

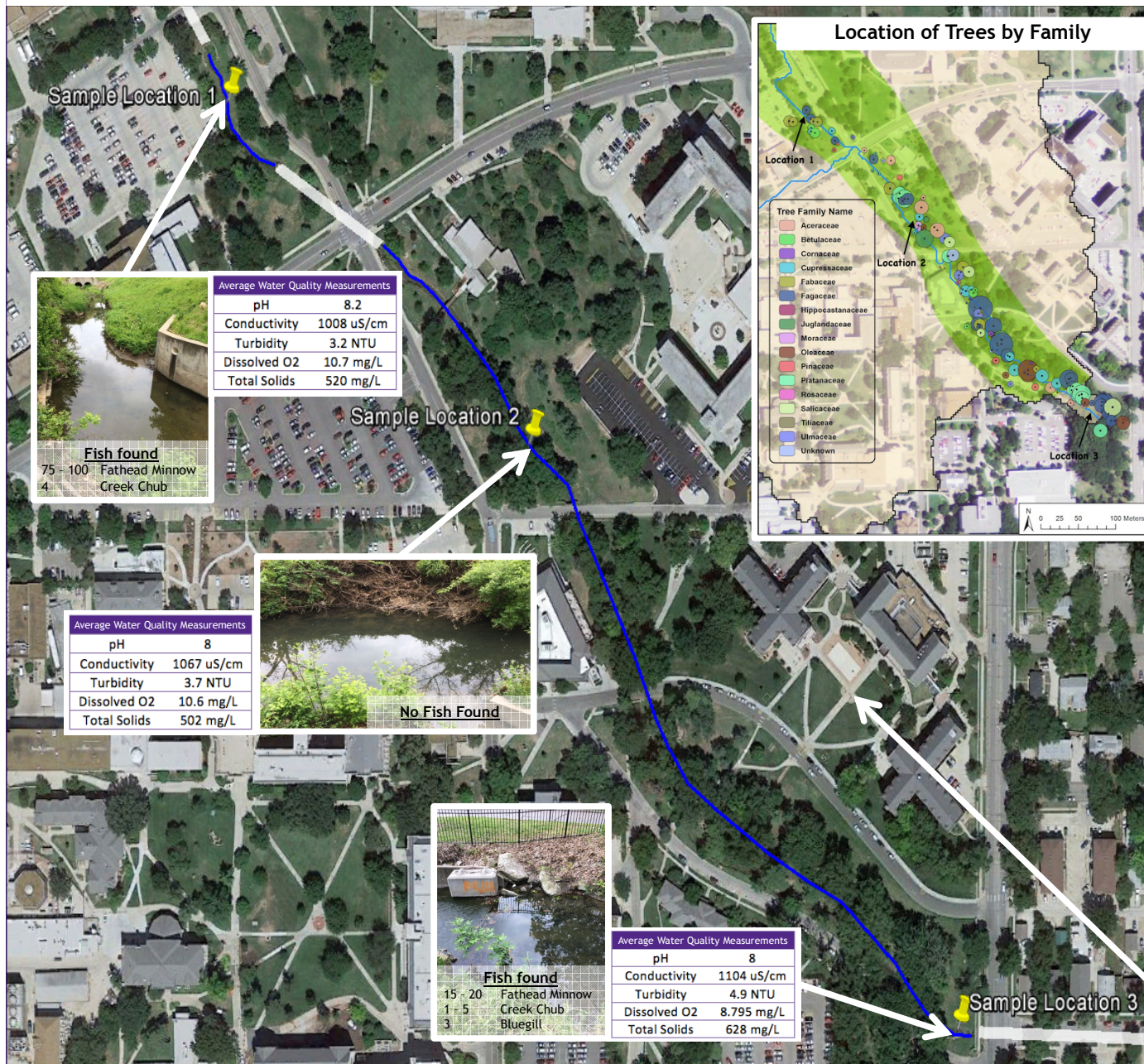


Environmental Assessment of K-State Campus Creek



Natural Resources and Environmental Sciences Spring 2017 Capstone Project

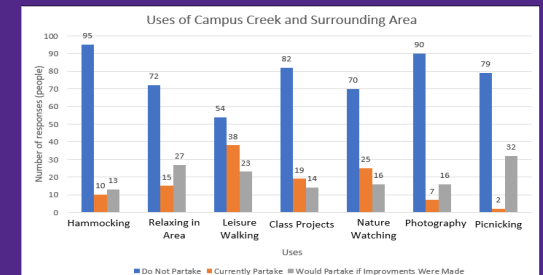
Chad Olney, Amy Kruse, Chad Touslee, Nathan Fischer, Dayton Allen, and Morgan Hammes



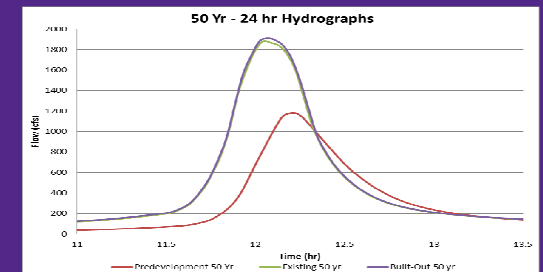
Introduction

Campus Creek runs directly through Kansas State University. Its watershed encompasses most of the North part of the campus which has plans for continued development. In order to assess the environmental quality of the current stream, this study looked at three different locations along the creek and examined the overall environmental health of the system, the ecological services it provides, and the hydrologic implications of current and future development.

Ecological Services Data

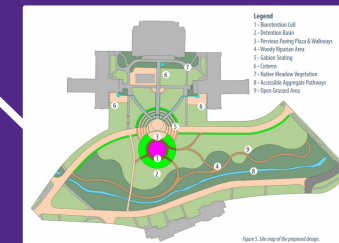


Hydrologic Data



Stronger Quinlan Proposal

Proposed by a team of KSU students and faculty, "Stronger Quinlan" proposed the implementation of a number of water retention systems to help reduce peak runoff from the Strong



Complex. The designs reduced the areas runoff volume by 46%. It will take designs like this throughout the entire watershed to see a significant reduction in the flooding potential of the Campus Creek.

Conclusion: To improve the quality of Campus Creek, we recommend the vegetation surrounding the creek be restored, in addition to land use changes enacted to prevent flash flooding and pollution to the water system. Restoring vegetation is vital as trees are extremely beneficial to the creek's health, as well as a recreational asset. Vegetation could be utilized to reduce erosion and stabilize the soil. This would increase water quality and provide necessary habitats for aquatic life. Improved land-use would decrease max flow, prevent pollutants from entering the system, and improve quality of the ecosystem. All of these changes combined would lead to increased ecosystem services, making them beneficial to students and fish alike.

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Resources:

McDonough, K., Schmitt, E., Weeks, J., Krauska, J., Wong, T., & Bruns, C. (2016). Stronger Quinlan. Kansas State University. Retrieved from https://www.epa.gov/sites/production/files/2017-04/documents/ksu_narrative_506.pdf.