

# RUSLE2 Install & Support



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## Revised Universal Soil Loss Equation 2 (RUSLE2)

RUSLE2 is used to evaluate potential erosion rates at specific sites as well as guide conservation and erosion control planning. RUSLE2 uses factors that represent the effects of climate (erosivity, precipitation, and temperature), soil erodibility, topography, cover-management, and support practices to compute soil erosion. Conservation planning concepts must be understood and implemented into the RUSLE2 program in order for this program to work effectively.

### **NEW!!** [RUSLE2 Version 1.26.6.4 \(Nov. 2006\) Instructions](#)

**This update is necessary to improve internal functions, update Soils files, incorporate Fuel Use Energy Calculations, and includes updated database managements. RUSLE2 is scheduled to be updated periodically to ensure the most current version is available to field office staff.**

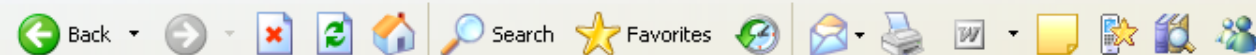
The [official NRCS RUSLE2 Program Website](#), Database and Instructions: Includes files and directions for installing RUSLE2. RUSLE2 Software will be installed by IT staff on Government Equipment.

[Checking RUSLE2 After installation FY07](#) This file will provide basic setup instructions after a new installation.

[RUSLE2 Database Updates 2007](#) These directions will guide you through updating tillage and rotation files and soils updates. It will also guide you in bringing files in from archived MOSES files.

[Conservation Farm Plan Questionnaire](#) can be completed by farmers themselves, or staff may use it to interview landowners prior to running RUSLE2. This worksheet captures the tillage and rotation issues as well as other practices such as contouring for the field.

[RUSLE2 Glossary](#) explains common abbreviations used in RUSLE2.



Address http://www.wi.nrcs.usda.gov/technical/consplan/rusle.html

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[RUSLE2 Glossary](#) explains common abbreviations used in RUSLE2.

[RUSLE 2 Planning Choices](#) shows how to select the correct soil unit and slope length and steepness factors.

[RUSLE2 Manure Application Guidance](#)

[Building & Saving Management templates](#) For directions on how to add tillage practices or crop rotations to an existing management profile follow directions from "adding a Base Management". Saving files temporarily or building sample management files to use in planning can be done by following directions in Saving Management Files to C. Other Local Management Records.

[Soil Conditioning Index](#) (SCI) is a tool that can predict the consequences of cropping systems and tillage practices on the trend of soil organic matter.

[Soil Tillage Intensity Rating](#) (STIR) factsheet

[Tillage Equipment-Pocket Identification Guide](#) (7 MB) Pocket guide common farm tillage equipment. It provides definitions and terminology along with color photos and line drawings for equipment commonly used in RUSLE2. Warning: this is a large file and will take some time to download.

### Powerpoint Presentations

[RUSLE 2 Training](#)

[Maintaining Soil Quality Gains after CRP or Long-term Sod](#)

Technical Contact: [Judy Derricks, State Agronomist](#)

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This site contains the official NRCS version of RUSLE2. It is the only version of RUSLE2 to be used for official purposes by NRCS field offices. The NRCS developed and maintains the database components on this site. These components comprise the Official NRCS RUSLE2 Database. The official NRCS RUSLE2 database is the only database to be used for official purposes by NRCS field office employees.

RUSLE2 is an upgrade of the text-based RUSLE DOS version 1. It is a computer model containing both empirical and process-based science in a Windows environment that predicts rill and interrill erosion by rainfall and runoff. The USDA-Agricultural Research Service (ARS) is the lead agency for developing the RUSLE2 model. The ARS, through university and private contractors, is responsible for developing the science in the model and the model interface.

For further information, contact Dave Lightle at [dave.lightle@lin.usda.gov](mailto:dave.lightle@lin.usda.gov).

Additional information on RUSLE2 is available at the [ARS Oxford Mississippi National Sedimentation Laboratory](#) website.

Note: This site is optimized for use with Internet Explorer 6.0. To install IE 6.0 see you local computer Administrator or visit the Microsoft website at [www.microsoft.com](http://www.microsoft.com)



Revised Universal Soil Loss Equation, Version 2 - Microsoft Internet Explorer

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Includes instructions for downloading program & files.

# Important!!!

Back-up your existing data before installing RUSLE2 or the *Base Database*, when updating your version of RUSLE2



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- Move this item
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**Other Places**

- RUSLE2
- My Documents
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**Details**

Previous version... Database Update In... Importing soils. climat... INSTRUCTI... FOR INSTA... R2NRCS\_2006 1114.exe R2NRCS\_20...

readme\_firs... RUSLE2\_Pr... RUSLE2\_Sci... RUSLE2\_Us...

User: Anonymous Internet

Run .exe file to  
install RUSLE2.

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[RUSLE2 Technology](#)[RUSLE2 Program](#)**Revised Universal Soil Loss Equation, Version 2 (RUSLE2)**

New users will also need *Base Database, Climate Data, Crop Management Templates, and Soils Data.*

It's a good idea to re-download and import this data if doing an update, to ensure that all data is current.

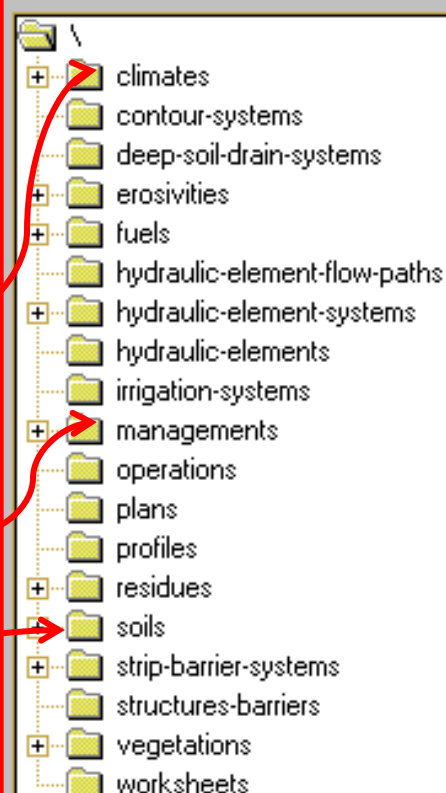
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  - deep-soil-drain-systems
  - erosivities
  - fuels
  - hydraulic-element-flow-paths
  - hydraulic-element-systems
  - hydraulic-elements
  - irrigation-systems
  - managements
  - operations
  - plans
  - profiles
  - residues
  - soils
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  - structures-barriers
  - vegetations
  - worksheets

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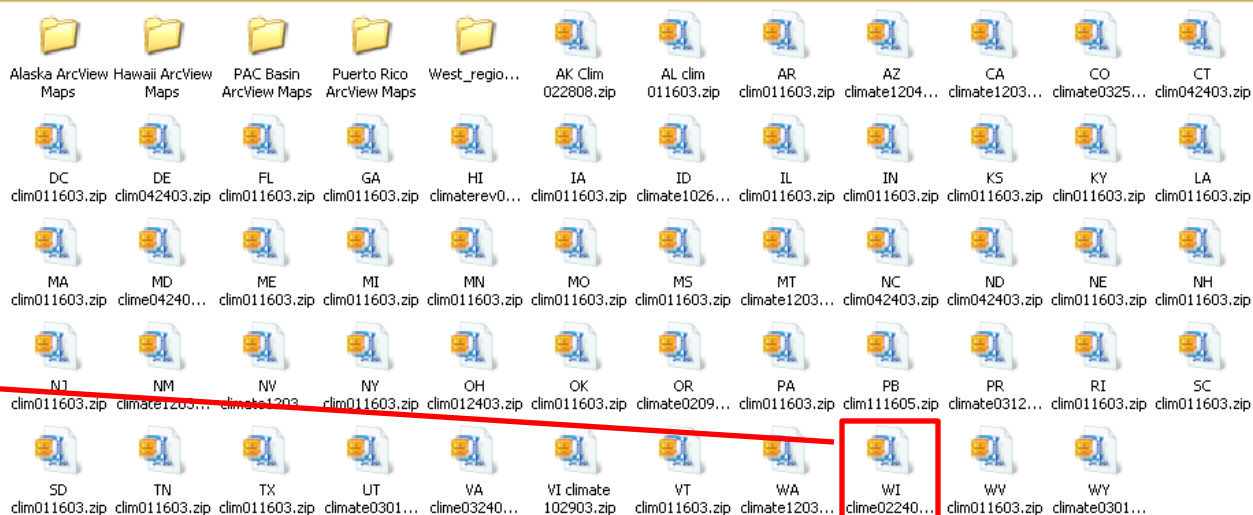
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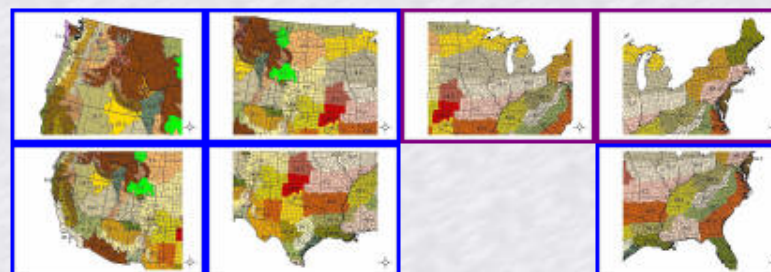
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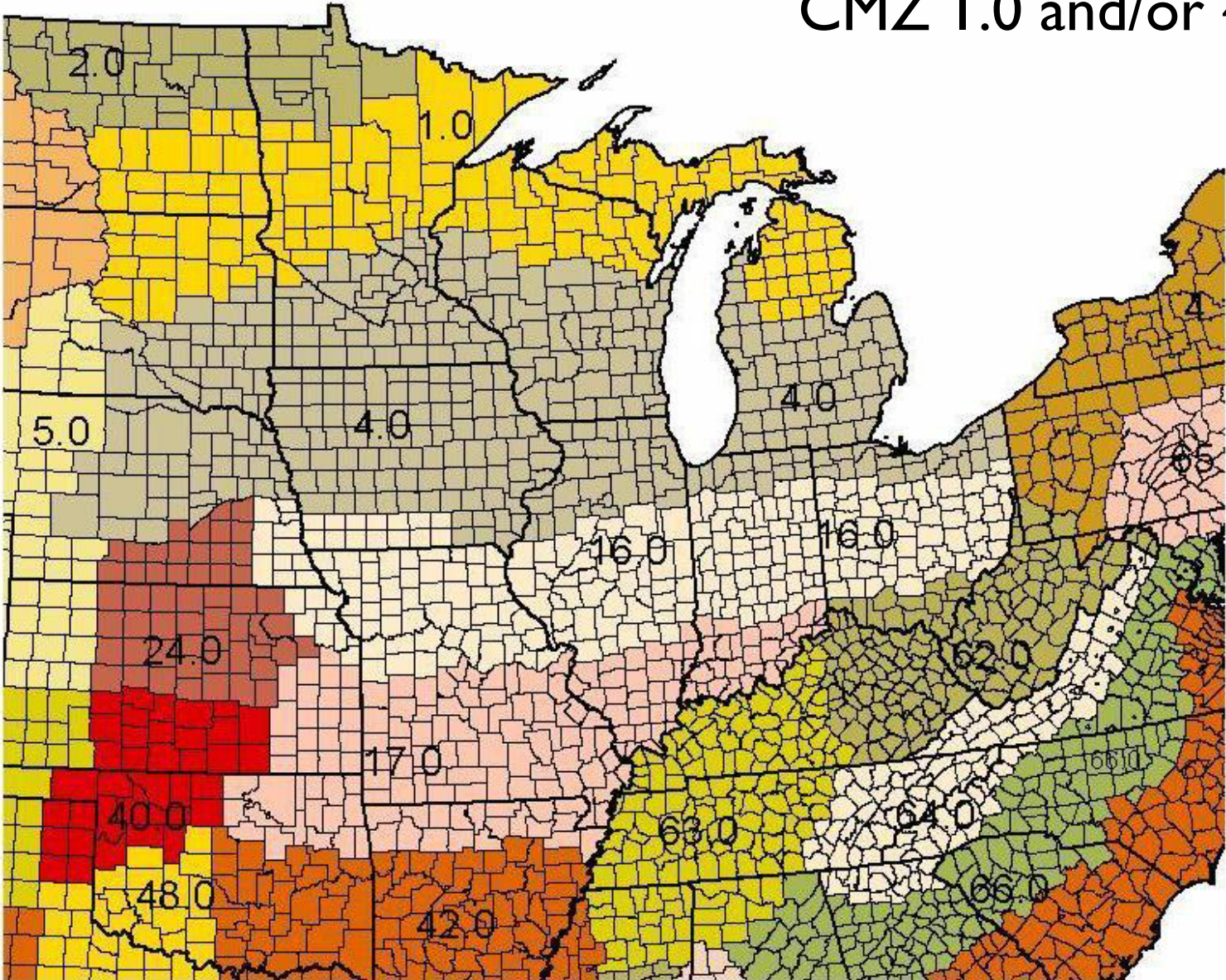
## Maps of the crop management zones (CMZ) for the Continental United States.

To view an enlarged map, point to and click on the appropriate box.



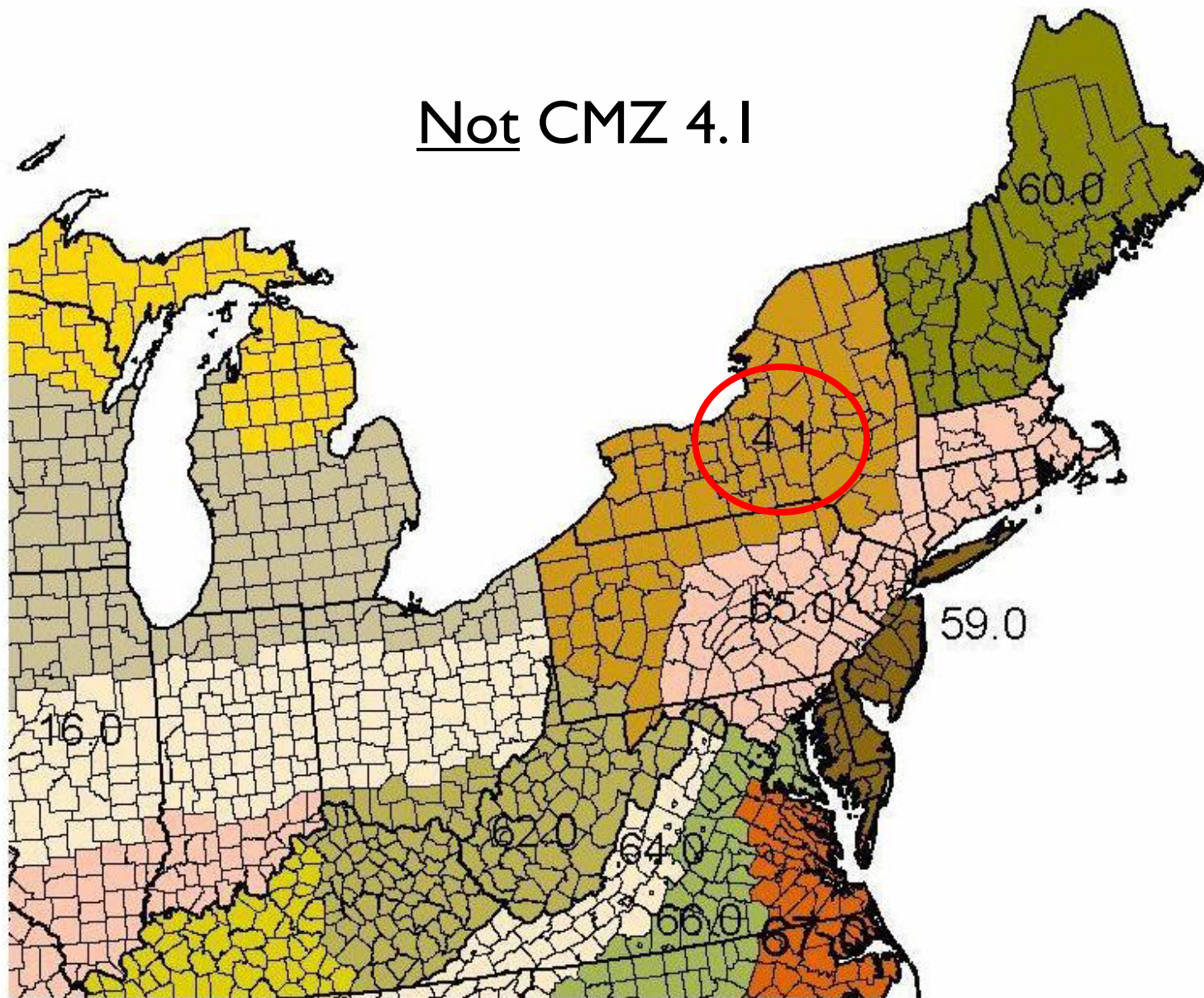


# CMZ 1.0 and/or 4.0

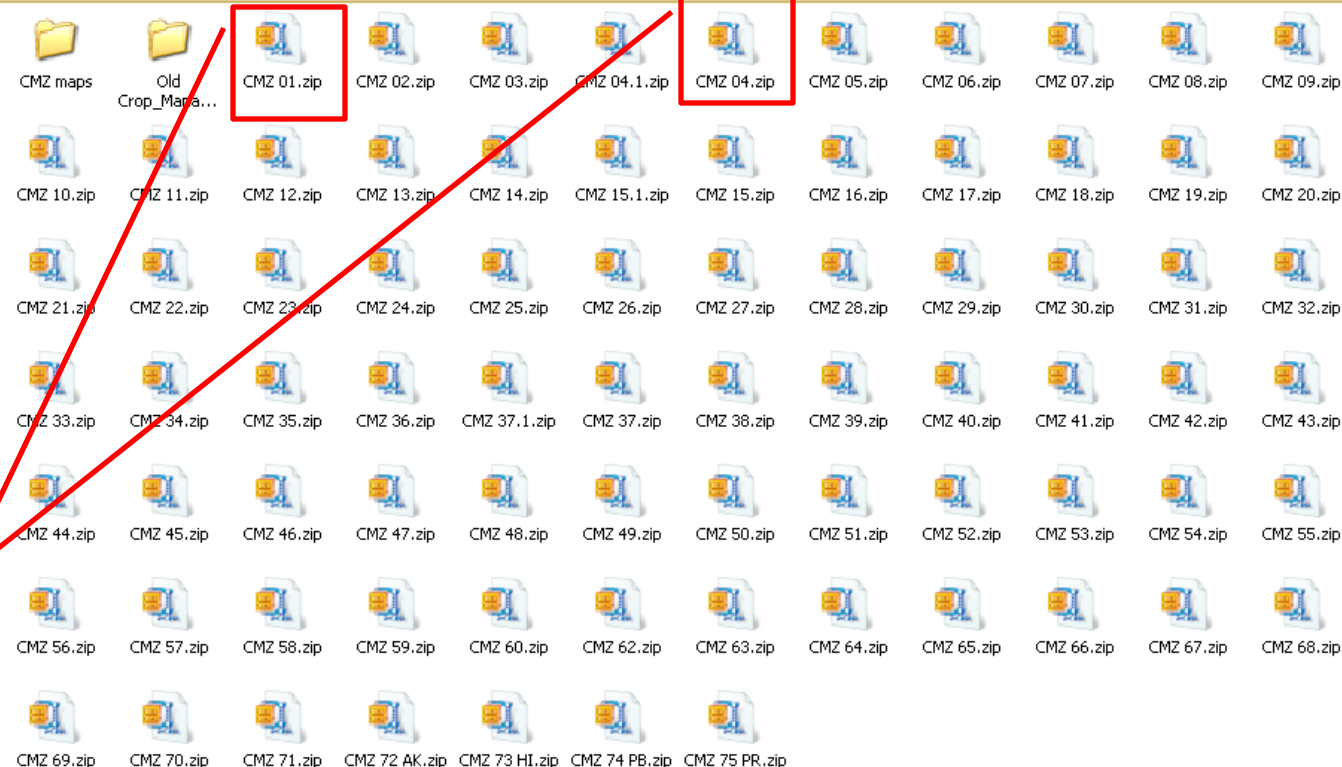




Not CMZ 4.1





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Dane WI Nov07.gdb	Dodge WI Nov07.gdb	Door WI Nov07.gdb	Douglas WI.gdb	Dunn WI Nov07.gdb	Eau Claire WI Nov07.gdb	Florence WI Nov07.gdb	FonDulac WI.gdb	Forest WI Nov07.gdb	Grant WI Nov07.gdb	Green Lake WI Nov07.gdb	Green WI Nov07.gdb
Iowa WI Nov07.gdb	Iron WI Nov07.gdb	Jackson WI Nov07.gdb	Jefferson WI Nov07.gdb	Juneau WI Nov07.gdb	Kenosha and Racine WI...	Kewaunee WI Nov07.gdb	La Crosse WI Nov07.gdb	Lafayette WI Nov07.gdb	Langlade WI Nov07.gdb	Lincoln WI Nov07.gdb	Marathon WI Nov07.gdb
Marinette WI Nov07.gdb	Marquette WI Nov07.gdb	Menomonie WI.gdb	Milwaukee and Waukesha ...	Monroe WI Nov07.gdb	Oconto WI Nov07.gdb	Oneida WI Nov07.gdb	Outagamie WI Nov07.gdb	Ozaukee WI.gdb	Pepin WI Nov07.gdb	Pierce WI Nov07.gdb	Polk WI Nov07.gdb
Portage WI Nov07.gdb	Price WI Nov07.gdb	Richland WI Nov07.gdb	Rock WI Nov07.gdb	Rusk WI.gdb	Sauk WI Nov07.gdb	Sawyer WI.gdb	Shawano WI Nov07.gdb	Sheboygan WI Nov07.gdb	St. Croix WI Nov07.gdb	Taylor WI Nov07.gdb	Trempealeau WI Nov07.gdb
Vernon WI Nov07.gdb	Vilas WI Nov07.gdb	Walworth WI Nov07.gdb	Washburn WI Nov07.gdb	Washington WI Nov07.gdb	Waupaca WI Nov07.gdb	Waushara WI Nov07.gdb	Winnebago WI Nov07.gdb	Wisconsin.zip	Wood WI Nov07.gdb		

Adams WI	Ashland WI	Barron WI	Bayfield WI	Brown WI	Buffalo WI	Burnett	Calumet and	Chippewa WI	Clark WI	Columbia WI	Crawford
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Dane WI	Dodge WI	Door WI	Douglas	Dunn WI	Eau Claire WI	Florence WI	FonDuLac	Forest WI	Grant WI	Green Lake WI	Green WI
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Marquette WI	Marquette WI	Menomonie	Milwaukee and	Monroe WI	Oconto WI	Oneida WI	Outagamie WI	Ozaukee	Pepin WI	Pierce WI	Polk WI
Nov07.gdb	Nov07.gdb	WI.gdb	Waukesha ...	Nov07.gdb	Nov07.gdb	Nov07.gdb	Nov07.gdb	WI.gdb	Nov07.gdb	Nov07.gdb	Nov07.gdb

Portage WI	Price WI	Richland WI	Rock WI	Rusk WI.gdb	Sauk WI	Sawyer	Shawano WI	Sheboygan WI	St. Croix WI	Taylor WI	Trempealeau
Nov07.gdb	Nov07.gdb	Nov07.gdb	Nov07.gdb		Nov07.gdb	WI.gdb	Nov07.gdb	Nov07.gdb	Nov07.gdb	Nov07.gdb	WI Nov07.gdb





















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Laboratory website:

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Climate

STEP 1: Choose location to set climate: Location

STEP 2: Choose soil type: Soil

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

STEP 4a: Select base management Base management

STEP 4b: Modify/build man. sequence if desired Management sequence ☐

Man.	Management	Starting date, m/d/y	Ending date, m/d/y	Correct dates by:
<input type="button" value="+"/> <input type="button" value="-"/>				
1	default	1/1/1	1/1/1	==>

CMZ & Base MOSES

STEP 4c: adjust management inputs

Adjust yields

General yield level

Adjust res. burial level

Adjust ext. res. additions

Rock cover, %

Fuel type for entire run

Equiv. diesel use for entire simulation, gal/ac

Energy use for entire simulation, BTU/ac

Fuel cost for entire simulation, US\$/a

Apply rot. builder manage. sequence to erosion calc.  Save temp. management as permanent

STEP 5: Set supporting practices: Contouring  Actual row grade, %  Crit. slope length, ft

Strips/barriers

Diversion/terrace, sediment basin

Subsurface drainage

Yrs offset from start year ( <input type="checkbox"/> )	
Segment	Yrs offset from start year, yr
<input type="button" value="+"/> <input type="button" value="-"/>	
1	0

Results Additional Results Track Residue and Canopy

Soil loss for cons. plan, t/ac/yr	13
T value, t/ac/yr	4.0
Surf. res. cov. values	<input type="text" value="open"/>
Soil conditioning index	<input type="text" value="Soil conditioning index"/>

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Also includes basic instructions for using RUSLE2.


# Using RUSLE2

- Common “Errors”
  - Insufficient info → incorrect assumptions
    - Using wrong planting/tillage implements
  - Changing yields & residue levels
  - Not saving common “C” factors in “Other Local Management Records”
  - Ignoring yellow folders
- Suggestions
  - Only way to learn it is to use it!
  - Don’t save profiles or worksheets
  - Don’t skip steps
  - Have a good understanding of the profile screen
  - Use worksheets to develop comparisons
  - Don’t overcomplicate (or is it too late)?



# RUSLE 2

- Wisconsin Website:
  - <http://www.wi.nrcs.usda.gov/technical/consplan/rusle>
- National Website:
  - [http://fargo.nserl.purdue.edu/rusle2\\_dataweb/](http://fargo.nserl.purdue.edu/rusle2_dataweb/)



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