

## SOLID SET SPRINKLER EVALUATION VERSION 1.1 USERS GUIDE

### Workbook Documentation

Spr-SS-Eval is a Microsoft Excel<sup>®</sup> workbook developed using Microsoft Visual Basic for Applications<sup>®</sup> to evaluate a solid set sprinkler system. This workbook is based upon the evaluation procedure located in Part 623 National Engineering Handbook, Chapter 11, Sprinkle Irrigation. This workbook has been developed to comply with the Natural Resources Conservation Service (NRCS) conservation practice standard Irrigation System, Sprinkler, Code 442.

### Workbook Purpose and Description

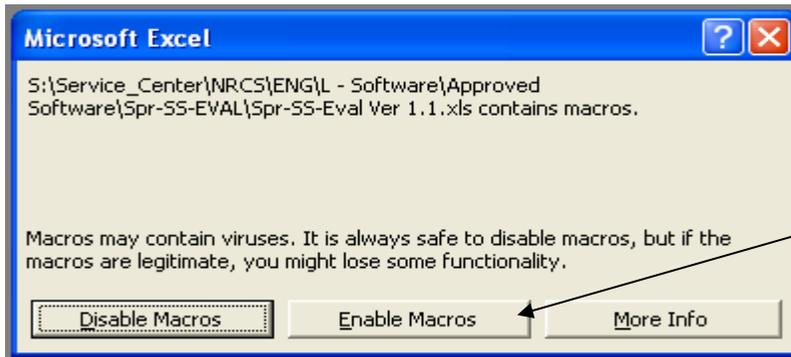
This workbook was developed to aid in the field evaluation of solid set sprinkler systems. The workbook serves as means to document system data and will calculate the average application rate and system distribution uniformity. The workbook provides a detailed report of the evaluation.

### Software Requirements

Use of this workbook requires that Microsoft Excel<sup>®</sup> be installed. This workbook works with Microsoft Excel<sup>®</sup> 97 or later. The user should have a basic understanding of Excel<sup>®</sup>.

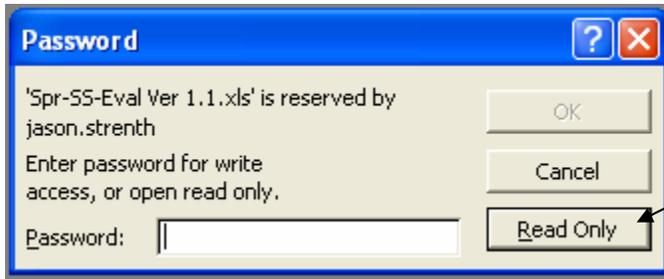
### Installing the Workbook

Place the Spr-SS-Eval workbook in the appropriate directory. Open the workbook by double clicking on the file or through the Excel program. Upon opening this workbook, a dialog box will appear. The “enable macros” button must be clicked in order to use this workbook accurately.



Click on Enable Macros

Another dialog box will then appear; the user then selects the “read-only” button. This option allows user inputs, however, it prevents the overwriting of the original file by requiring the user to save the file as a different name. The program is password protected. The user may modify any value in a yellow cell. Since this workbook is protected, only the values in the yellow cells may be modified.



Click on Read Only

### Using the Workbook

The workbook contains the following nine worksheets:

1. Instructions - This worksheet contains these instructions in a printable pdf format.
2. System Inventory - This worksheet is where the details of the system (landowner, sprinkler model, number of sprinklers, etcetera) are entered.
3. Catch Can Data - This worksheet is the location where the catch can test data is inputted. Data to be placed on this worksheet includes volume of catch, catch can spacing, evaporation volume, etcetera. Catch can pattern must be rectangular.
4. Results Summary - This worksheet displays the results of the catch can test. Results include average sprinkler pressure, minimum and maximum discharge rate, distribution uniformity, etcetera. Also, this worksheet allows the user to identify possible problems with the system.
5. Distribution Pattern - This worksheet provides a graphical display of the catch can test results. The graph is limited to a maximum catch of 300 ml.
6. Problems List - This worksheet allows the user to choose possible problems from a given list. For each problem, a general recommendation is displayed. To edit and print these recommendations, click the “Click Here to Print Text Box” button.
7. Print Recommendations - This worksheet displays the recommendations selected in the previous worksheet. These recommendations are general. They can and should be edited for each situation.
8. Sched - This worksheet is the irrigation scheduling guide. It allows the user to input the management allowed deficit (MAD) for each month and the worksheet calculates the irrigation operating time and interval. The operating time is rounded to the nearest fifteen (15) minutes.
9. Sched – Min - This worksheet performs the same functions as the Sched worksheet except the operating time is calculated in minutes. This worksheet should be used if a more precise operating time is needed and for small irrigated areas that operate less than 15 minutes.

### References

NRCS National Engineering Handbook Part 623, Chapter 11, Pages 11-79 to 11-84.

### Disclaimer Statement

The USDA NRCS cannot assume liability for the use or maintenance of this workbook or any results it may produce.

### Output

The user has the option of printing each of three main output pages as well as extra report pages with site-specific recommendations. The user has the option of printing all recommendations as well as selecting which of the recommendations are printed. These recommendations are printed into a text box within the workbook. The user also has the option to add any other recommendations that may not be in the list, by clicking inside the textbox and then typing. In addition, the program will print out a sprinkler evaluation form for performing the evaluation.

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