

# SepticResource.com Design worksheet instructions

version 3.3

A computer with Microsoft Excel or equivalent will be necessary to use the design worksheets. If you have difficulty opening the Excel worksheet due to security or macro conditions, go to “Tools”, “Macro”, “Security”, and choose the medium security setting.

When you open the worksheet, if it prompts you with a security window, simply select “enable macros”. Different versions of Excel may require other methods of enabling macros.

The primary goal of these design worksheets is to provide an efficient and understandable septic design. Also offered are field evaluation, soil log, perc sheets, etc. You can use these or substitute with your own to complete your design.

Start with the design sheet first, and the other supporting forms will self-populate where applicable.

Completing the design sheet will require a few basic site specific items such as: # of bedrooms, soil loading rate, # of inches to redox, mound site slope or bed width, length from pump tank to bed, vertical lift from pump tank to bed, or # of desired trenches. It usually takes less than a minute to enter this information and print the “technical” portion of the design. The supporting forms, documentation and unique LUG requirements will take additional time.

The MN septic code has many interrelated requirements, at times it can be difficult to ensure that all aspects of the code are being met. The design sheets are made to be efficient and do the calculations for you, while ensuring compliance with Minnesota 7080 State code. You will also have the ability to make adjustments for various LUG requirements.

These worksheets give **Designers** the ability to do the technical portion of a design in less than a minute, saving valuable time. Designs can also be performed on-site with a laptop to confirm it will fit the location before leaving the jobsite. Homeowner or LUG changes are not a problem as adjustments to a design can be made at anytime. Simply change an input field and all other calculations are automatically adjusted, repeat the process until the design is exactly as needed.

**LUG's** can use these worksheets to quickly review and permit systems. Given the inputs, the worksheet computes a code compliant design, as a result there is very little to actually verify. It can also be used to ensure that designs on other forms meet all code requirements. Simply take the basic information from another design and insert it into the SepticResources worksheet, then verify the results are the same.

Since these worksheets are quick and easy to fill out, **Installers** can use them to give customers a ballpark estimate while they are still on the phone. It also has a 1- page Installer summary so that all the information necessary to build the septic system is found on a single page. This simplifies the bid process, reduces the possibility of mistakes and eliminates time wasted looking through multiple pages for specific information.

**LUG's** can also use the 1-page inspector checklist to guide them through the inspection process. Once again saving time and reducing the possibility of mistakes.

**Apprentices** are able to learn and understand how the different components of a design affect each other by changing the inputs and observing the affect on the end result. They will also learn the requirements and limits of the code as the worksheets have many “checks and balances” to ensure the code is met.

Once you have completed your preliminary and field evaluations, determine which type of design form to use (mound, pressure bed, at-grade, etc.).

Fill in the top of the form with the name, address, date, etc.

- The YELLOW boxes require the site specific information to be entered.
- The BLUE boxes can be left to the default value, or adjusted as necessary for personal preference, or LUG requirements.
- The WHITE boxes are calculated fields and should NOT be adjusted. Changing these fields may result in the design no longer meeting code requirements. If you make a mistake, simply open a new form and start over. Under unusual or necessary circumstances you may change a “white” box, just make sure you understand how it will affect the rest of the form.

Click on the YELLOW or BLUE boxes and enter your data, or choose from the drop down box when given. At anytime you can change the YELLOW or BLUE inputs to try various options until the most desired design result is found.

Once you become comfortable with using the worksheet, you can also save a version with the BLUE boxes pre-set to your typical local conditions.

When finished, save your technical design sheet by using the “save as” command, and print/email as necessary. Attach your site plan, soil logs, cover sheet, etc., and any other LUG requirements to complete your design.