to WIN-PST.

🄯 Update Pesticides	
WIN-PST Update Pesticides Process Locate the downloaded WinPstUpdPest.mdb file. Click the Help button for additional information.	
WIN-PST Update Pesticides database file Database C: DownLoaded-DataWinPstUpdPest.mdb	_
Size 30.26 MB Last updated 11/14/2007 9:26:27 AM Status O Help Proceed	Close
Status: Update Pesticides process completed OK.	

# **Processing Errors**

If an error occurs during the Update Pesticides process, a message will display like the example below. Click  $\mathbf{OK}$  to continue.

WIN-PST 3.1 Message	
WinPst Update Pesticides Erro	r
Error: PRODTYPE table update failed.	
Unable to proceed.	
	<u>0</u> k

The Update Pesticides screen Status bar will display the processing error message and the Status box will show 'Error' in red. You may need to close WIN-PST and restore the previous version of your WIN-PST main database.

Click **Close** to return to WIN-PST.

🔯 Update Pesticides	
WIN-PST Update Pesticides Process Locate the downloaded WinPstUpdPest.mdb file.	
Click the Help button for additional information.	
WIN-PST Update Pesticides database file	
Database C:\DownLoaded-Data\WinPstUpdPest.mdb	_
Size 30.26 MB Last updated 11/14/2007 9:26:27 AM Status Err	or
Help	Close
Status: Error: PRODTYPE table update failed.	//

### **Appendix**

#### Loss Potential Algorithms

WIN-PST 3.1 calculates loss potentials using algorithms found in:

Goss, D. and D.Wachope. 1990. The SCS/ARS/CES pesticide properties database: II Using it with soils data in a screening procedure. In Pesticides in the Next Decade, The Challenges Ahead, Proceedings of the Third National Research Conference, On Pesticides. Diana L. Weigmann editor. Virginia Water Resources Research Center, Blacksburg, VA. November 8-9, 1990.

### Soil Algorithms

**Soil Leaching Potential (SLP):** The sensitivity of a given soil to pesticide leaching below the rootzone.

**SLP** characterizes those soil properties that would increase or decrease the tendency of a pesticide to move in solution with water and leach below the root zone. A high rating indicates the greatest potential for leaching.

Use the following algorithm to compute the SLP, then adjust for site conditions.

**SLP** Algorithm:

HYD -- Hydrologic Group. KFACT -- Soil K factor. OM1 -- % surface horizon organic matter content. Horiz_1_Depth -- Depth of the first soil horizon, in inches.

If (HYD == "D") and (KFACT is null) and the soil taxonomic class is Histisol (i.e., organic soil), use a KFACT of 0.02 in the algorithm below. If the surface horizon is organic, the KFACT is null and the soil taxonomic class is not organic (i.e., mineral) then use the KFACT of the fist mineral horizon. See the definition for KFACT.

If ((HYD == "A") and ((OM1 * Horiz_1_Depth) <= 30)) or ((HYD == "B") and ((OM1 * Horiz_1_Depth) <= 9) and (KFACT <= 0.48)) or ((HYD == "B") and ((OM1 * Horiz_1_Depth) <= 15) and (KFACT <= 0.26)) SLP = HIGH

otherwise

```
if ((HYD == "B") and ((OM1 * Horiz_1_Depth) >= 35) and (KFACT >= 0.40)) or
((HYD == "B") and ((OM1 * Horiz_1_Depth) >= 45) and (KFACT >= 0.20)) or
((HYD == "C") and ((OM1 * Horiz_1_Depth) <= 10) and (KFACT >= 0.28)) or
((HYD == "C") and ((OM1 * Horiz_1_Depth) >= 10))
SLP = LOW
```

otherwise

if (HYD == "D") SLP = VERY LOW

otherwise

SLP = INTERMEDIATE

Site Conditions:

Macropores: +1 HWT : HIGH **Soil Solution Runoff Potential (SSRP):** The sensitivity of a given soil to pesticide loss dissolved in surface runoff that leaves the edge of the field. A high rating indicates the greatest potential for solution surface loss.

Use the following algorithm to compute the SSRP.

**SSRP** Algorithm:

HYD -- Hydrologic Group.

If ((HYD == "C") or (HYD == "D")) SRP = "HIGH"

otherwise

if (HYD == "A") SSRP = "LOW"

otherwise

if (HYD == "B") SSRP = "INTERMEDIATE"

#### Site Conditions:

none apply

**Soil Adsorbed Runoff Potential (SARP):** Represents sensitivity of a soil to pesticide loss adsorbed to sediment and organic matter that leaves the edge of the field.

**SARP** characterizes those soil properties that would increase or decrease the tendency of a pesticide to move in surface runoff attached to soil particles. A high rating indicates the greatest potential for sediment/pesticide transport.

Use the following algorithm to compute the **SARP**, then adjust for site conditions.

**SARP** Algorithm:

HYD -- Hydrologic Group. KFACT -- Soil K factor.

If (HYD == "D") and (KFACT == 0) use a KFACT of 0.02 in the algorithm below. See the definition for KFACT.

If ((HYD == "C") and (KFACT >= 0.21)) or ((HYD == "D") and (KFACT >= 0.10)) SARP = HIGH

otherwise

if (HYD == "A") .or ((HYD == "B") .and. (KFACT <= 0.10)) .or ((HYD == "C") .and. (KFACT <= 0.07)) .or ((HYD == "D") .and. (KFACT <= 0.02))SARP = LOW

otherwise

SARP = INTERMEDIATE

Site Conditions:

Field slope > 15%: +1

# **Pesticide Algorithms**

**Pesticide Leaching Potential (PLP):** Indicates the tendency of a pesticide to move in solution with water and leach below the root zone. A low rating indicates minimal movement and no need for mitigation.

Use the following algorithm to compute the PLP, then adjust for management.

**PLP** Algorithm:

HL -- Half-life in the soil in days. SOL -- Solubility in water in mg/L. (ppm) Koc -- Soil organic carbon sorption coefficient in mL/g.

Please note: The log() function used below is log, base 10.

log_val = log(HL) * (4-log(Koc))

If (log_val >= 2.8) PLP = HIGH

otherwise

if ((log_val < 0.0) or ((SOL < 1) and (HL <= 1))) PLP = VERY LOW

otherwise

if (log_val <= 1.8) PLP = LOW

otherwise

PLP = INTERMEDIATE

#### Management:

Banded: -1 Spot Treatment: -2 Foliar: -1 Low rate: -1 Ultra Low rate: -2 **Pesticide Solution Runoff Potential (PSRP):** Indicates the tendency of a pesticide to move in surface runoff in the solution phase. A high rating indicates the greatest potential for pesticide loss in solution runoff.

Use the following algorithm to compute the **PSRP**, then adjust for management.

**PSRP** Algorithm:

HL -- Half-life in the soil in days. SOL -- Solubility in water in mg/L. (ppm) Koc -- Soil organic carbon sorption coefficient in mL/g.

If ((SOL >= 1) and (HL > 35) and (Koc < 100000)) or ((SOL >= 10) and (SOL < 100) and (Koc <= 700)) PSRP = HIGH

otherwise

if (Koc >= 10000) or ((Koc >= 1000) and (HL <= 1)) or ((SOL < 0.5) and (HL < 35)) PSRP = LOW

otherwise

PSRP = INTERMEDIATE

#### Management:

Banded: -1 Spot Treatment: -2 Foliar: -1 Soil Incorporated: -1 Low rate: -1 Ultra Low rate: -2 **Pesticide Adsorbed Runoff Potential (PARP):** Indicates the tendency of a pesticide to move in surface runoff attached to soil particles. A low rating indicates minimal potential for pesticide movement adsorbed to sediment, and no mitigation is required.

Use the following algorithm to compute the **PARP**, then adjust for management.

**PARP** Algorithm:

HL -- Half-life in the soil in days. SOL -- Solubility in water in mg/L. (ppm) Koc -- Soil organic carbon sorption coefficient in mL/g.

If ((HL >= 40) and (Koc >= 1000)) or ((HL >= 40) and (Koc >= 500) and (SOL <= 0.5)) PARP = HIGH

otherwise

```
if (HL <= 1) or
((HL <= 2) and (Koc <= 500)) or
((HL <= 4) and (Koc <= 900) and (SOL >= 0.5)) or
((HL <= 40) and (Koc <= 500) and (SOL >= 0.5)) or
((HL <= 40) and (Koc <= 900) and (SOL >= 2))
PARP = LOW
```

otherwise

PARP = INTERMEDIATE

#### Management:

```
Banded: -1
Spot Treatment: -2
Foliar: -1
Soil Incorporated: -1
Low rate: -1
Ultra Low rate: -2
```

# **Interaction Matrices**

## Leaching

## Soil / Pesticide Interaction Leaching Potential (ILP)

The Soil / Pesticide Interaction Leaching Potential (**ILP**) is derived from the Soil Leaching Potential (SLP) and Pesticide Leaching Potential (PLP). The matrix below shows the how they calculated.

		Pesticide Leaching Potential (PLP)				
		High	Intermediate	Low	Very Low	
Soil Leaching Potential (SLP)	High	High	High	Intermediate	Low	
	Intermediate	High	Intermediate	Low	Very Low	
	Low	Intermediat e	Low	Low	Very Low	
	Very Low	Low	Low	Very Low	Very Low	

### Adjustments:

Low rainfall, no irrigation: -1

### Solution Runoff

## Soil / Pesticide Interaction Solution Runoff Potential (ISRP)

The Soil / Pesticide Interaction Solution Runoff Potential (**ISRP**) is derived from the Soil Solution Runoff Potential (SSRP) and Pesticide Solution Runoff Potential (PSRP). The matrix below shows the how they calculated.

		Pesticide So (PSRP)	lution Runoff l	Potential
		High	Intermediate	Low
Soil Solution Runoff Potential	High	High	High	Intermediate
(SSRP)	Intermediate High		Intermediate	Low
	Low	Intermediate	e Low	Low

# Adjustments:

Low rainfall, no irrigation: -1

# **Adsorbed Runoff**

# Soil / Pesticide Interaction Adsorbed Runoff Potential (IARP)

The Soil / Pesticide Interaction Adsorbed Runoff Potential (**IARP**) is derived from the Soil Adsorbed Runoff Potential (SARP) and Pesticide Adsorbed Runoff Potential (PARP). The matrix below shows the how they calculated.

		Pesticide Ad (PARP)	sorbed Runoff	Potential
		High	Intermediate	Low
Soil Adsorbed Runoff Potential	High	High	High	Intermediate
(SARP)	Intermediate	eHigh	Intermediate	Low
	Low	Intermediate	Low	Low

# Adjustments:

Low rainfall, no irrigation: -1

# Adjustments

WIN-PST 3.1 adjusts soil, pesticide and interaction ratings based on management and site conditions. Adjustments are as follows:

# **Soil Ratings**

# Site Conditions Adjustments:

Leaching:

Macropores: +1 HWT : HIGH

Solution Runoff:

No-adjustments

#### Adsorbed Runoff:

Field slope > 15%: +1

### **Pesticide Ratings**

#### Management Adjustments:

Leaching

Foliar: -1

Banded: -1 Spot: -2

Low rate: -1 Ultra Low rate: -2

Solution Runoff

Banded: -1 Spot: -2

Foliar: -1 Soil Incorporated: -1

Low rate: -1 Ultra Low rate: -2

Adsorbed Runoff:

Banded: -1 Spot: -2

Foliar: -1 Soil Incorporated: -1

Low rate: -1 Ultra Low rate: -2

# **Interaction Ratings**

### Rainfall/Irrigation adjustment:

There is only one adjustment that directly effects interaction ratings and is found on the interactions tab of WIN-PST 3.1. It is the probability of Rainfall or irrigation soon after pesticide application. The selection is labeled "Rainfall" and has two possible choices "Low" or "High". The default choice is "High".

Leaching

Low probability of rainfall/no irrigation -1

Solution Runoff

Low probability of rainfall/no irrigation -1

Adsorbed Runoff

Low probability of rainfall/no irrigation -1

## Applying the adjustments

The maximum aggregate adjustment allowed is 1 rating class (+/- 1; e.g., "High" gets reduced to an "Intermediate") for any one pathway (e.g., pesticide leaching) except for "ultra low" application rate and "spot" treatment which decrease pesticide ratings by -2. In other words, adjustments are not additive. Only one adjustment is allowed for any pathway.

For example a pesticide that is both foliar applied (-1) and banded (-1) will only receive a decrease in rating of one class since the ratings are not additive. Therefore, a pesticide leaching potential of "High" would be adjusted to "Intermediate".

A pesticide that is foliar applied (-1) and spot treated (-2) would receive a two class decrease (-2). This combination of management techniques would reduce a "High" pesticide leaching potential to a "Low".

Once the Soil Loss Ratings and Pesticide Loss Ratings are adjusted, the interaction matrix (Appendix B) is used to determine the Interaction Loss Rating. The interaction rating can be further adjusted to reflect rainfall or irrigation. If the probability of rainfall or irrigation is very low, then an adjustment factor of one class is applied to the Interaction Loss Rating.

This rating should be used for dry climates/cropping where the pattern of rainfall/irrigation does not occur soon after pesticide application. The definition of "soon after pesticide application" is based on several factors including the half life of the pesticide, formulation and placement of the pesticide (e.g., foliar, soil applied, soil incorporated. etc.). The minimum time for should be at least 10-14 days. For pesticides with moderate to long half-lives (for half life >= 45 days) at least a month of no rainfall or irrigation should be considered before "Rainfall - Low" should be chosen.

If rainfall is typically absent but the field is irrigated, then the adjustment should not be made. For many cropping situations, there will be a probability of rainfall or irrigation soon after application. In these cases the default condition should be used (i.e., Rainfall set to 'High').

# Hazard Ratings - Adjustment for toxicity

WIN-PST hazard ratings are determined by a matrix created between the Interaction Loss Rating and the Exposure Adjusted Toxicity (EAT) class. The Exposure Adjusted Toxicity class assigns rating classes to long term toxicity thresholds similar to EPA's Toxicity class. EAT classes were designed by the WIN-PST group to qualify the potential hazard/risk associated with a potential long-term environmental exposure. EAT classes are broken down by resource concern in the current version of WIN-PST either humans or aquatic. The classes are follows:

### Exposure Adjusted Toxicity Ratings for humans.

Class	Threshold ranges
EXTRA HIGH	1 ppb > X
HIGH	10 ppb > X >= 1 ppb
INTERMEDIATE	50 ppb > X >= 10 ppb
LOW	100 ppb > X >= 50 ppb
VERY LOW	X >= 100 ppb

## Exposure Adjusted Toxicity Ratings, based on STV, for fish.

Class	Threshold ranges
EXTRA HIGH	10  ppb > X
HIGH	100 ppb > X >= 10 ppb
INTERMEDIATE	1,500 ppb > X >= 100 ppb
LOW	20,000 ppb > X >= 1,500 ppb
VERY LOW	X >= 20,000 ppb

### Calculating the WIN-PST Hazard Potentials

WIN-PST Hazard Potentials are a combination of both the Interaction Loss potential and the Exposure Adjusted Toxicity. See the matrix below:

### Hazard Potential Matrix

Exposure Adjusted Toxicity								
Interaction Loss Rating	Extra High	High	Intermediate	Low	Very Low			
High	Extra High	High	Intermediate	Low	Low			
Intermediate	Extra High	High	Intermediate	Low	Very Low			
Low	High	Intermediate	Low	Low	Very Low			
Very Low	Intermediate*	Low*	Very Low*	Very Low*	Very Low*			
* Leaching only								

For example a pesticide/soil interaction loss potential of '**Intermediate**' and an Exposure Adjusted Toxicity of '**Extra High**', would receive an "**Extra High**" Hazard rating:

Exposure Adjusted Toxicity							
Interaction Loss Rating	Extra High	High	Intermediate	Low	Very Low		
High	Extra High	High	Intermediate	Low	Low		
Intermediate	Extra High	High	Intermediate	Low	Very Low		
Low	High	Intermediate	Low	Low	Very Low		
Very Low	Intermediate*	Low*	Very Low*	Very Low*	Very Low*		

An Interaction Loss Rating of '**Low**' and an Exposure Adjusted Toxicity of '**High**' would result in a Hazard rating of "**Intermediate**":

Exposure Adjusted Toxicity							
Interaction Loss Rating	Extra High	High	Intermediate	Low	Very Low		
High	Extra High	High	Intermediate	Low	Low		
Intermediate	Extra High	High	Intermediate	Low	Very Low		
Low	High	Intermediate	Low	Low	Very Low		
Very Low	Intermediate*	Low*	Very Low*	Very Low*	Very Low*		

## **Glossary**

#### 

See Ultra Low Rate.

#### 96-hour LC50

Lethal concentration that kills 50% of a fish species' population over a 96-hour (4 Day) period. A type of acute fish toxicity. Stored in ppb in the NAPRA PPD.

#### AGE

Age of fish tested. A field in the fish toxicity data table.

#### AI_NAME

Active ingredient common name. A field in the AIS data table in the WIN-PST PPD.

#### Ai_percent

A field of data in the fish toxicity data table. Indicates the percentage of the product studied which is comprised of this active ingredient.

# CNAME_TYPE

Type -- The type of name associated with this active ingredient.

(none) -- The preferred name at EPA for this active ingredient.

- C -- Common Name
- R -- Chemical abstract service registration number.
- S -- Synonym
- T -- Trade Name

### COMMENT

Notes we have made in the course of maintaining the toxicity data tables. A field in the fish and human toxicity data tables.

#### b

See Banded Application.

#### **Banded Application**

Pesticide application over less than 50% of the field. This typically involves pesticide application over the rows. Banding pesticide application can reduce the P-Ratings by one class since it reduces pesticide application to the field by 50%.

Banded: -1 PLP, -1 PSRP, -1 PARP

#### Broadcast

Broadcast application (default) - applied to more than 1/2 of the field.

#### Cancer Slope

See <u>OSTAR</u>.

## CANCERGRP

EPA Cancer Class (synonymous with EPA Cancer Group). Affects the way an HA* is computed from an RFD. See the definition for HA*. A field in the human toxicity data table.

Current EPA Categories (EPA is in the process of revising the Cancer Guidelines)

Group A: Human Carcinogen Sufficient evidence in epidemiological studies to support causal association between exposure and cancer.

Group B: Probable Human Carcinogen Limited evidence in epidemiological studies (Group B1) and/or sufficient evidence from animal studies (Group B2).

Group C: Possible Human Carcinogen Limited evidence from animal studies and inadequate or no data in humans.

Group D: Not Classifiable Inadequate or no human and animal evidence of carcinogenicity.

Group E: No Evidence of Carcinogenicity for Humans No evidence of carcinogenicity in at least two adequate animal tests in different species or in adequate epidemiological and animal studies.

Reference: "Drinking Water Regulations and Health Advisories" Office of Water, US EPA, Washington, D.C. February 1996

# CAS_NO

Chemical Abstract Service Registration Number for an active ingredient.

Format: XXXXXXXYYZ. 10 digits, no dashes, with leading zeroes as necessary.

Matches the CAS_NO field in the EPA REG DB. CASRN represents the same information as the CAS_NO, except that the format of the digits is different.

## CASRN

Chemical Abstract Service Registration Number for an active ingredient.

Format: XXXXXXX-YY-Z.

7 digits with no leading zeroes, a dash, then 2 digits with possible leading zeroes, a dash, then 1 digit.

This is the most common form of the CAS_NO. CASRN represents the same information as the CAS_NO, except that the format of the digits is different.
## CHCL

Chronic Human Carcinogen Level, calculated.

The concentration at which there is a 1 in 100,000 probability of contracting cancer; calculated by using the EPA algorithm based on QSTAR from animal studies. A CHCL provides a concentration comparable to an MCL.

10^-5 represents a 1/100,000 chance of contracting cancer.70 Kg represents the average weight of an adult.2 L/day represents average consumption of water each day by an adult.

_____

Reference:

"Drinking Water Health Advisory: Pesticides" (Book) United States Environmental Protection Agency Office of Drinking Water Health Advisories Lewis Publishers Pages viii - xiii, 1994

# CHEM_ID

WIN-PST PPD active ingredient identification number.

## COMP_NAME

Component name. The name of the component (series, taxonomic unit, or miscellaneous area) of the mapunit.

### CRACKGR24

Surface Connected Macropores (cracks) at least 24 inches deep. The value can be updated by the user based on the site conditions.

# EPA_CNAME_Type

EPA_CNAME_Type is directly taken from EPA's Pesticide Product Information System.

### **EPA OPP**

United States Environmental Protection Agency Office of Pesticide Programs (EPA OPP).

## **EPA Product Names**

A 'product' is a commercially available formulation of one or more active ingredients mixed with adjuvants and inert ingredients. When a pesticide product is sold to the public, it must have an EPA registration number that appears on the product label. An EPA registration number may be associated with many different product names depending on the wholesaler or retailer. The EPA product database used in WIN-PST includes the original registration name for a given product. Since EPA allows manufacturers or dealers to change the name of the product associated with a particular formulation and add new names, some product names for currently registered products will not appear in WIN-PST. Ratings for these products are still available through the EPA registration number. All name differences can be ignored if the EPA registration numbers are identical.

## **EPA REG DB**

EPA Registration Database. Updated monthly.

This database can be accessed online at http://www.epa.gov/opppmsd1/PPISdata/index.html

# EXTRA HIGH

See Hazard Ratings.

## f

See Foliar Application.

### FIFRA

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

### **Fish Hazard**

I-ratings combined with fish relative toxicity categories. Only combine the ILP with a fish toxicity when using tile drainage. Only combine the ILP or ISRP with an MATC*. Only combine the IARP with an STV.

See <u>Hazard Ratings</u> for more information.

#### **Fish Toxicity**

Toxicity threshold for fish to an active ingredient in parts per billion (ppb).

This data is stored in the FISHTOX data table in the TOX_PPB field.

See <u>Hazard Ratings</u> for more information.

### FOLI_HL_GE

A field in the CHEMICAL data table in the NAPRA PPD. Indicates the quality of the data in the FOLI_HL_RV field.

See G/E.

### FOLI_HL_RV

A field in the CHEMICAL data table in the NAPRA PPD. Representative foliar half-life of this pesticide active ingredient, in days, if it is foliarly applied to a crop.

### **Foliar Application**

Foliar pesticide application utilizing a directed spray when the crop and/or weeds are at nearly full canopy. This increases interception of pesticide by the plant and decreases contact with the soil. Foliar application allows reduction of the P-Ratings by one class.

### G/E

The G/E fields in the WIN-PST PPD indicate the quality of the representative value.

WIN-PST PPD pesticide property data (Koc, solubility in water, and field half-life) is comprised from a variety of sources: -- Pesticide Properties in the Environment; Wauchope et. al., 1996. (PPE)

- -- Personal communications with Dr. Wauchope.
- -- EPA OPP "EFGWB One Liner Data Base"; Version 3.04; data table dated 3-18-98.
- -- Personal communications with chemical companies.

All of the values in the WIN-PST PPD were selected from literature with the intent that these values would be used in pesticide models, which requires the use of a 'representative value' rather than a range of values, which more correctly describes the range of values each property could take for each chemical.

The values in the G/E field indicate the quality of each data element:

G -- A 'Guess' value from PPE and subsequent personal communication with Dr. Wauchope (ARS).

Indicates that some degree of uncertainty exists in the value. 'G' is used when no value is known to exist but the authors of PPE believe that the parameter can be estimated by a similar compound. (PPE Pg. 23) i.e. 'G' denotes a 'guess' value -- neither an experimental value nor a good estimation procedure was available. (PPE Pg. 33)

Solubilities marked with a 'G' are expected to be accurate within a factor of 10. A total guess was required only for petroleum oil, a mixture of hydrocarbons. (PPE Pg. 9, section 3.3.1)

E -- An 'Estimate' value from PPE and subsequent personal communication with Dr. Wauchope (ARS).

Indicates that some degree of uncertainty exists in the value. 'E' is used to indicate that existing data are so diverse that selection of a representative value is a matter of scientific judgement by the authors of PPE or that the value is calculated from some more fundamental property. (PPE Pg. 23) i.e. 'E' denotes that a value is an 'estimate', meaning either: (a) an unusually wide range of values have been reported and we (the authors of PPE) had no reason to select any one value as a 'best' value, or (b) no experimental value is available but a reasonable estimation was possible. (PPE Pg. 33)

Solubilities marked with an 'E' are expected to be accurate within a factor of 2. About 10% of the solubilities in PPE were estimated. In some cases, the solubility of a similar compound was used as an estimate. (PPE Pg. 9, section 3.3.1)

n -- A 'NAPRA Selected Value'. Equates to a <BLANK>. (These values have not been peer reviewed.)

g -- A 'Guess' value developed by the NAPRA Team using Dr. Wauchope's 'Guess' methodology. (These values have not been peer reviewed.)

e -- An 'Estimate' value developed by the NAPRA Team using Dr. Wauchope's 'Estimate' methodology. (These values have not been peer reviewed.)

<BLANK> -- A value from PPE and subsequent personal communication with Dr. Wauchope (ARS). The set of all pesticides which are not designated by a G, E, n, g, or e.

### GT_LT

A field in the fish toxicity data table. Indicates that the actual toxicity is greater than (>) or less than (<) the value listed.

#### Goss, Don

The author of SPISP.

Don W. Goss, Ph.D.

#### HA

Health Advisory, determined by EPA's Office of Water (OW). The concentration of a chemical in drinking water that is not expected to cause any adverse non-carcinogenic effects over a lifetime exposure with a margin of safety. HA is compared to the PLP or PSRP for humans.

#### HA*

Health Advisory calculated using the EPA method for calculating HA based on Reference Dose (RFD). RFD values are from the EPA Office of Pesticide Programs (OPP), EPA, or World Health Organization (WHO).

The EPA OPP RFD is updated regularly and when available is used to determine HA*. If the RFD from EPA OPP is not available, then the EPA RFD is used. EPA RFD is an agency-wide value that is not updated as regularly or as often as the OPP RFD. If neither of these values are available, then the WHO RFD is used.

In accordance with OW policy, Health Advisories are not calculated for chemicals that are known or probable human carcinogens (EPA Cancer Class A and B).

-----

Algorithm:

-- If the EPA Cancer Class is C:  $HA^* = RFD * 700$ 

-- If the EPA Cancer Class is D, E, or unclassified:  $HA^* = RFD * 7000$ 

-- If EPA Cancer Class is A or B: MCL is used if available from EPA OW. CHCL* is determined in lieu of MCL when MCL is not available.

-----

#### References:

"Drinking Water Regulations and Health Advisories". US EPA Office of Water, 4304. EPA 822-B-96-002. October, 1996.

"EPA Office of Pesticide Programs Reference Dose Tracking Report". US EPA Office of Pesticide Programs. February, 1997.

# Half-Life (HL)

Half-life of an active ingredient under field conditions, in days. Sometimes referred to as field dissipation half-life. Used to compute the P-Ratings.

Half-life is the time required for a pesticide to degrade to one-half of its previous concentration. Each successive elapsed half-life will decrease the pesticide concentration by half. For example, a period of two half-lives will reduce a pesticide concentration to one-fourth of the initial amount. Half-life can vary by a factor of three or more from reported values depending on soil moisture, soil pH, temperature, oxygen status, soil microbial population, and other factors. Additionally, resistance to degradation can change as the initial concentration of a chemical decreases. It may take longer to decrease the last one-fourth of a chemical to one-eighth than it took to decrease the initial concentration to one-half. In general, the longer the half-life, the greater the potential for pesticide movement.

### Hazard

Pesticide toxicity combined with potential exposure.

### HIGH

See Loss Potential Algorithms.

See Interaction Matrices.

See Hazard Ratings.

# High Water Table

Water Table is within 24 inches of the soil surface.

See w.

### Human Hazard

I-ratings combined with human relative toxicity categories. Combine the ILP or ISRP with an MCL, HA, HA*, or CHCL. IARP cannot be combined with a human toxicity.

## Human Toxicity

Long-term human toxicity of an active ingredient in parts per billion (ppb).

Toxicities are based on availability in the priority order: MCL, HA, HA* (HA and HA* are used for Cancer Groups C, D, E and unclassified) and CHCL*. MCL is used whenever available by the EPA Office of Water. HA and HA* are used for Cancer Groups C, D, E and unclassified. CHCL* is used for Cancer Groups A, B1 and B2 when MCL is unavailable.

This data is stored in the HUMTOX data table in the TOX_PPB field.

See <u>Hazard Ratings</u> for more information.

# HWT_LT_24

High Water Table less than 24" under the surface. The value comes from the Soils database and can be changed by the user based on the site conditions.

### HWT

See High Water Table.

i

See Soil Incorporated.

### I-Ratings

SPISP II Soil / Pesticide Loss Interaction Ratings: ILP, ISRP, and IARP.

PLP, PSRP and PARP pesticide ratings are combined with SLP, SSRP and SARP soil ratings in a Soil/Pesticide Interaction Matrix that results in ILP, ISRP and IARP Soil/Pesticide Interaction ratings. These interaction ratings provide a relative potential for pesticide loss for each soil/pesticide combination. ILP ratings indicate the potential for pesticides to leach below the root zone. ISRP ratings indicate the potential for pesticides to move beyond the edge of the field dissolved in solution runoff. IARP ratings indicate the potential for pesticides to move beyond the edge of the field adsorbed to sediment and organic matter which is suspended in runoff water.

WIN-PST also combines ILP, ISRP and IRP ratings with pesticide toxicity to humans and fish in an Exposure Adjusted Toxicity Interaction Matrix that results in overall Human Hazard and Fish Hazard WIN-PST Ratings.

See Interaction Matrices for more information.

#### IARP

SPISP II Soil / Pesticide Interaction Adsorbed Runoff Potential.

See Interaction Matrices for more information.

### ILP

SPISP II Soil / Pesticide Interaction Leaching Potential.

See Interaction Matrices for more information.

### IMPORTDATE

A field in the pesticide toxicity data tables, indicating the date in which the information was imported into the database.

### INTERMEDIATE

See Loss Potential Algorithms.

See Interaction Matrices.

See Hazard Ratings.

### ISRP

SPISP II Soil / Pesticide Interaction Solution Runoff Potential.

See Interaction Matrices for more information.

### Kd

The ratio of sorbed to solution pesticide concentrations after equilibrium of a pesticide in a water / soil slurry.

Kd * 100 can be used to approximate unknown Koc's.

See <u>Koc</u>.

# KFACT

Soil Erodibility factor (K). Includes rock fragments. An erodibility factor which is adjusted for the effect of rock fragments. (SSSD User's Manual - Appendix A-11.) Used to compute the SLP and SARP ratings. Valid range: 0.02 - 0.69.

Soil Erodibility Factor (K) is the rate of soil loss per rainfall erosion index unit [ton*acre*h(hundreds of acre*ft-ton*in) -1] as measured on a unit plot. The unit plot is 72.6 ft. long, 6 ft. in width, has a 9 percent slope, and is continuously in a clean-tilled fallow condition with tillage performed upslope and downslope. The soil properties that influence assigned K factor values to specific soils are soil texture, organic matter content, structure, and permeability.

If the soil hydrologic group is D and KFACT is 0, a KFACT of 0.02, the lowest valid KFACT, is used in the SPISP II Ratings algorithms. A KFACT of 0 is OK in the database if you have a D hydro group because if erosivity is a non-issue, a KFACT was purposely not computed. This is an indication of a field that has virtually no erosion. i.e. A nonerosive soil.

For more information on KFACT, see page 8-11 of the USDA Agriculture Handbook # 537 "Predicting Rainfall Erosion Losses -- A guide to conservation planning." December 1978.

#### Koc

Soil organic carbon sorption coefficient of an active ingredient in mL/g. Used to compute the P-Ratings.

Pesticides vary in how tightly they are adsorbed to soil particles. Koc measures the affinity for pesticides to sorb to organic carbon. The higher the Koc value, the stronger the tendency to attach to and move with soil. Soil pH can affect the Koc of ionic and partially ionic pesticides. A pesticide with an anion as the active species would have a Koc set low to account for that pesticide's inability to sorb to soil particles. A cationic active species would tend to bind strongly with soil and therefore have a relatively high Koc.

Pesticide Koc values greater than 1,000 indicate strong adsorption to soil. Pesticides with lower Koc values (less than 500) tend to move more with water than adsorbed to sediment.

If Koc is not defined, you can compute it from Kd, using one of the following methods:

1) Assuming 1% OM, Koc = Kd * 100

2) Koc = Kd / weight fraction of organic carbon present in the soil, where:

Koc = (Cs/Cw) * (1/Foc) = Kd/Foc

Cs -- Concentration of pesticide in the soil phase of the slurry. Micrograms pesticide / gram of soil.

Cw -- Concentration of pesticide in the water phase. Micrograms pesticide / ml of water.

Foc -- weight fraction of organic carbon present in the soil.

-- 'Reviews of Environmental Contamination and Toxicology', Volume 123, Wauchope, et. al, 1992, pg 10.

# KOC_GE

A field in the WIN-PST PPD. Indicates the quality of the data in the KOC_RV field.

See <u>G/E</u>.

### KOC_RV

A field in the WIN-PST PPD. See Koc.

#### I

See Low Rate

### LC50

See <u>96-hour LC50</u>.

#### LOC

Level of Concern. Acute fish toxicity value determined by dividing 96-hour LC50 by two.

LOC is used by EPA for risk assessment.

Reference: "Hazard Evaluation Division Standard Evaluation Procedure" 'Ecological Risk Assessment.' EPA-540/9-85-001. Published June, 1986. EPA Office of Pesticide Programs, Washington, DC 20460.

### Loss Potential

Potential for pesticide to move off the edge of the field and/or percolate below the root zone. Determined from soil/pesticide interaction ratings (I-Ratings) that result from combining soil ratings and pesticide ratings.

See Loss Potential Algorithms for more information.

#### LOW

See Loss Potential Algorithms.

See Interaction Matrices

See Hazard Ratings.

## Low Rate

A pesticide application rate of 1/10 to 1/4 lb active ingredient per acre. (112 to 280 grams per hectare.) A low application rate can reduce the P-Ratings by one class.

#### m

See Macropores.

#### Macropores

Surface-connected holes or cracks that extend deeper than 24" into the soil. Macropores increase the SLP by one class.

#### MATC*

Maximum Acceptable Toxicant Concentration (MATC*) in ppb. MATC* is the long-term toxicity value for fish.

The MATC* for an active ingredient can be determined empirically by performing long-term or early life-stage toxicity tests. These test results produce the No Observable Effect Concentration (NOEC) and Lowest Observable Toxicant Concentration (LOEC).

Empirically, the geometric mean of the NOEC and LOEC is the MATC*. When both the NOEC and the LOEC were available, MATC* was determined in this manner. These values are described as "MATC=geometric mean of (LOEC, NOEC)" in the CALC_NOTES field of the toxicity data browser, TOX_VIEW.

When either the NOEC or the LOEC (or both) were unavailable, MATC* was determined from a regression equation using the 96-hour LC50 in the method described by Barnthouse et al., (1990). These values are described as "MATC calc. from 96-h LC50" in the CALC_NOTES field of the toxicity data browser, TOX_VIEW.

In rare instances, empirically derived MATC* values were found to be larger than the 96-hour LC50 for that chemical. This may occur when the toxicity tests for the 96-hour LC50 and the NOEC / LOEC are performed:

-- Under different water quality conditions. (hardness, alkalinity, pH, temperature, etc.)

-- With different species of fish.

-- With different products which use this active ingredient (AI). Occasionally, pesticide toxicity can be attributed to the

inert ingredients in the formulation of a product which contains this AI, rather than the AI itself.

When the empirically-derived (NOEC/LOEC) MATC* is larger than the 96-hour LC50, an MATC* computed using the Barnthouse method is used instead. These values are described as "MATC calc. from 96-h LC50 (since empirically found MATC was > 96-h LC50)" in the CALC_NOTES field of the toxicity data browser, TOX_VIEW.

The MATC* for an active ingredient is used in several ways in WIN-PST:

-- To compute the WIN-PST Exposure Adjusted Toxicity Rating to fish for pesticide in solution.

-- To compute the WIN-PST Exposure Adjusted Toxicity Rating to fish for pesticide adsorbed to sediment. We call this the Sediment Toxicity Value (STV). STV = KOC x MATC*

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Reference:

Barnthouse, L.W., G.W. Suter II and A.E. Rosen, 1990.

"Risks of Toxic Contaminants to Exploited Fish Populations: Influence of Life History, Data Uncertainty and Exploitation Intensity."

Environmental Toxicology and Chemistry. 9:297-311.

#### MCL

EPA's Maximum Contaminant Level. Maximum permissible long-term pesticide concentration allowed in a public water source. MCL is used in WIN-PST for any pesticide for which EPA has an assigned value. In the absence of an MCL, an HA, HA* or CHCL* is used in WIN-PST.

#### MUSYM

Map unit symbol associated with a soil Map Unit.

#### n

See <u>G/E</u>.

### NAME

Common name of fish species tested. A field in the fish toxicity data table.

#### NAPRA

National Agricultural Pesticide Risk Analysis.

### NAPRA PPD

See WIN-PST PPD

### NPURG

National Pesticide/soils database and User decision support system for Risk assessment of Ground and surface water contamination. Based on the SPISP I algorithms.

## OMH / OM_H

The maximum value for the range in organic matter content of the soil layer or horizon, expressed in percent by weight.

### OML / OM_L

The minimum value for the range in organic matter content of the soil layer or horizon, expressed in percent by weight.

#### OPPRFD

EPA's Office of Pesticide Programs Reference Dose. A field in the human toxicity data table.

#### OW

EPA Office of Water (EPA-OW).

### OWRFD

EPA's Office of Water Reference Dose. A field in the human toxicity data table.

#### **P-Ratings**

SPISP II Pesticide Loss Ratings: PLP, PSRP, PARP.

See Loss Potential Algorithms for more information.

#### PARP

Pesticide Adsorbed Runoff Potential. See Loss Potential Algorithms for more information.

## PC_CODE

EPA active ingredient registration number. (AKA Shaughnessy Code)

## PCT_WASHOF

A field in the NAPRA PPD. This field contains washoff fraction data, if an active ingredient is foliarly applied. This is the fraction of the pesticide applied to the foliage available for washoff.

### рΗ

In general, pH is a numerical measure of acidity or hydrogen ion activity. pH < 7.0 is acidic. pH 7.0 is neutral. pH > 7.0 is alkaline. (basic)

In the WIN-PST PPD, pH represents the value at which the solubility in water, field half-life, and Koc (SOL, HL, Koc) are valid.

When determining P-Ratings or I-Ratings, appropriate properties are selected based on field soil pH.

If the pH field is blank, assume that the SOL, HL, and Koc for this active ingredient are pH-insensitive and therefore that these properties are valid at any soil pH.

A pH reading of 5 is ten times more acidic than a reading of 6, and 6 is ten times more acidic than a reading than 7. Most adult fish die in water at a pH of 5 or below.

### PHH

The maximum value for the range in soil reaction (pH) for the first soil layer or surface horizon.

### PHL

The minimum value for the range in soil reaction (pH) for the first soil layer or surface horizon.

### PKA

Acid dissociation constant.

#### PKB

Base dissociation constant.

#### PLP

Pesticide Leaching Potential. See Loss Potential Algorithms for more information.

#### **PSRP**

Pesticide Solution Runoff Potential. See Loss Potential Algorithms for more information.

## QSTAR

EPA OPP Cancer Slope Value. Determined from animal studies; QSTAR values are assigned by EPA and used to estimate the probability of contracting cancer from a pesticide. Used to determine CHCL. QSTAR is a field in the human toxicity data table.

### RFD

Reference Dose. RFD's based on animal studies are used for human toxicity determination. They are reported by the EPA OW and EPA OPP. A field in the human toxicity data table.

### ROCKDEPH

The maximum value for the range in depth to bedrock, expressed in inches.

### ROCKDEPL

The minimum value for the range in depth to bedrock, expressed in inches.

#### S

See <u>Slope</u>.

## S-Ratings

SPISP II Soil Vulnerability Ratings: SLP, SSRP, SARP.

See Loss Potential Algorithms for more information.

### SARP

Soil Adsorbed Runoff Potential. See Loss Potential Algorithms for more information.

## SHRINKSW

Shrink-Swell Potential. An interpretation rating of the soil layer or horizons behavior of changing volume (shrinking and swelling) upon wetting and drying.

### Slope

Field slope. If the field slope is greater than 15%, increase the SARP by one class.

## SLOPE_H

The upper range of the slope as defined by the USDA-NRCS soils database. This is the value used to set the slope > 15% site condition.

### SLOPEGR15

Field slope greater than 15%.

See <u>Slope</u>.

See <u>SLOPE_H</u>.

## SLP

Soil Leaching Potential. See Loss Potential Algorithms for more information.

# SOIL_HL_GE

A field in the WIN-PST PPD. Indicates the quality of the data in the SOIL_HL_RV field. See GE FIELDS for more information.

See <u>G/E</u>.

### SOIL_HL_RV

See Half-Life (HL).

### Soil Incorporated

Pesticide incorporated into soil. Incorporation decreases pesticide runoff but increases percolation. Soil Incorporated: +1 PLP, -1 PSRP, -1 PARP.

### SOL_GE

A field in the WIN-PST PPD. Indicates the quality of the data in the SOL_RV field. See GE FIELDS for more information.

See <u>G/E</u>.

### SOL_RV

A field in the WIN-PST PPD.

See Solubility (SOL).

## Solubility (SOL)

Solubility is the measure of an active ingredient's ability to dissolve in water at room temperature. It is expressed in mg/L (ppm). Used to compute P-Ratings.

Solubility is a fundamental physical property of a chemical and affects the ease of wash off and leaching through soil. In general, the higher the solubility value, the greater the likelihood for movement.

### SOURCE

Source of toxicity data. A field in the toxicity data tables.

Fish toxicity data table: Source of toxicity data from which MATC and STV values were calculated.

Human toxicity data table: Source of toxicity data: OW -- This toxicity (HA or MCL) is from EPA's Office of Water (EPA-OW). <BLANK> -- HA* and CHCL* from various sources. See definitions for HA* and CHCL.

# SPISP II

Soil / Pesticide Interaction Screening Procedure version II.

See Loss Potential Algorithms and Interaction Matrices for more information.

## SPISP II Ratings

Soil/PesticideIinteraction Two Ratings. Loss potential algorithms used by WIN-PST 3.1.

See Loss Potential Algorithms and Interaction Matrices for more information.

#### SSRP

Soil Solution Runoff Potential. See Loss Potential Algorithms for more information.

### **Standard Rate**

The default pesticide application rate. A label rate greater than 1/4 lb active ingredient per acre (280 g/ha).

## STSSAID

State Soil Survey Area ID.

Two letter state abbreviation and soil survey area ID (SSAID). A concatenation of FIPS alpha code for a state and the soil survey area symbol (SSAID). Example: MA011, which is the STSSAID for Franklin County, Massachusetts.

## STUDY_CAS

CAS_NO reported in toxicity studies for a pesticide. A field in the human and fish toxicity data tables. The STUDY_CAS may differ from the value in the CAS_NO field if the STUDY_CAS was believed to be incorrect.

### STUDY_NAME

A field in the pesticide toxicity data tables. Indicates the actual name used in the study from which pesticide toxicity values were procured. Occasionally, the name used in a study does not match the name we would use for that same chemical; based on other identifiers, such as the CAS_NO or the PC_CODE.

## STUDY_PC

PC_CODE reported in toxicity studies for a pesticide. A field in the human and fish toxicity data tables. The STUDY_PC may differ from the value in the PC_CODE field if the STUDY_PC was believed to be incorrect.

## Study_time

A field in the fish toxicity data table. Indicates the relative timeframe of the study.

### STV

Sediment Toxicity Value. STV = MATC x Koc. Compared to the PARP when the species of concern are fish.

STV provides toxicity of pesticide sorbed to detached soil leaving the field. Koc is used in STV determination to estimate pesticide concentration in sediment pore water. Fish MATC is used in lieu of toxicity data to sediment dwelling animals for which test data are rare. STV threshold ratings are the same as those used for MATC evaluation. The method for sediment short-term toxicity of nonionic pesticides (Di Torro et al., 1991), was modified to determine long-term toxicity. STV is also used to evaluate ionic pesticide which account for about 25% of pesticides. This is achieved by use of an adjusted Koc in the NAPRA PPD, which accounts for pesticide ionic properties.

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Reference:

Di Torro, D.M., C.S. Zarba, D.J. Hansen, W.J. Berry, R.C. Swartz, C.E. Cowan, S.P. Pavlou, H.E. Allen, N.A. Thomas, P.R. Paquin. 1991.

"Technical Basis for Establishing Sediment Quality Criteria for Nonionic Organic Chemicals Using Equilibrium Partitioning." Environmental Toxicology and Chemistry. 10:1541-1583

## **Surface Applied**

Surface Applied (default) - applied to the soil surface.

## SURFACE DEPTH

Depth of the soil surface horizon. Used to compute the SPISP II SLP rating. This can be a default (Default First Horizon Depth) or user-supplied value (DEPTH[1] (User)).

See also: Default First Horizon Depth, DEPTH[1] (User), Horiz[1] / Horiz_1_Depth / H1_DEPTH, LAYDEPH, LAYDEPL, SLP

### TAXA

Animal group tested. A field in the fish toxicity data table.

## TAXONOMIC

Genus and species of the fish tested. A field in the fish toxicity data table.

## TEXTURE

Soil texture class designations. Code for the USDA texture for the specified layer or horizon of the soil. Example: Sandy Loam (SL); Loam (L).

	Texture Terms	Terms used in lieu of texture
BY Bouldery BYV Very bouldery BYX Extremely bouldery CB Cobbly CBA Angular cobbly CBV Very cobbly CBX Extremely cobbly CN Channery CNV Very channery CNV Very channery FL Flaggy FLV Very flaggy FLV Very flaggy	Texture Terms COS Coarse sand S Sand FS Fine sand VFS Very fine sand LCOS Loamy coarse sand LS Loamy sand LFS Loamy fine sand LVFS Loamy very fine sand COSL Coarse sandy loam SL Sandy loam FSL Fine sandy loam VFSL Very fine sandy loam L Loam	Terms used in lieu of texture CE Coprogenous earth CEM Cemented CIND Cinders DE Diotomaceous earth FB Fibric material FRAG Fragmental material G Gravel GYP Gypsiferous material HM Hemic material ICE Ice or frozen soil IND Indurated MARL Marl MPT Mucky-peat
FLV Very flaggy FLX Extremely flaggy GR Gravelly GRC Coarse gravelly GRF Fine gravelly GRV Very gravelly GRX Extremely gravelly MK Mucky PT Peaty RB Rubbly SR Stratified ST Stony STV Very stony	VFSL Very fine sandy loam L Loam SIL Silt loam SI Silt SCL Sandy clay loam CL Clay loam SICL Silty clay loam SC Sandy clay SIC Silty clay C Clay	MARL Marl MPT Mucky-peat MUCK Muck PEAT Peat SG Sand and gravel SP Sapric material UWB Unweathered bedrock VAR Variable WB Weathered bedrock

### TOX_PPB

Toxicity threshold concentration of pesticide in parts per billion (ppb).

## TOX_TIME

Timeframe associated with a toxicity. WIN-PST PPD, Fish: tox_type: MATC -- LONG-TERM LOC -- 4-DAY WIN-PST PPD, Human: {Lifetime AKA CHRONIC}.

# TOX_TYPE

Toxicity type that applies to an animal, fish or humans.

FISH: Toxicity types in the WIN-PST fish toxicity data table: 96-hour LC50, LOC, MATC, and STV.

HUMAN: Toxicity types in the WIN-PST human toxicity data table: MCL, HA, HA*, and CHCL. Based on availability, usage priority in this database is: MCL, HA, HA* and CHCL. This order was determined by considering:

1. MCL is EPA's drinking water regulation of choice.

2. HA has been determined by the EPA Office of Water (OW).

3. HA* is calculated by the same method used by the OW for noncarcinogens and possible human carcinogens as determined by OW.

4. CHCL is determined for probable and known carcinogens. It is comparable to the MCL.

## **Ultra Low Rate**

A pesticide application rate of 1/10 lb or less active ingredient per acre. (112 grams per hectare.) An ultra low rate of application allows reduction of the P-Ratings by two classes.

## **USEPARFD**

United States EPA assigned Reference Dose.

### Usepattern

A field of data in the fish toxicity data table.

### USER_OM

A value that represents percent organic matter in the first soil horizon. The value comes from the Soils database and can be changed by the user based on the site conditions.

### **VERY LOW**

See Loss Potential Algorithms.

See Interaction Matrices.

See Hazard Ratings.

# VP_GE

A field in the WIN-PST PPD. Indicates the quality of the data in the VP_MMHG field. See GE FIELDS for more information.

See <u>G/E</u>.

# VP_MMHG

A field in the WIN-PST PPD. Vapor pressure in millimeters (mm) of mercury (Hg).

## VP_PH

A field in the WIN-PST PPD. The pH at which the value in the VP_MMHG field is valid.

w

See High Water Table (HWT)

### WHO

World Health Organization.

### WHORFD

World Health Organization Reference Dose. RFD's from WHO are used to calculate HA* when RFD's are unavailable from EPA OPP or EPA. A field in the human toxicity data table.

## WIN-PST PPD

WIN-PST / NAPRA Pesticide Properties Database (PPD). Comprised of data from a variety of sources, this database contains EPA registration data (EPA REG DB), representative value pesticide property data (source indicated by the G/E field in the data tables), and toxicity data for humans and fish.

## WTDEPL

Lower range of the depth to high water table, in feet. If the depth to the high water table comes within 2 feet of the soil surface during the growing season, then the HWT_LT_24 soil site condition should checked.

# WTKIND

Kind of water table: Apparent, perched, or artesian.

# USER_DEPTH

A value that represents the Depth of the soil surface horizon. The value comes from the Soils database and can be changed by the user based on the site conditions.