

RUSLE2 - Instructions & User Guide



January 2016

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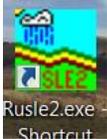
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Note: There is more help and instruction available within the RUSLE2 Program by clicking on the "Help" menu and selecting "users manual".

For help with an individual cell in the program, place your cursor on that cell and right-click, then select "Help".

Step 1: Open RUSLE2



Click the RUSLE2 Shortcut on your desktop.

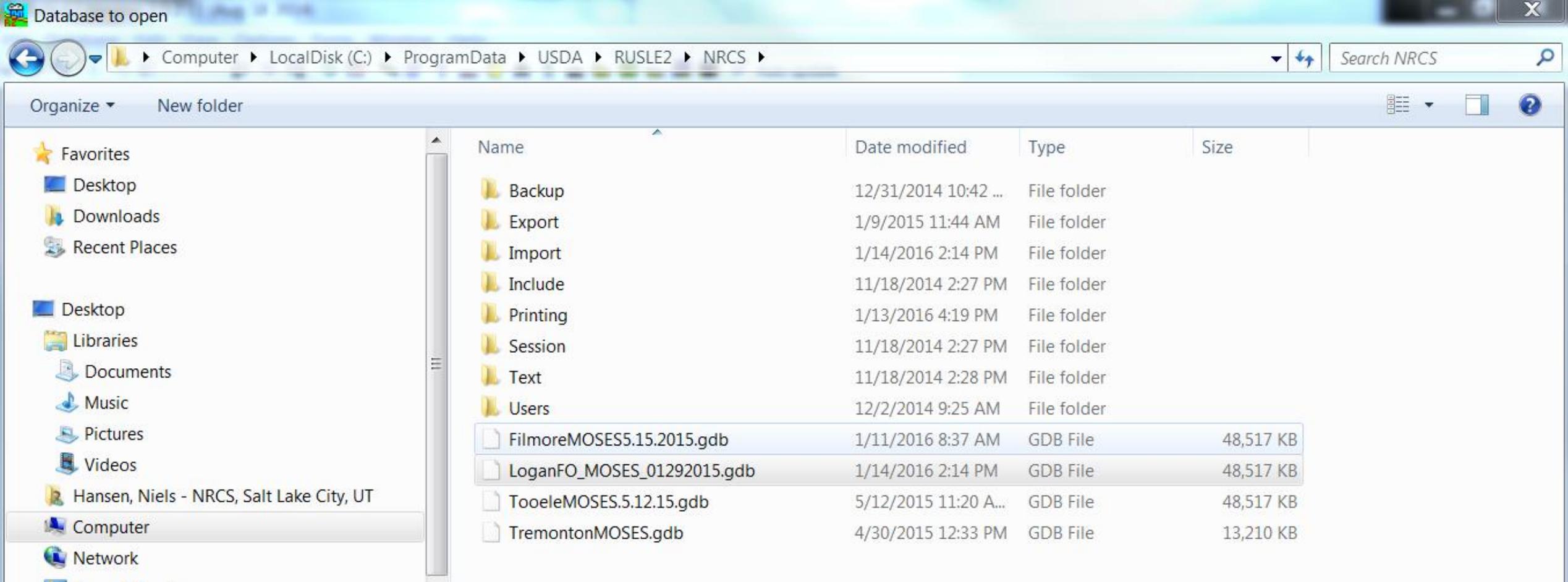
If it isn't on your desktop go to Start>All Programs>USDA Applications>Rusle2>  Rusle2 Soil Erosion Prediction

Before you can do any work you must import the database for your field office. Each one is different across the state. Check the lower right corner of the screen. This is the database for the LoganFO.

To import the correct database:

1st go the "Database"

2nd choose "open alternate"



You will get this screen and you can choose the correct database. If it is not there email the state or area agronomist and they will email it to you and you can save it to this location.

Click “Open” and will go back to the blank RUSLE2 screen.

To import the correct database:

1st go to the "Database"

2nd choose "open alternate"

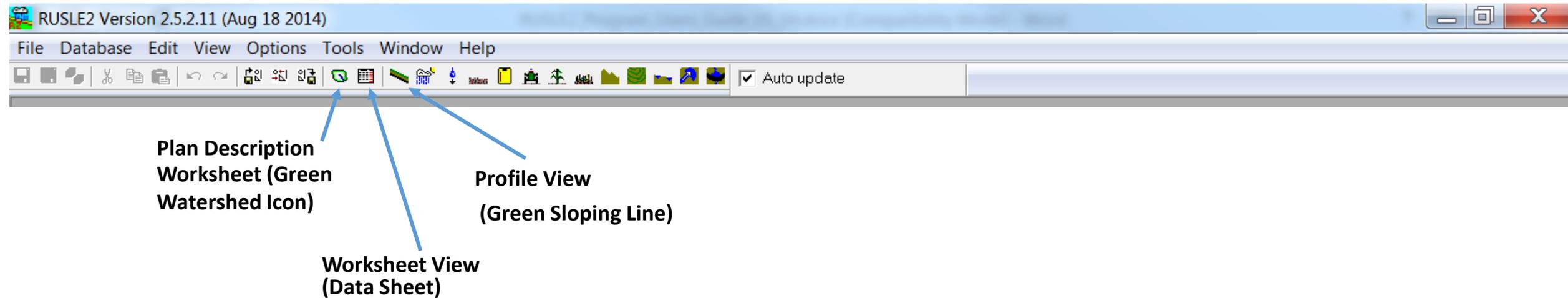
3rd choose the correct database for your field office

You are here

4th go to the "Database" again

5th choose "Startup Database" This will be the database your computer starts with until you change it again.

In the opening screen select the "**Plan Description Worksheet**" user template (the green watershed symbol). This is the screen that can be used to calculate soil loss for multiple fields and print a summary report. We will use the "Plan Description Worksheet" template to provide instruction on how to use RUSLE2. The other worksheets follow a very similar process.



Step 2. Select a Starting File/Template.

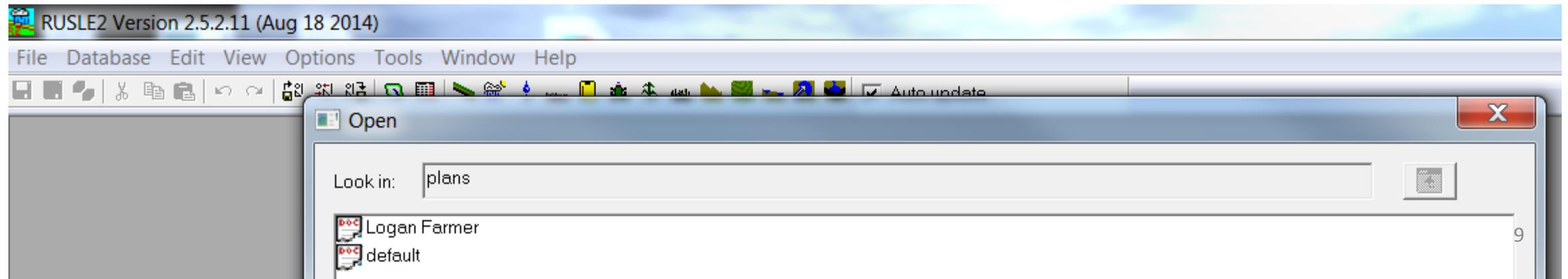
Plan Description View (Green Watershed Icon) - This is the template to use to calculate soil loss on multiple fields for conservation planning. 

Worksheet View (Data Sheet) - This is a useful template to use to calculate several soil loss alternatives for one hillslope or one field. **NOTE:** This is also the template you will be directed to use when you want to build rotation management systems. you will be able to save rotations you create in the local (c) CMZ file folder and use in the future to save entry time.



Profile view (Green Sloping Line) - This template is used to make calculations for cross slope farming, contour buffers, and other structural practices. 

In the "Open" dialogue box click on the file you wish to start. If you are starting for the first time, select the default. Make sure you click hard enough that the [file name] appears in the name blank at the bottom of the dialogue box. Click Open.



NOTE: If this is the first time you are starting do the following:

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Plan: Logan Farmer

Owner name Logan Farmer

Location USA\Utah\Cache County\UT_Cache_Req_15

Info You can write some information in this box.

Compare field alternatives Compute avg. soil loss for a field/watershed

FIELDS (click yellow folder to open a field)	
Field	Field name
+ -	
Worksheet	South Forty

RESULTS FOR EACH FIELD & ALTERNATIVE		
Field name	Description	Cons. plan. soil loss, t/ac/yr
South Forty		0

1st Select a location using the drop down menu and opening the yellow climate folder – navigate until you find your county – DOUBLE CLICK the county e.g. Cache County. Then select UT_Cache_Req_15 (the precipitation zone for the field you are working on. REQ is used when there is snow cover most of the winter.

2nd Now click on the yellow “worksheet” folder. This will open the worksheet view to enter data – we want to set up the rest of the planning template for future use.

This is the Worksheet screen

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Plan: Worksheet (Field[1]) of Logan Farmer

Tract #
Owner name
Field name: South Forty

Info: This is the field along SR 89

Compare management alternatives for a single hillslope profile

Location: ...A KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES\Kidman Fine sandy loam 100%

T value, t/ac/yr

Slope length (along slope), ft: 600
Avg. slope steepness, %: 2.0

MANAGEMENT ALTERNATIVES & P

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management
+	-				
Profile	0.51	64	0		...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer

Now click on the yellow folder next to "profile" – this will open the profile view.

This is the Profile screen where you can enter Contouring, Strips/Barriers, Diversion/terrace, sediment basin, and subsurface drainage

The screenshot shows the RUSLE2 software interface. The title bar reads "RUSLE2 Version 2.5.2.11 (Aug 18 2014)". The menu bar includes "File", "Database", "Edit", "View", "Options", "Tools", "Window", and "Help". The toolbar contains various icons for file operations and a checked "Auto update" option. The main window title is "Plan: Profile (Temp. scenario[1]) of Logan Farmer".

The interface is divided into several steps for data entry:

- STEP 1: Choose location to set climate:** Location []
- STEP 2: Choose soil type:** Soil []
- STEP 3: Set slope topography:** Slope length (along slope), ft [] Avg. slope steepness, % []
- STEP 4a: Select base management:** Base management [...r Local Mgt Records\Alfalfa 4 yrs. fall seed, 4X, wheat winter 4 yrs. bale and remove residue, con till, Z35 Logan Farmer]
- STEP 4c: adjust management inputs if de**
 - Adjust yields [open]
 - General yield level []
 - Adjust res. burial level [Normal res. burial]
 - Adjust ext. res. additions [Residue inputs]
- STEP 5: Set supporting practices:**
 - Contouring [default] Actual row grade, % [2.0] Crit. slope length, ft [600]
 - Strips/barriers [(none)]
 - Diversion/terrace, sediment basin [(none)]
 - Subsurface drainage [(none)]

At the bottom, there is a "Results" section with tabs for "Additional Results", "Track Biomass", "TRACK_RIDGE_HEIGHT_AND_SOIL_LOSS_BY_DAY", and "FUEL_USAGE__COST_SUM_FOR_ALL_OPS_NOT_ANNUAL_AVG". The "TRACK_RIDGE_HEIGHT_AND_SOIL_LOSS_BY_DAY" tab is active, showing:

Soil loss for cons. plan, t/ac/yr	0	Info
T value, t/ac/yr		
Surf. res. cov. values	[open]	
Soil conditioning index	[Soil conditioning index]	

Click the "X" in upper right to close the profile view.

Next click the "X" in upper right to close the worksheet view. You are now back at the "Plan View screen"

This is the “Plan view screen”

1. Click on the File> Save As> Type in a name for this “Template”(or file) then click Save

Owner name Logan Farmer
Location USA\Utah\Cache County\UT_Cache_Req_15
Tract #

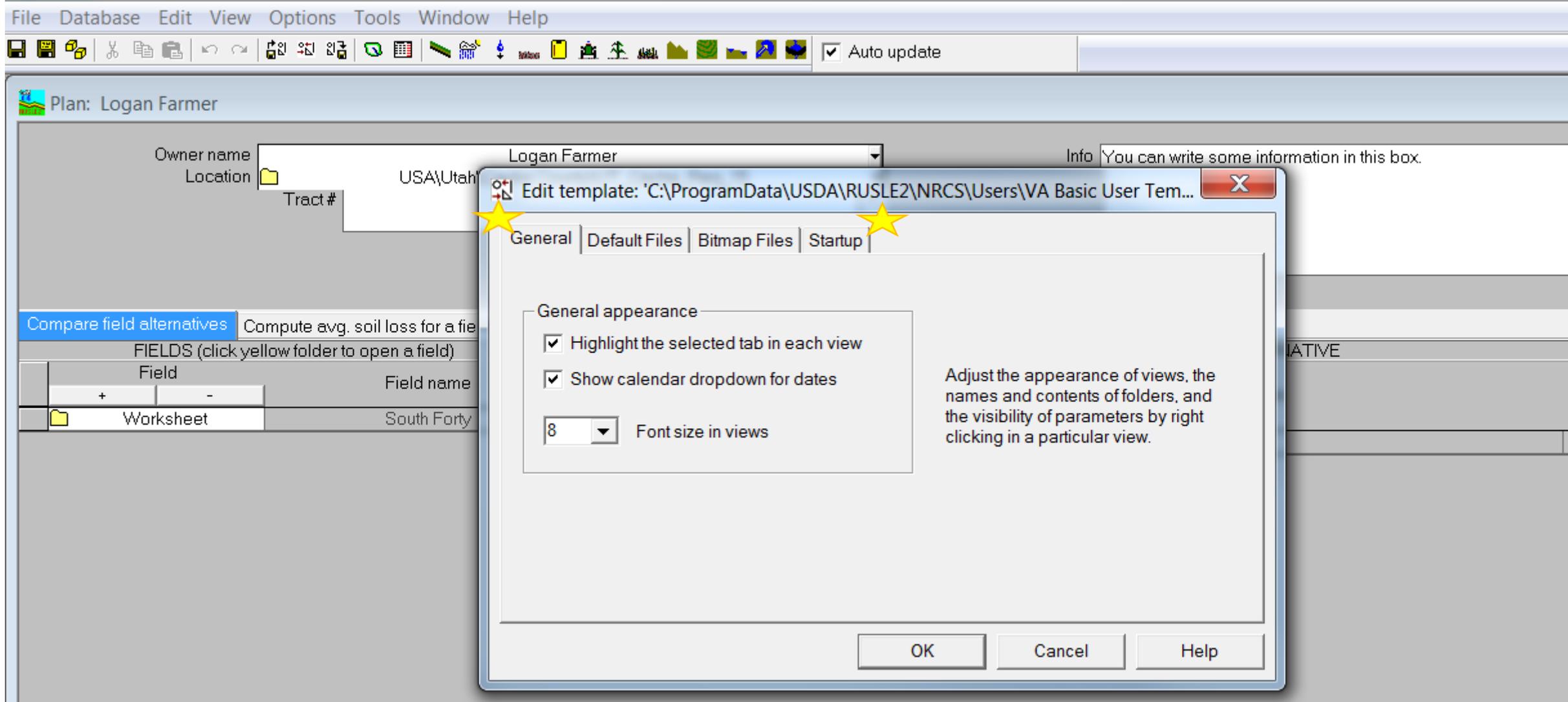
Info You can write some information in this box.

Compare field alternatives Compute avg. soil loss for a field/watershed

FIELDS (click yellow folder to open a field)	
Field	Field name
+ -	
Worksheet	South Forty

RESULTS FOR EACH FIELD & ALTERNATIVE		
Field name	Description	Cons. plan. soil loss, t/ac/yr
South Forty		0

2. Now click on the “Options menu at the top of the screen. Select Template> Edit Current



- In the "Startup Tab ", check the box next to "use this template on startup" if you want this one to start when you open the "Plan Descriptions Template". If not, do not check it.
- In the "General Tab" click "Highlight Selected Tab" and "Show Calendar..."
- Click OK

Using RUSLE2 to Predict Sheet and Rill Erosion

Step 1. "Owner Name" or your Client. (On the "Plan View")

Click on the drop down arrow. A box will appear where you can type in the owner name.

Step 2. Climate "Location". (On the "Plan View")

Click on the drop down arrow (IF NOT ALREADY SELECTED). Navigate down the files, open your state, then move down and double click on the county or climate file you want.

Step 3. Plan "Info" Box (Upper-Right of Screen) (On the "Plan View")

Place your cursor in the box and type a description of the fields or treatment units being evaluated. This will be helpful information for the future. The information entered here will appear in the Report Printout that will serve as your permanent record.

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Plan: Logan Farmer

Owner name Logan Farmer
Location USA\Utah\Cache County\UT_Cache_Req_15
Tract #

Info You can write some information in this box.

Compare field alternatives Compute avg. soil loss for a field/watershed

15

FIELDS (click yellow folder to open a field)

RESULTS FOR EACH FIELD & ALTERNATIVE

Step 4. Enter Fields and Field Names (Worksheet View)

Plan: Logan Farmer

Owner name Logan Farmer
Location USA\Utah\Cache County\UT_Cache_Req_15
Tract#

Info You can write some information in this box.

Compare field alternatives | Compute avg. soil loss for a field/watershed

FIELDS (click yellow folder to open a field)			
Field	+	-	Field name
Worksheet			South Forty

RESULTS FOR EACH FIELD & ALTERNATIVE		
Field name	Description	Cons. plan. soil loss, t/ac/yr
South Forty		0

1st. Click on the yellow folder next to Worksheet – this will open up the field Worksheet view where you enter data about the field being evaluated.

Tract#
Owner name
Field name

Info

Compare management alternatives for a single hillslope profile

Location

Soil

Slope length (along slope), ft

Avg. slope steepness, %

T value, t/ac/yr

MANAGEMENT ALTERNATIVES & RE:

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management
<input type="button" value="+"/> <input type="button" value="-"/>	0.51	64	0	<input type="text" value="...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer"/>	<input type="text" value="...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer"/>

- 2nd.** Use the drop down menu (next to field name) and enter the "Field Name" e.g. South 40.
- 3rd.** OPTIONAL – enter info about the field in the "Info" text box, if it will be useful for you later.

4th. **SOIL** -Use the Soil drop down menu to select the planning soil for this field. Select the Soil Survey Area “Cache County Area”. Next select the “Map Unit” and click the “+” sign to display the soil component. If there is only one soil component select it; if there is more than one soil component, select the one that best fits the field condition. Double click the Map Unit Component to enter

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Plan: Worksheet (Field[1]) of Logan Farmer

Tract #

Owner name

Field name

Info This is the field along SR 89

Compare management alternatives for a single hillslope profile

Location

Soil

T value, t/ac/yr

Slope length (along slope), ft 600

Avg. slope steepness, % 2.0

MANAGEMENT ALTERNATIVES & RE:

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management
+ -					

5th. Enter the **LENGTH OF SLOPE AND THE PERCENT SLOPE** that you **measured in the field**.

The screenshot shows the RUSLE2 software interface. The title bar reads "RUSLE2 Version 2.5.2.11 (Aug 18 2014)". The menu bar includes "File", "Database", "Edit", "View", "Options", "Tools", "Window", and "Help". The toolbar contains various icons for file operations and analysis. The main window is titled "Plan: Worksheet (Field[1]) of Logan Farmer". It features several input fields: "Tract #", "Owner name", "Field name" (set to "South Forty"), and "Info" (containing "This is the field along SR 89"). A blue callout box highlights the "Compare management alternatives for a single hillslope profile" section. Below this, there are fields for "Location", "Soil" (set to "...fA KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES\Kidman Fine sandy loam 100%"), and "T value, t/ac/yr". A table displays "Slope length (along slope), ft" as 600 and "Avg. slope steepness, %" as 2.0. A blue arrow points from the callout box to the "Slope length" field. At the bottom, a table titled "MANAGEMENT ALTERNATIVES & RE:" lists various management options with columns for "Temp. scenario", "Soil conditioning index (SCI)", "STIR value", "Cons. plan. soil loss, t/ac/yr", "Description", and "Base management". The "Profile" row is selected, showing a SCI of 0.51, STIR of 64, and soil loss of 0. The management description is "...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer".

There are two (2) primary ways to enter management:

1. Build a rotation using single year crops or double crops, OR
2. Select a pre-built rotation and use as is or do minor revisions.

Option 2 is the easiest and quickest; however, the **6th step** below will show how to build a rotation from single year crops. Selecting pre-built rotations will be shown at the end of this section.

6th MANAGEMENT - Entering and “building a rotation from single year crops”.

Double click on the yellow profile folder in the “Worksheet View”. The profile screen shown below will appear.

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Plan: Profile (Temp. scenario[1]) of Logan Farmer

STEP 1: Choose location to set climate: Location

STEP 2: Choose soil type: Soil

STEP 3: Set slope topography: Slope length (along slope), ft Avg. slope steepness, %

STEP 4a: Select base management: Base management  ...r Local Mgt Records\Alfalfa 4 yrs, fall seed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer

STEP 4c: adjust management inputs if de

Adjust yields  open

General yield level

Adjust res. burial level Normal res. burial

Adjust ext. res. additions  Residue inputs

STEP 5: Set supporting practices:

Contouring  default Actual row grade, % 2.0 Crit. slope length, ft 450

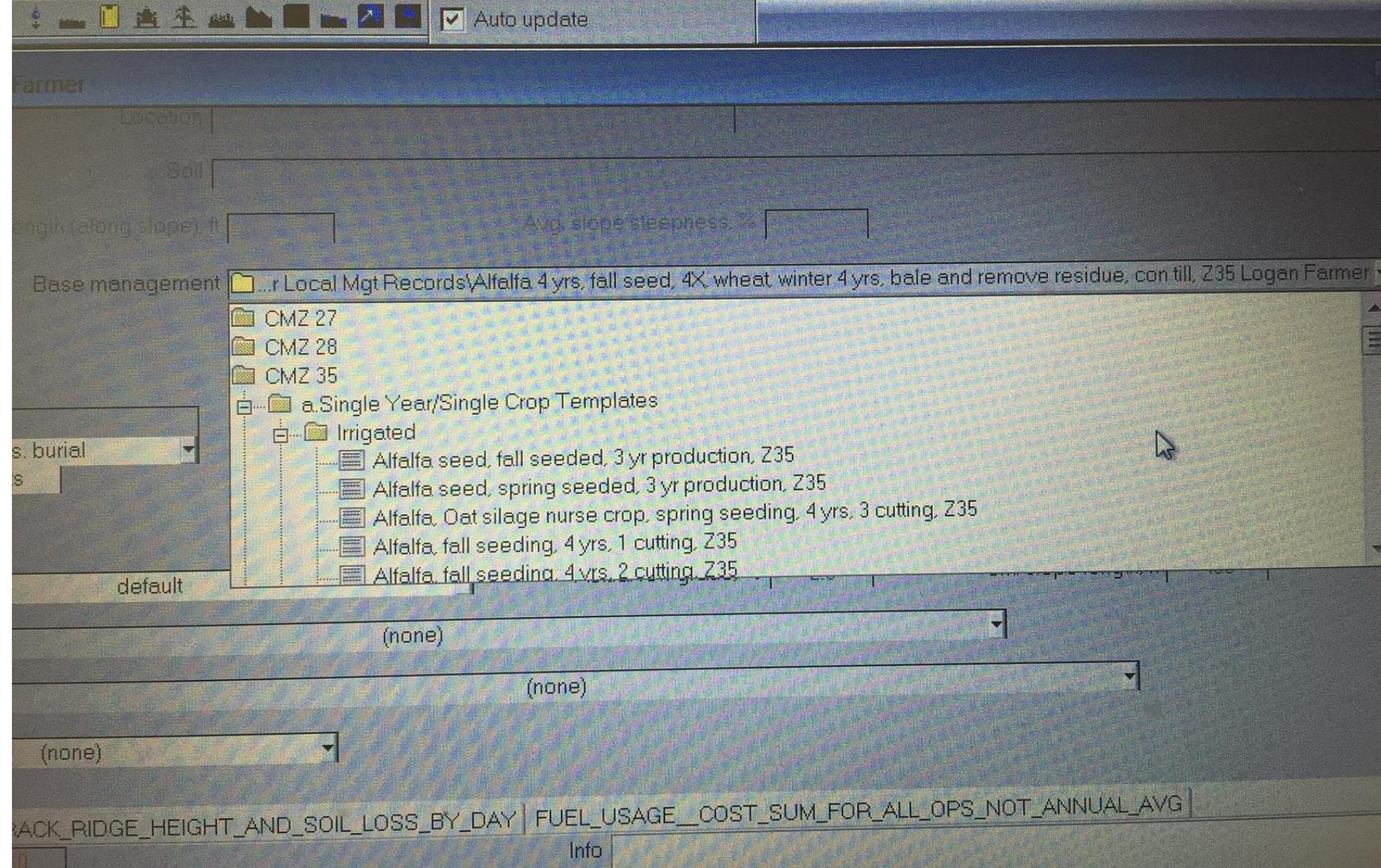
Strips/barriers (none)

Diversion/terrace, sediment basin (none)

Subsurface drainage (none)

Start at step 4c Select Base management.

Start by navigating to the appropriate CMZ e.g. CMZ 35 then go to the single year crops (**a. folder – Single Year Crops Templates**)



(b. **Multiyear Rotation Templates** - folder is for already built rotations/tillage systems)

(c. **Other Local Mgt. Records** – where you will save **your** rotation file/templates you built and wish to save for future use)

Use the drop down menu in the first row to select the management file for crop

The management screen shows the crop and tillage operations that are in the management file

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File Database Edit View Options Tools Window Help

Plan: Profile (Temp. scenario[1]) of Logan Farmer

Management: CMZ 35\a.Single Year/Single Crop Templates/Irrigated\Corn, silage, conv, fplow. Z35

Duration, yr | 1 | View/edit rotation builder used to make this management [op]

Operations Info FUEL_USE_AND_COST_SUM_FOR_ALL_OPS_AND_YEARS_NOT_ANNUAL_AVG

Management Operations

Date, m/d/y	Operation	Vegetation	Yield (harv. units). #/ac	Type of cover material	Cover add/ret lb/e
+	-				
10/1/0	Plow, moldboard				
10/15/0	Disk, tandem secondary op.				
4/29/1	Cultipacker, roller				
4/30/1	Fert applic. surface broadcast				
4/30/1	Cultipacker, roller				
5/1/1	Planter, double disk opnr	Corn, silage	23		
5/15/1	Cultivator, row 3 in ridge				
5/22/1	Cultivator, row 3 in ridge				
6/1/1	Cultivator, row 3 in ridge				
6/20/1	Cultivator, row 3 in ridge				
9/15/1	Harvest, silage				76

Right click on a row in the "Operation" column to add a new row or Click on the "+" sign under "Date"

Start with the first tillage after harvest. In this example "Harvest, silage" was 9/15/1 at the end and "Plow, moldboard" was the previous year

In the example above (11) rows are shown for a one year rotation. Change operations and dates until they reflect the management of the field

ALWAYS be mindful of the dates!

They must be in sequence. RUSLE2 will automatically add an extra year between dates that are not in sequence!

Make sure the date of the following crop or operation is at least one day later than the ending date of the previous crop or operation.

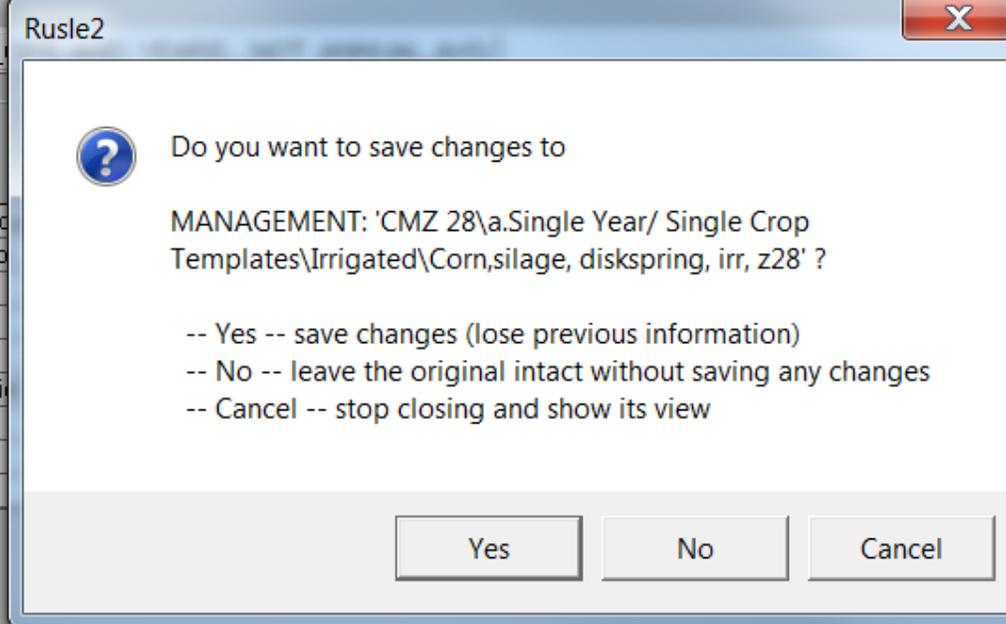


Tillage implements that have several kinds of tools such as an offset disk, followed by a straight point chisel, followed by another offset disk, followed by a roller harrow all pulled the same time can have several entries all with the same date.

Duration, yr 1

View/edit rotation builder used to make this management op

Date, m/d/y		Operation
+	-	
4/10/0	▼	Disk, tandem heavy primary c
4/15/0	▼	Disk, tandem secondary op
4/20/0	▼	Cultipacker, roller
4/25/0	▼	Planter, double disk opnr
5/25/0	▼	Sprayer, post emergence
6/1/0	▼	Fert applic. side-dress, liqui
6/1/0	▼	Cultivator, row 3 in ridge
7/1/0	▼	Cultivator, row 3 in ridge
9/1/0	▼	Harvest, silage



Yield (harv. units), #/ac	Type of cover material	Cover m add/rem, lb/ac
22	weeds; 0-3 mo	250
		735

When you close this screen RUSLE2 will ask if you want to save the changes. Answer "Yes"

Date, m/d/y		Operation
+	-	
4/10/0	▼	Disk, tandem heavy primary
4/15/0	▼	Disk, tandem secondary
4/20/0	▼	Cultipacker, roller
4/25/0	▼	Planter, double disk opr
5/25/0	▼	Sprayer, post emergenc
6/1/0	▼	Fert applic. side-dress, liq
6/1/0	▼	Cultivator, row 3 in ridge
7/1/0	▼	Cultivator, row 3 in ridge
9/1/0	▼	Harvest, silage

Yield (harv. units), #/ac	Type of cover material	Cover m add/rem, lb/ac
22	weeds: 0-3 mo	250
		735

Rusle2

Cannot save object 'managements\CMZ 28\a.Single Year/ Single Crop Templates\Irrigated\Corn,silage, diskspring, irr, z28'
 This object is readonly.
 Your access group doesn't allow you to save this object, although you may be able to save it to a different location.

OK

RUSLE2 won't let you save it with the templates in folder (a. Single Year Templates; or in folder (b. Multi-year Rotation Templates

Date, m/d/y	
+	-
4/10/0	▼
4/15/0	▼
4/20/0	▼
4/25/0	▼
5/25/0	▼
6/1/0	▼
6/1/0	▼
7/1/0	▼
9/1/0	▼

Save As

Save in:

- ▼ a.Single Year/Single Crop Templates
- ▼ b.Mullti-year Rotation Templates
- ▼ c.Other Local Mgt Records
- ▼ d.Construction Site Templates

File name:

File type:

Open to last directory

of cover material	Cover m add/rem lb/ac
eds: 0-3 mo	250
	735

Save it in the (c. "Other Local Mgt Records" and give it a name that is descriptive so that it is easy to find. Notice the way the file name describes the management.

Plan: Profile (Temp. scenario[1]) of Logan Farmer*

STEP 1: Choose location to set climate: Location

STEP 2: Choose soil type: Soil

STEP 3: Set slope topography: Slope length (along slope), ft Avg. slope steepness, %

STEP 4a: Select base management: Base management CMZ 35\c. Other Local Mgt R
 CMZ 35\a. Single Year/Single Crop Templates\Irrigated\Corn, silage, conv, fplow, Z35

STEP 4c: adjust management inputs if de
 Adjust yields open
 General yield level
 Adjust res. burial level Normal res. burial
 Adjust ext. res. additions Residue inputs

STEP 5: Set supporting practices:

Contouring default Actual row grade, % 2.0 Crit. slope length, ft 450

Strips/barriers (none)

Diversion/terrace, sediment basin (none)

Subsurface drainage (none)

Results Additional Results Track Biomass TRACK RIDGE HEIGHT AND SOIL LOSS BY DAY FUEL USAGE COST SUM FOR ALL OPS NOT ANNUAL AVG

You can select “Multi-year Rotation Templates” that have long rotations of alfalfa and other crops to save some time.

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Management: CMZ 35\b.Multi-year Rotation Templates\Irrigated\Alfalfa 6 yrs, spring seed, 3X, barley, spring 2 yrs, con till, Z35

Duration, yr | 8 | View/edit rotation builder used to make this management | op

Operations Info | FUEL_USE_AND_COST_SUM_FOR_ALL_OPS_AND_YEARS_NOT_ANNUAL_AVG |

Management Operations

Date, m/d/y	Operation	Vegetation	Yield (harv. units), #/ac	Type of cover material	Cover m add/remi lb/ac
+ -					
5/13/1	Disk, tandem secondary op.				
5/14/1	Fert applic. surface broadcast				
5/14/1	Cultipacker, roller				
5/14/1	Cultipacker, roller				
5/15/1	Drill or airseeder, double disk	Alfalfa, spring seed	1		
8/15/1	Harvest, hay, legume	Alfalfa, spring seed senes to y2 regrowth	2		270
4/10/2	Fert applic. surface broadcast				
4/10/2	Sprayer, post emergence			weeds; 0-3 mo	0
6/4/2	Harvest, hay, legume	Alfalfa, NW yr2 regrowth after cutting	2		405
7/8/2	Harvest, hay, legume	Alfalfa, NW yr2 regrowth after cutting	2		231
9/15/2	Harvest, hay, legume	Alfalfa, NW yr2 senes to yr3 regrowth	3		392
4/10/3	Fert applic. surface broadcast				
4/10/3	Sprayer, post emergence			weeds; 0-3 mo	0
6/4/3	Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		619
7/8/3	Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		262
9/15/3	Harvest, hay, legume	Alfalfa, NW yr3 senes to yr4 regrowth	3		445
4/10/4	Fert applic. surface broadcast				
4/10/4	Sprayer, post emergence			weeds; 0-3 mo	0
6/4/4	Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		647
7/8/4	Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		262

Multi-year Rotation Templates give you a base management that might be close to the management of the field. Adjust dates, operations, years, crops to reflect what the farmer is doing on that field.

Duration, yr | 8

View/edit rotation builder used to make this management | op

FUEL_USE_AND_COST_SUM_FOR_ALL_OPS_AND_YEARS_NOT_ANNUAL_AVG

Management Operations

Operation	Vegetation	Yield (harv. units), #/ac	Type of cover material	Cover matl add/remove, lb/ac
Sprayer, post emergence			weeds; 0-3 mo	0
Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		647
Harvest, hay, legume	Alfalfa, NW yr3 regrowth after cutting	2		435
Harvest, hay, legume	Alfalfa, NW yr3 senes to yr4 regrowth	3		294
Disk, tandem heavy primary op.				1240
Disk, tandem secondary op.				
Disk, tandem secondary op.				
Harrow, coiled tine				
Harrow, spike tooth				
Drill or airseeder, double disk	Barley, spring, CMZ 10, 10 in. spac.	2500		
Sprayer, post emergence			weeds; 0-3 mo	50
Harvest, killing crop 70pct standing stubble				840
Bale straw or residue				
Disk, tandem heavy primary op.				
Disk, tandem secondary op.				
Disk, tandem secondary op.				
Harrow, coiled tine				
Harrow, spike tooth				

Revising Operations in a Rotation:

In the example above if you wanted to show to field cultivator operation instead of the “Disk, tandem secondary op.” you would click on the drop down arrow next to “Disk, tandem secondary op.” Navigate through the choice list to select “Cultivator, field 6-12 in. sweeps”. The list is long; typing the first letter of the operation may speed your search.

File Database Edit View Options Tools Window Help

Auto update

Plan: Profile (Temp. scenario[1]) of Logan Farmer*

STEP 1: Choose location to set climate: Location

STEP 2: Choose soil type: Soil

STEP 3: Set slope topography: Slope length (along slope), ft Avg. slope steepness, %

STEP 4a: Select base management: Base management CMZ 35\a.Single Year/Single Crop Templates\Irrigated\Corn, silage, conv, fplow, Z35

STEP 4c: adjust management inputs if de

Adjust yields open

General yield level

Adjust res. burial level Normal res. burial

Adjust ext. res. additions Residue inputs

STEP 5: Set supporting practices:

Contouring default Actual row grade, % 2.0 Crit. slope length, ft 450

Strips/barriers (none)

Diversion/terrace, sediment basin (none)

Subsurface drainage (none)

Results Additional Results Track Biomass TRACK RIDGE HEIGHT AND SOIL LOSS BY DAY FUEL USAGE COST \$/M FOR ALL OPS NOT ANNUAL AVG

Step 4c involves adjusting yields for the crops as needed

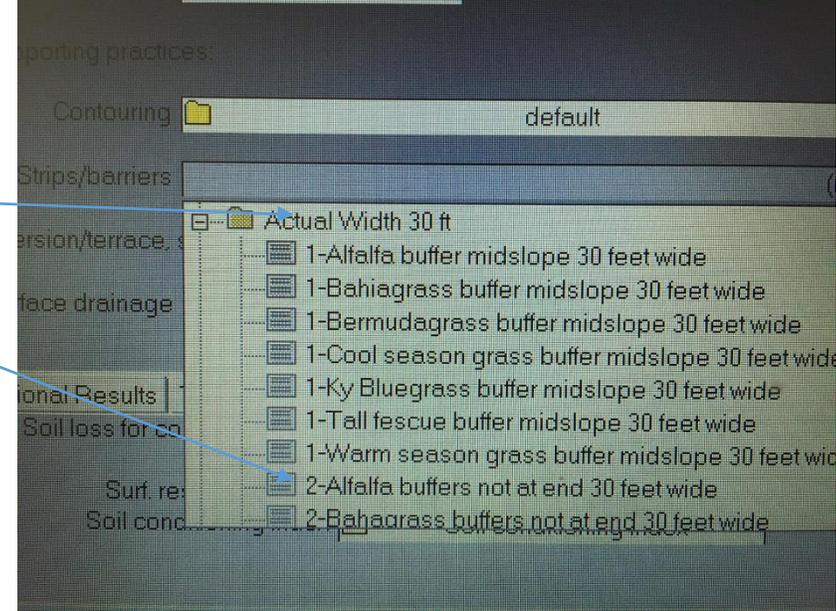
Step 5 involves inputting the supporting practices such as Contouring, Strips/barriers, Diversion/terrace, Sediment basin, and Subsurface drainage.

Use only the absolute row grades. The row grade means the percent of grade off the contour; e.g. Absolute row grade of 1% means the contouring is actually on a 1% grade across the slope – not on a perfect contour. There is one choice for “On Contour”. If contouring is not used, then use the default “up-and-down the hill”.



Contour Buffer Strips:

- 1st Select Actual Width of the Buffer
- 2nd Select the number of strips in "L"
- 3rd Select the type of cover



Guidance to select the correct strip cropping choice:

- Unless your slope length is longer than 200 feet you probably only have two (2) strips on the "Length (L)".
- In the choices 2 Strip rotational 0-1 means: 2 strips on "L" and the "0-1" means the 1st and 2nd crop in the rotation are next to each other (this would be a two year rotation). In a "0- 2" means the 1st and 3rd crops in the rotation are in strips next to each other (this would be a four year rotation like corn-oats-hay-hay where corn and 1st year hay are adjacent or oats and 2nd year hay are adjacent to each other).



Guidance to select Filter Strips (This applies if a filter strip is located at the bottom of the "L"):

- Two Main Choices Are Available – Actual Width or Percent of the "Length".
- Select the width and the type of cover. If you do not find the exact match select a similar choice – most produce very similar results.

Adjust Residue Burial – Select the Plan: Profile View then Click here to open a choice list to decrease burial or increase burial rate for each field operation

The screenshot displays the RUSLE2 software interface with the following components:

- Title Bar:** RUSLE2 Version 2.5.2.11 (Aug 18 2014) - [Plan: Profile (Temp. scenario[1]) of Logan Farmer*]
- Menu Bar:** File Database Edit View Options Tools Window Help
- Toolbar:** Includes icons for file operations and a checked 'Auto update' button.
- STEP 1:** Choose location to set climate: Location []
- STEP 2:** Choose soil type: Soil []
- STEP 3:** Set slope topography: Slope length (along slope), ft [] Avg. slope steepness, % []
- STEP 4a:** Select base management: Base management [CMZ 35\b.Mullti-year Rotation Templates\Irrigated\Alfalfa 6 yrs, spring seed, 3X, barley, spring 2 yrs, con till, Z35]
- STEP 4c:** adjust management inputs if de
Adjust yields [open]
General yield level []
Adjust res. burial level [Normal res. burial]
Adjust ext. res. additions [Residue inputs]
- STEP 5:** Set supporting practices:
Contouring [default] Actual row grade, % [2.0] Crit. slope length, ft [450]
Strips/barriers [(none)]
Diversion/terrace, sediment basin [(none)]
Subsurface drainage [(none)]
- Bottom Bar:** Results | Additional Results | Track Biomass | TRACK_RIDGE_HEIGHT_AND_SOIL_LOSS_BY_DAY | FUEL_USAGE_COST_SUM_FOR_ALL_OPS_NOT_ANNUAL_AVG

Plan: Worksheet (Field[1]) of Logan Farmer*

Tract #

Owner name

Field name

Info

Compare management alternatives for a single hillslope profile

Location

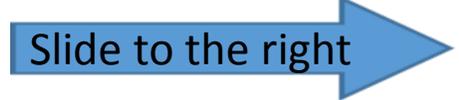
Soil

Slope length (along slope), ft

Avg. slope steepness, %

T value, t/ac/yr

Temp. scenario	Soil conditioning index (SCI)	STIP value	Cons. plan. soil loss, t/ac/yr	Description	Base management
+	-				
Profile	0.50	50	0		...mplates\Irrigated\Alfalfa 6 yrs, spring seed, 3X, barley, spring 2 yrs, con till, Z35



Worksheet View shows the soil loss on the selected "L" and "S". This is the conservation planning value.

ALTERNATIVES & RESULTS

General yield level	Yield values	Residue values	Contouring	Strips / barriers	Sed. delivery, t/ac/yr	Equiv. diesel use gal/ac	Fuel type	Fuel cost US\$/ac	Show in summary?	
con till, Z35	Base yield	Yields	...ue inputs	default	(none)	0	44	(none)	0	Yes

Slide to the left

This displays sediment delivery at the end of "L"

Adding or Deleting Attributes displayed on the “Worksheet View”

Some of the “attributes” e.g. diversions/terraces are not needed in your location or you may wish to add one to make the worksheet more useful for your location. Attributes can be added and deleted at any time – if you delete one then want to add it back it can be done.

To delete an attribute:

- 1st Click on an attribute title e.g. “Description”.
- 2nd Right click and select – Delete this visual.

To Add an Attribute:

- 1st. Right click on the words “Management Alternatives and Results” then select Add Attr.
- 2nd From the choice list provide from Add Attr select the attribute you wish to add. (like “Description”)

RUSLE2 Version 2.5.2.11 (Aug 18 2014) - [Plan: Worksheet (Field[1]) of Logan Farmer*]

File Database Edit View Options Tools Window Help

Tract #
Owner name
Field name: South Forty

Info: This is the field along SR 89

Compare management alternatives for a single hillslope profile

Location: ...A KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES\Kidman Fine sandy loam 100%
Soil: ...A KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES\Kidman Fine sandy loam 100%
Slope length (along slope), ft: 450
Avg. slope steepness, %: 2.0
T value, t/ac/yr

MANAGEMENT ALTERNATIVES & RESULTS

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management	Gene
Profile	0.50	50	0			

...mplates\Irrigated\Alfalfa 6 yrs, spring seed, 3X, barley, spring 2 yrs, con till, Z35

Description - Type in a short description of the rotation system. The results will be shown on the Description will be displayed in the printout report.

RUSLE2 Version 2.5.2.11 (Aug 18 2014)

File Database Edit View Options Tools Window Help

Auto update

Plan: Worksheet (Field[1]) of Logan Farmer

Tract #
Owner name
Field name: South Forty

Info: This is the field along SR 89

Compare management alternatives for a single hillslope profile

Location: ...fA KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES; Kidman Fine sandy loam 100%

T value, t/ac/yr

Slope length (along slope), ft: 600
Avg. slope steepness, %: 2.0

MANAGEMENT ALTERNATIVES & RE:

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management
+ -	0.51	64	0		
Profile					...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer

Plan: Residue inputs (Adjust ext. res. additions[1]) of Logan Farmer

Residue addition values

Date	Operation	Residue type	Residue added, lb/ac	Cover from addition, %
4/10/1	operations\Sprayer, post emergence	weeds; 0-3 mo	250	14
4/10/2	operations\Sprayer, post emergence	weeds; 0-3 mo	250	14
4/10/3	operations\Sprayer, post emergence	weeds; 0-3 mo	250	14
4/10/4	operations\Sprayer, post emergence	weeds; 0-3 mo	250	14
5/15/5	operations\Sprayer, post emergence	weeds; 0-3 mo	500	26
5/15/6	operations\Sprayer, post emergence	weeds; 0-3 mo	500	26
5/15/7	operations\Sprayer, post emergence	weeds; 0-3 mo	500	26
5/15/8	operations\Sprayer, post emergence	weeds; 0-3 mo	500	26

Residue Values - Click here to view results of how much residue is remaining after each field operation

The amount of residue cover is displayed after each operation. These values can be used to document the amount of cover needed for the client residue management plan.

Tract #
 Owner name
 Field name **South Forty**

Info This is the field along SR 89

Compare management alternatives for a single hillslope profile

Location
 Soil **...IA KIDMAN FINE SANDY LOAM, DEEP WATER TABLE, 0 TO 2 PERCENT SLOPES\Kidman Fine sandy loam 100%**
 Slope length (along slope), ft **600**
 Avg. slope steepness, % **2.0**

T value, t/ac/yr

MANAGEMENT ALTERNATIVES & RE:

Temp. scenario	Soil conditioning index (SCI)	STIR value	Cons. plan. soil loss, t/ac/yr	Description	Base management
<input type="button" value="+"/> <input type="button" value="-"/>	0.51	64	0	<input type="button" value="...ed, 4X, wheat, winter 4 yrs, bale and remove residue, con till, Z35 Logan Farmer"/>	



Soil Condition Index (SCI) and Soil Tillage Intensity Rating (STIR)

Help: Printing and Saving Reports

After the user has completed data entry and the results are displayed in Worksheet, Plan View, or Profile View the user can print the results and save as a permanent record. The record can be saved as a Microsoft Word (.doc) file anywhere in your file directory. For NRCS and Conservation District users it is suggested you save the file in the client's folder within the Toolkit directory

To Print the Results, do the Following

- 1st.** Click on the FILE menu. Select Print to MS Word Template
- 2nd.** After the dialogue box appears select the appropriate template.
- 3rd.** Click "OPEN" in the dialogue box. This will open MS Word and display your record of the results.

4th. At this point you have the option of printing and/or saving the document in your file directory. The next page shows an example printout of the four fields used in preparing these instructions

5th. If you want to save this RUSLE2 run, click the FILE menu and do a SAVE AS. Give it a unique name and SAVE. One should not do this very often as it will take up memory space and could reduce the speed performance of the RUSLE2 program.

