

SVSlope 3D Output Visualization

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Introduction

Hi, my name is Murray Fredlund. Welcome to the session SVSlope 3D Output Visualization within the *SVOffice 2009 Next Generation* geotechnical software suite. The purpose of this session is to illustrate how the output results are visualized within the new SVSlope 3D visualization software.

Getting Started

We will be working with an example model from **Slope_3D>Fredlund_1977_3D_1**. This model is an extension of a classic 2D model into 3D and we've extruded this from the 2D case into 3D. This model has a slope with a water table and a defined slip surface which cuts through a weak layer. We are going to solve this model by selecting **Play**. Once the model is analyzed we can select **AcuMesh** in the **SVSlope Solver** to view the results. Alternatively we could select the **AcuMesh** button on the left toolbar. Once the results are brought up we can zoom in and adjust our display to better organize the information.

Customizing the Display

The model is displayed with a factor of safety of 1.487. The Method box will allow you select which method you want to select (**Method>M-P**). Here through the Morganstern-Price method the factor of safety is 1.647. Here you can see what we have is a defined slip surface so there is no need to adjust the grid and radius or anything like that. What we can do with this is select **Slips>Critical Sliding Mass**. We can then choose options like Setting Line Types or selecting Mass Explosion and explode it out of the slope so that we can see the approximate 3D implication of the slip surface and how it fits into the slope here. You can see that the bottom of the slip surface is cut off by the weak layer in this numerical model. These are some of the 3D views that you can see of the information. You can also plot all of the information out to a text file (**Slips>View Model Information**). It's also useful to flip these results into 2D (by selecting **2D** on the left hand toolbar). Where this is a PlanView, you can see the results of the model in **PlanView**. If I click on any particular column, the details of the column are displayed on-screen in a dialog box. As well, we can obtain profile views of the model to see the specifics of the slice through that model in the 2D plane. Alternatively the **YZ** plane can be also be plotted here. One last feature that you should be aware of is that you can select the different planes that you want to view through the software by adjusting the slider and it will recalculate the slice through the model. Just by adjusting the slider, a different slice will appear through the model. This gives you an overview of how to visualize results of a 3D Slope Stability analysis.

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