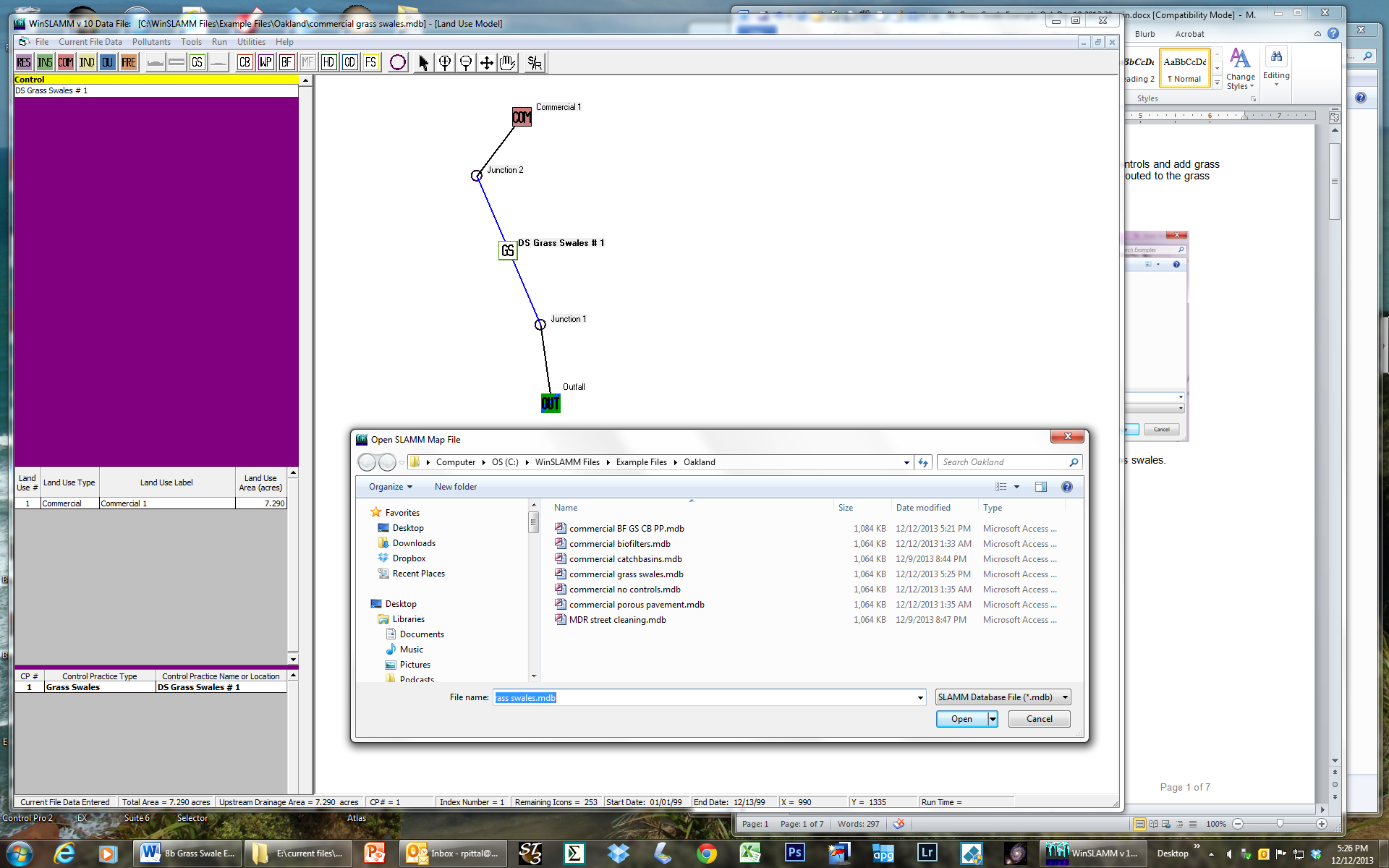
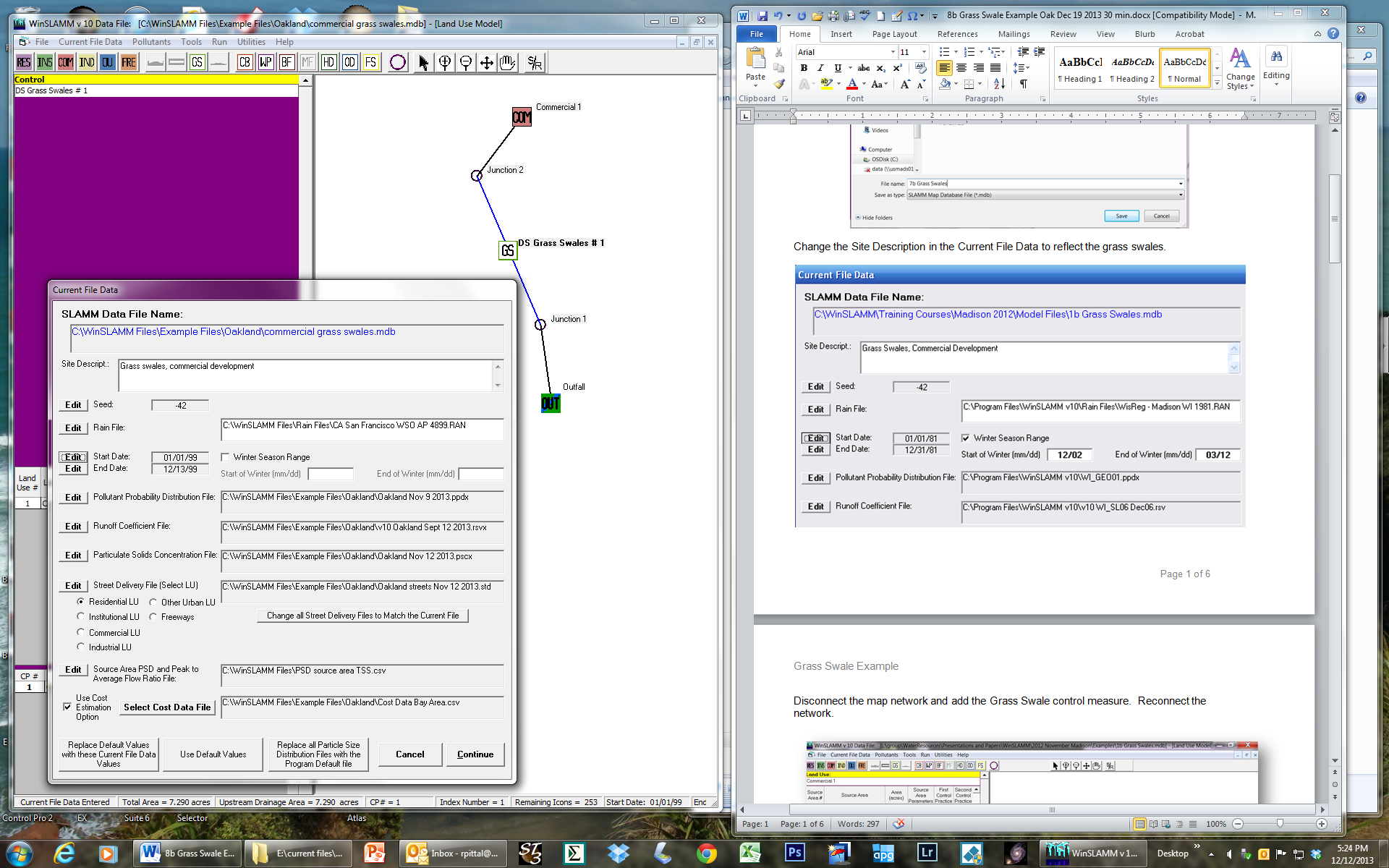
**Grass Swale Example**

For this example, we will start with the model file we created for No Controls and add grass swales. All of the source areas in the Commercial 1 Land Use will be routed to the grass swales.

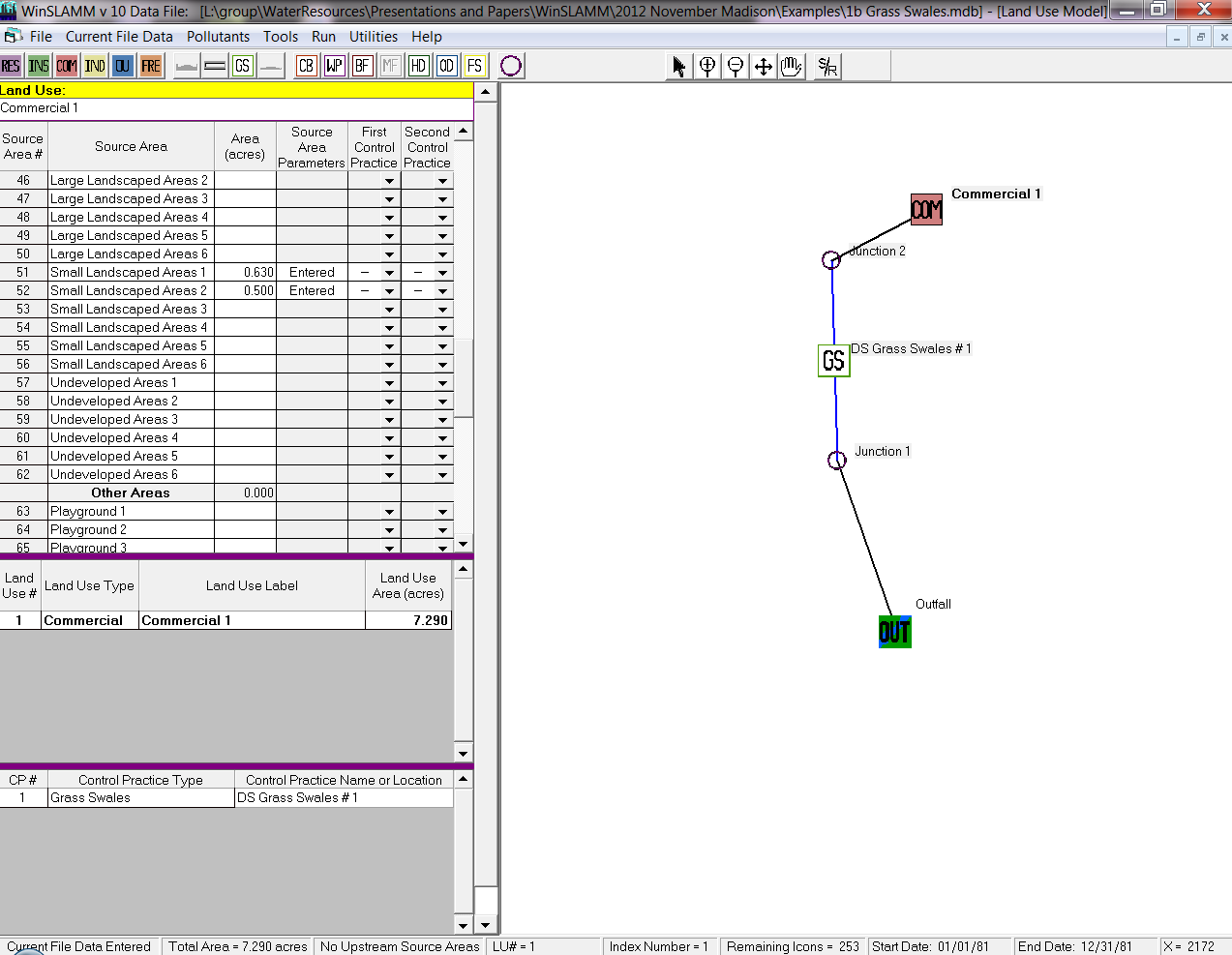
Open the No Controls model file and Save the File with a new name.



Change the Site Description in the Current File Data to reflect the grass swales.

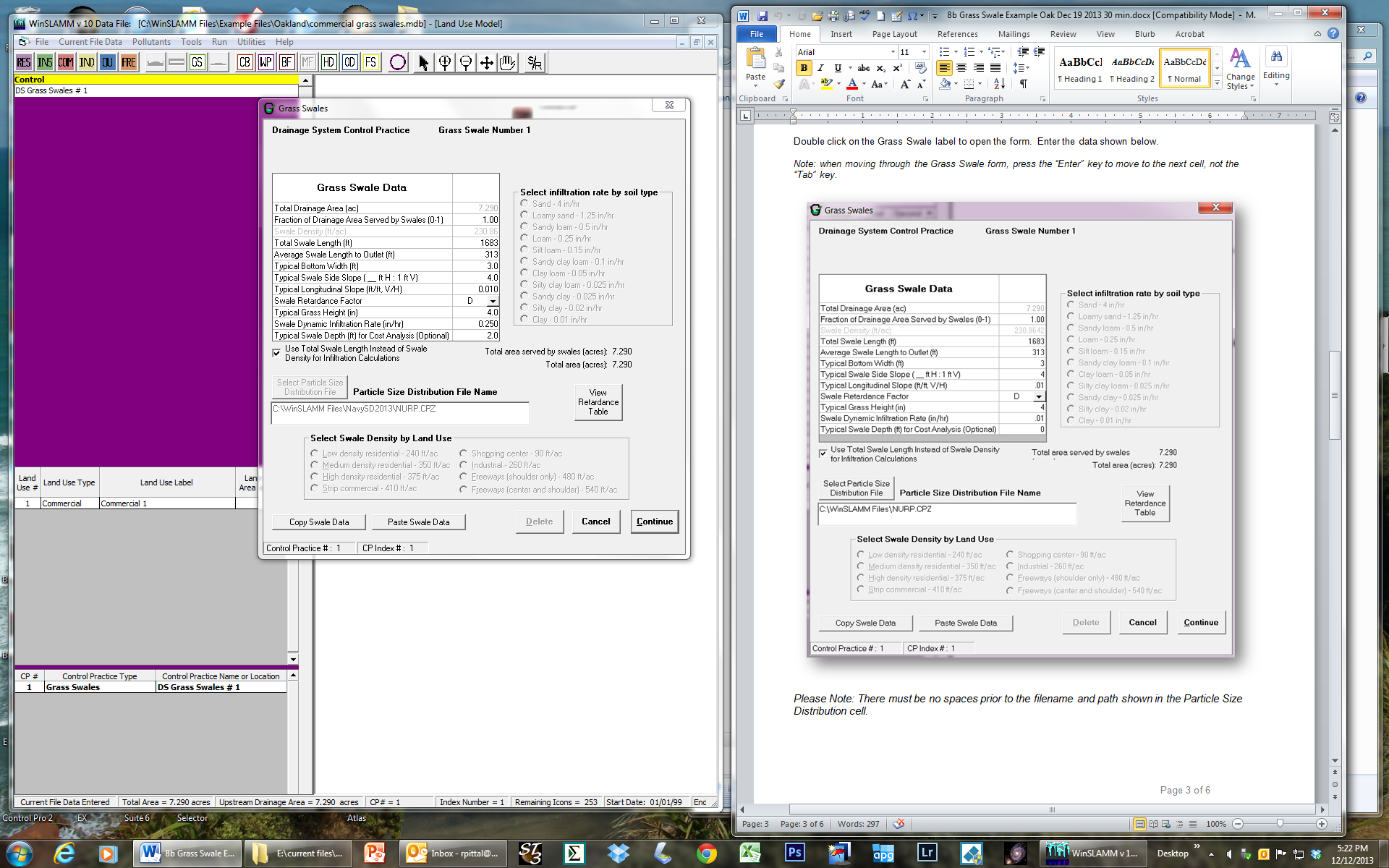


Disconnect the map network and add the Grass Swale control measure. Reconnect the network.



Double click on the Grass Swale label to open the form. Enter the data shown below.

*Note: when moving through the Grass Swale form, press the “Enter” key to move to the next cell, not the “Tab” key.*



*Please Note: There must be no spaces prior to the filename and path shown in the Particle Size Distribution cell. Since the particle sizes are being routed through the drainage system, this field is greyed out and not used.*

Run the model.

**Results**

Runoff Volume without controls: 173,467 cu ft

Outfall Total with controls: 81,727

Runoff Volume Percent Reduction: 52.89 %

Particulate Solids Concentration (with controls): 48.4 mg/L

Particulate Solids Yield (with controls): 246.8 lbs

Particulate Solids Percent Reduction: 64.83%

Rv (with controls): 0.20

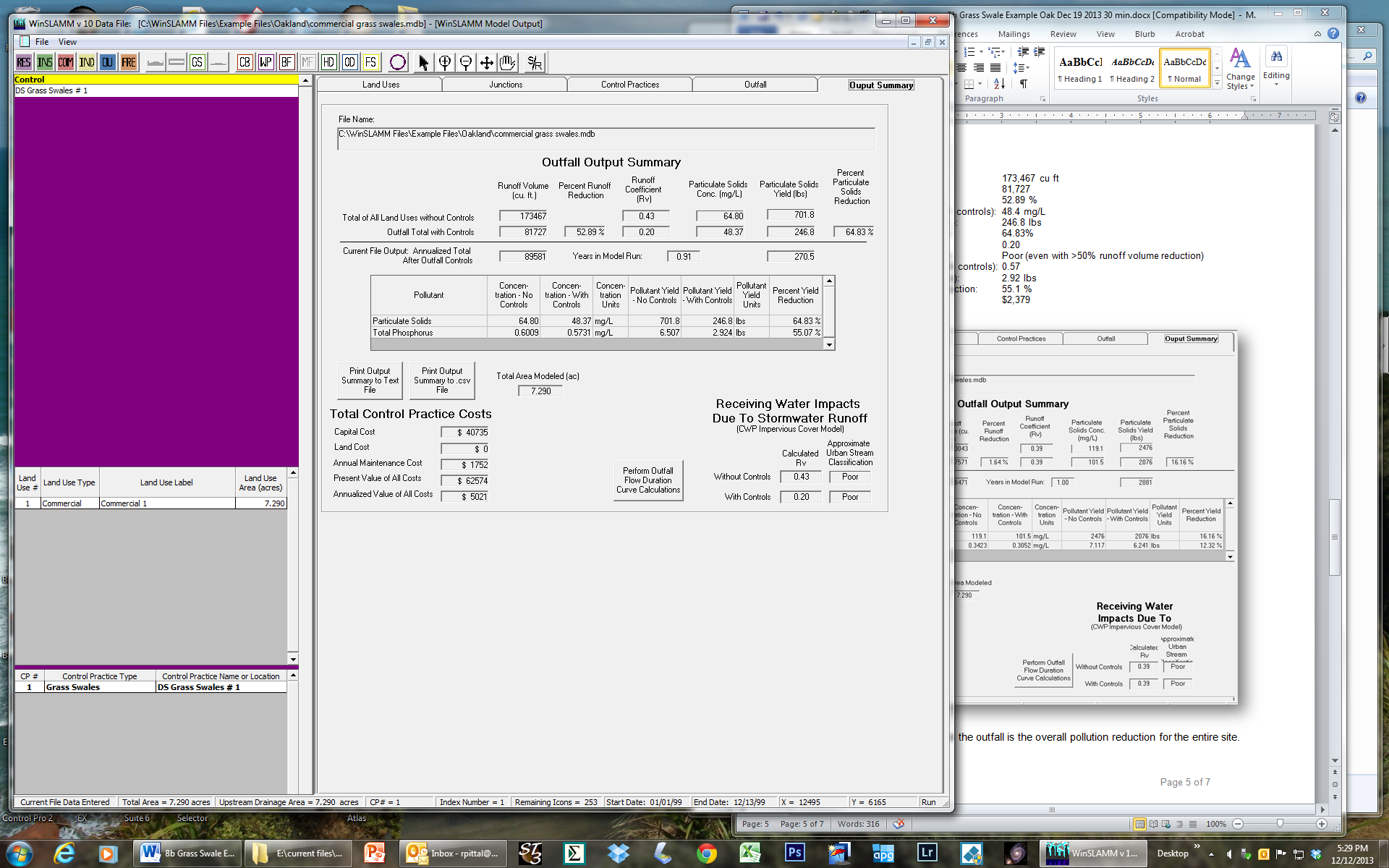
Approx. Urban Stream Classification: Poor (even with >50% runoff volume reduction)

Total Phosphorus Concentration (with controls): 0.57

Total Phosphorus Yield (with controls): 2.92 lbs

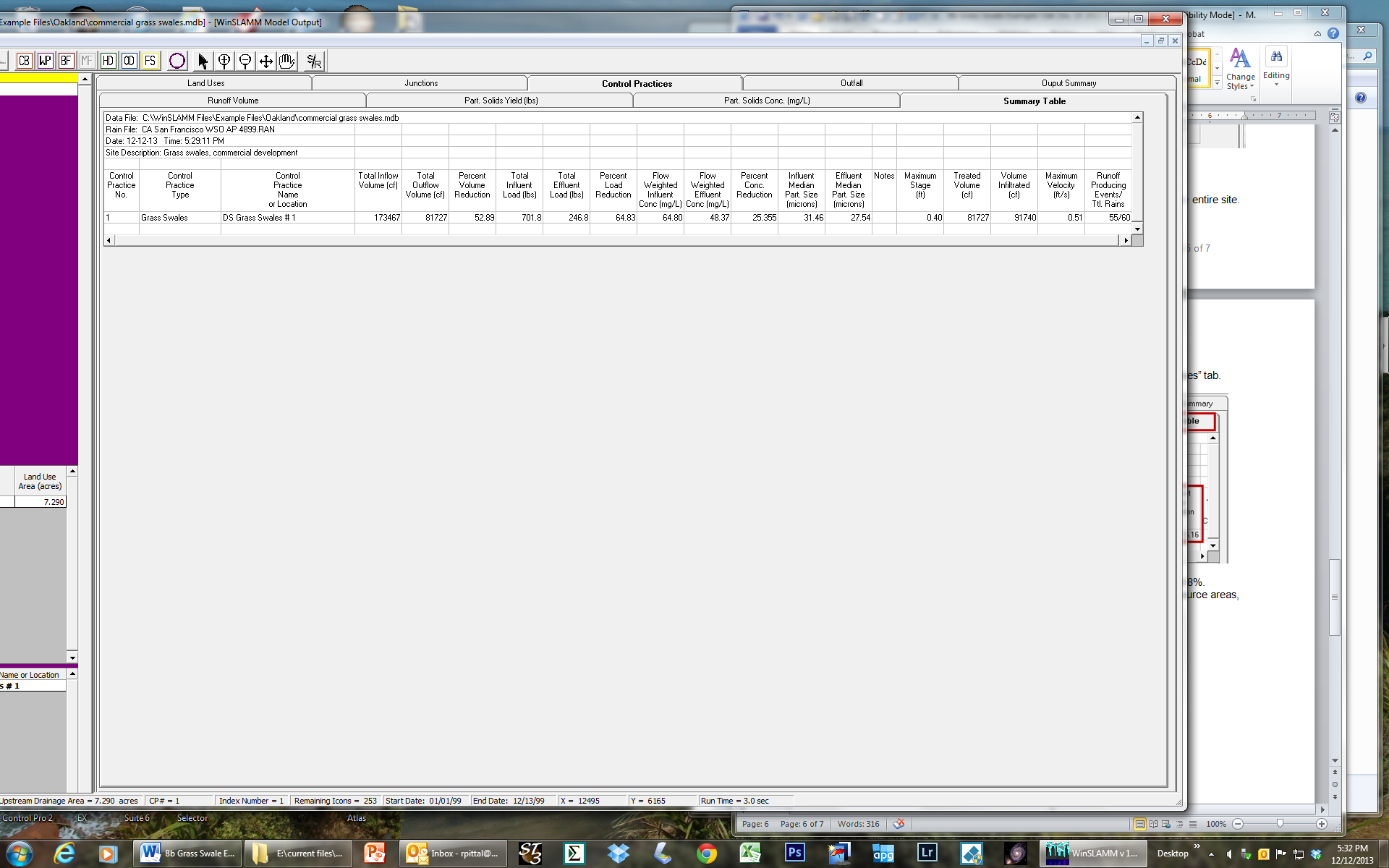
Total Phosphorus Yield Percent Reduction: 55.1 %

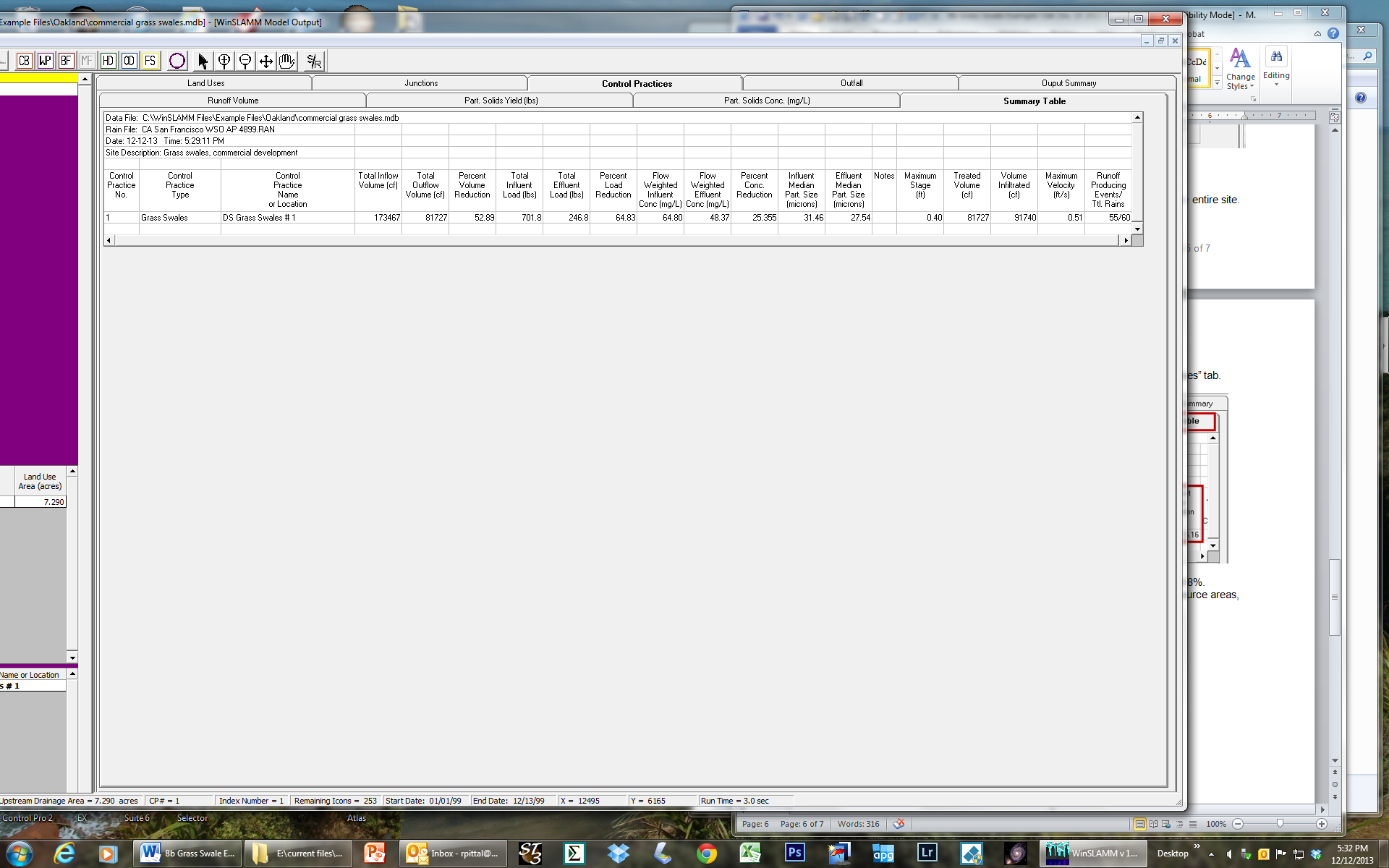
Annualized Value of all costs: $5,021



The pollution reduction reported at the outfall is the overall pollution reduction for the entire site.

To see the pollution reduction from just the grass swales, select the “Control Practices” tab.





The grass swales are reducing the runoff volume by 52.9% and the TSS load by 64.8%. Because there is only one control practice in the model and it is treating all of the source areas, the individual control practice output matches the output summary. The Control Practices summary tab also shows other features of the swales, such as the particle size changes for the flowing water, the maximum stage in the swale, the water mass balance, maximum water velocity, and the number of runoff producing events during the study period.

