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*Kerber Creek Restoration Using Phytoremediation II: Understanding the Link Between
Macroinvertebrate and Water Quality*

There is a definite connection between the phytoremediation techniques being used at Kerber Creek and the diminished heavy metal levels and macro invertebrate population increases . My data showed that there were several large and small decreases of certain analytes in the creek. While there were very large increases of analytes after the runoff season, the amounts decreased or stabilized within a month. I was able to establish a correlation between the conductivity and TDS levels as they relate to the climate and the phytoremediation itself. When the plants are actively processing in the warmer months the conductivity and TDS levels are much lower, but as the weather cools and the plants slow their uptake processes the conductivity and TDS levels rise. Overall, there were no significant changes in the majority of the analytes, which means that the plants are keeping the water filtered and stable. My study has definitely confirmed that the phytoremediation processes are working which proves my hypothesis is correct. The variety macro invertebrate colonies that have been able to reestablish themselves along the creek is encouraging for many reasons. First it indicates that the water quality has improved to the extent that a wider variety is able to call the creek corridor home. Secondly, it is also an indicator that the remediation techniques are working. Finally, since they are a base species and are now spread through the corridor it would set the stage for the repopulation of fish species.