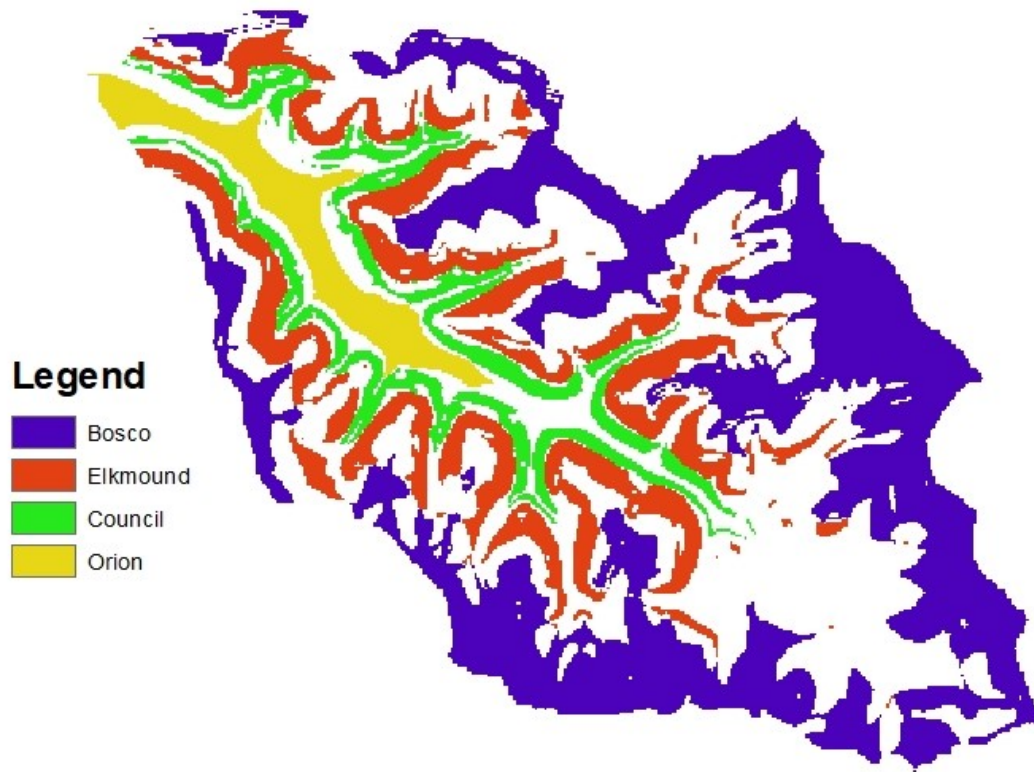
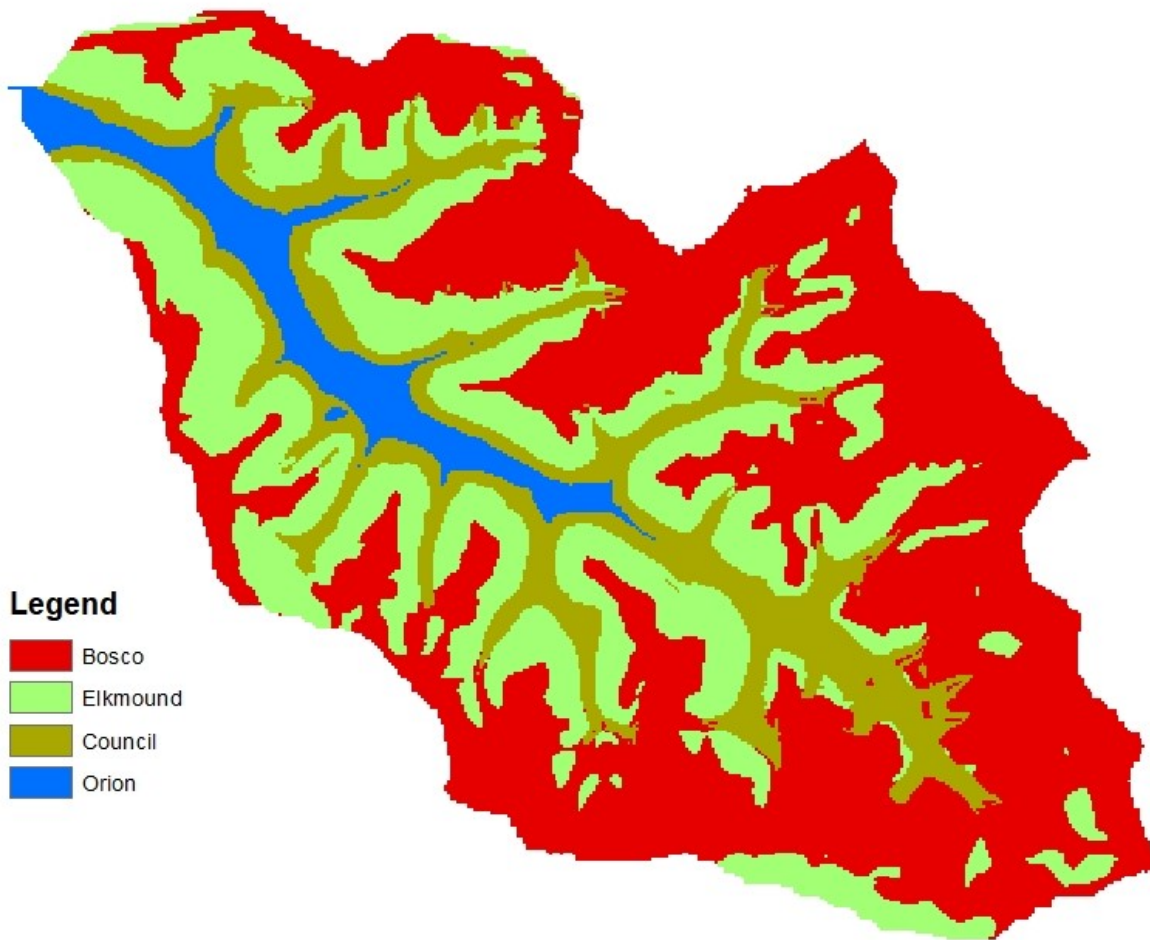


Jason Griffin  
GEOG 579  
Lab1  
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1. Pixels are not assigned because of the restrictive true/false or yes/no of the Boolean logic. For the Orion soil it only shows the true areas that has a slope gradient  $< .06$ , elevation  $< 800$ , and a profile curvature of  $> -0.0005$  and  $< 0.0013$ . The areas that do not meet the criteria are colored as white in my image.



2. With the fuzzy logic, the criteria are less restrictive. There could be a probability that Bosco soil could be in some areas that transitions into Elkmound or Council soil. There is more of a range in the functions where Bosco could be on a slope of .15 to .2, between elevations of 930 and 960, and a profile of -.002 to .003.
3. Fuzzy logic has an advantage in being more fluid with identifying a range to where geological phenomena can be present as a range between 0.0 to 1.0 instead of the more restrictive Boolean logic where the geological phenomena is either presented in the exact area that meets the needed criteria or it is not presented. When using the hardening process of the fuzzy evaluation, it will meld the individual geological phenomena images to show the uncertainty of the transition range of soils that Boolean logic would not show.

