Eco/Evo Lab.

Lab 4 Post-Lab Assignment

Boise State University – Intermountain Bird Observatory

*Native Plant Restoration Project*

**Scenario**

Like most things in science, many questions can be devised from a single project, or from results of a completed project. For this scenario, you are an ecologist with the IBO and in charge of managing the Native Plant Restoration Project. You have the same data from the lab exercise to analyze. You are monitoring the survival of native plant seedlings and the growth of sagebrush depending on the soil conditions they were planted in (3 different soil conditions: sandy, sandy loam, and gravel). You should analyze the same two datasets to look for potential differences in survival and growth among the different soil types.

Your study questions are:

*Does soil type affect native plant survival?*

*Does soil type affect sagebrush growth?*

**Include the following in a typed document and turn in via the Blackboard assignment link. See the rubric on Blackboard for more information on how you will be graded.**

1. TWO ANOVA output tables (one for plant survival and one for sagebrush growth) with captions.
   * Include full and complete captions explaining what data is being tested, what is being sought in the analysis, the statistical hypotheses, and what statistical conclusion you have reached.
2. Tukey test comparison table with Q values for *applicable* outputs
   * For any ANOVAs with a significant result, include the Q value table and a full and complete caption that summarizes the significant comparisons (by comparing to the Qcv).
3. One figure of mean sagebrush height and +/- standard error, including Tukey letters
   * Include a full and complete caption below the figure, explaining what data is being depicted and describing any significant patterns in the data.
4. Write a short paragraph (3-6 sentences) summarizing the findings and answering the research questions. Make sure your conclusion statements are appropriate, based on the design of the study.