MEMORANDUM

To: Vegetation Analysis Specialists

From: Karen Launchbaugh, Vegetation Contract Coordinator

Subject: Herbaceous Biomass Assessment

Date: October 21, 2008

Next week, I am meeting with the Idaho Department of Lands Rangeland Assessment Team regarding herbaceous biomass assessment methods (*fictitious situation*). In this memo, I will outline the information I need from you. Please address the questions I list below and provide supporting data in a few tables or figures to support your conclusions.

I would like to recommend an effective technique for future sampling of herbaceous biomass on rangeland types in central Idaho. We examined two sites in Price Valley during our visit in September: an upland sagebrush steppe site and a lowland meadow site. We used three methods to estimate biomass during our field work: 1) Weight-Rank (or Comparative Yield), 2) Direct Estimate, and 3)Visual Obstruction (or Robel Pole). Please compare the accuracy and potential advantages or disadvantages of these methods and make a strong recommendation for with method should be used in future investigations.

There are several ways to accomplish this analysis and make a recommendation. I suggest that you conduct a correlation analysis between your estimated parameter (weight rank, direct estimate, or average visual obstruction) and the actual weight of vegetation in the plot. Additionally, you could develop a regression equation to predict the weight based on your estimate and then compare your predicted weight and the actual weight. This approach is called a "double sampling" approach. Let me know if you have any questions about that. You can determine this relationship based on total herbaceous biomass or grasses and/or forbs depending on how you collected data in the field.

Let me remind you that I expect a short professional memo that includes and introductory section (with site description, methods used, outline of information in memo), a complete description of results (with table and/or graphs either attached or inserted in memo), and a recommendation of most reliable method (based on results, time required, and personal experience).

I will expect this information back by **Friday, October 31** at 7:00 p.m. by web CT (http://webct.uidaho.edu/). Please contact me if you have any questions.