Spatiotemporal Analysis of W

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Abstract

The NRES Capstone class group projects brings individuals with unique backgrounds

K-Stateôs campus. Campus Creek is fed by multiple detention basins and drainage pipes and flows in a southeasterly direction towards a reinforced concrete box, which was installed sometime in the past, and moves stream water under N. Manhattan Ave where it will join the City of Manhattanôs smaller reinforced concrete box which runs underneath Bertrand St. carrying

Materials and Methods

Sample Collection

We selected five key locations along Campus Creek. In order to monitor any potential

Trend Analysis

(04/11/2017 and 04/13/2017). This is in comparison to the 2023 study that had conducted sampling one time at five dif

recommended for them to not get worse. One suggestion that we have would be for K-State staff to monitor these levels at the same sampling areas that we did. Sampling could look like collecting water in each of these five sampling locations, twice a year, once in the spring during the wet season and once in the fall during the dry season. This will help in creating a long-term collection of data, allowing one to look at trends and make adjustments later on if needed. If other studies were to be conducted in the future over Campus Creek, there would then be a larger

Turner, S.W.D. et al., 2021. Comparison of potential drinking water source contamination across one hundred U.S. cities. Nature Communications, 12(1): 7254. (doi: 10.1038/s41467-021-27509-9)

Table 1. Campus Creek 2017 and 2023 measured parameters. Temperature (Temp

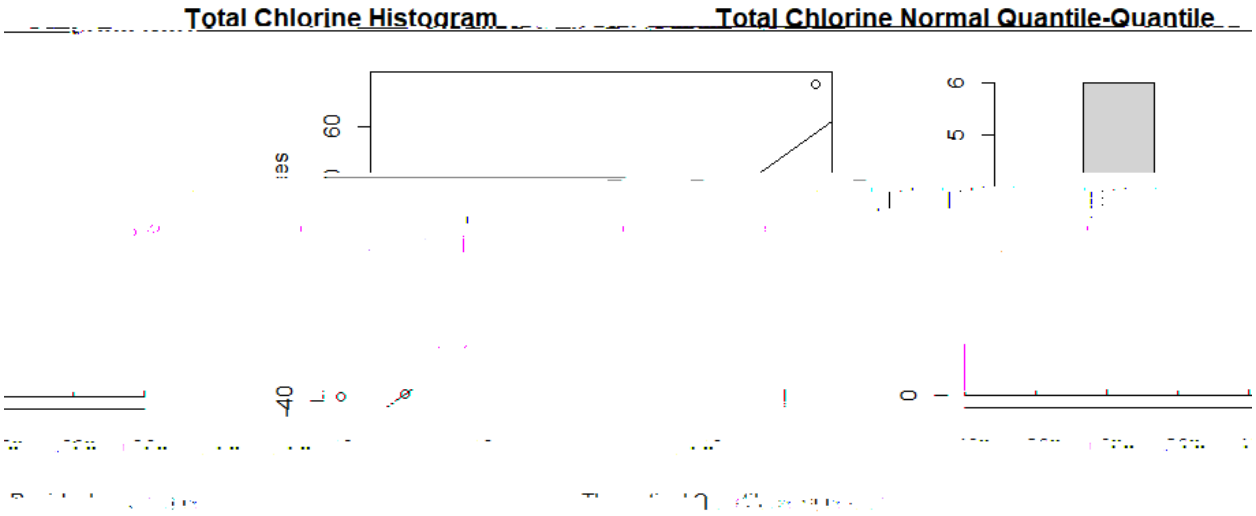

Figure 9. Total chlorine (ppm) histogram and normal quantile-quantile plots for Campus Creek 2023.

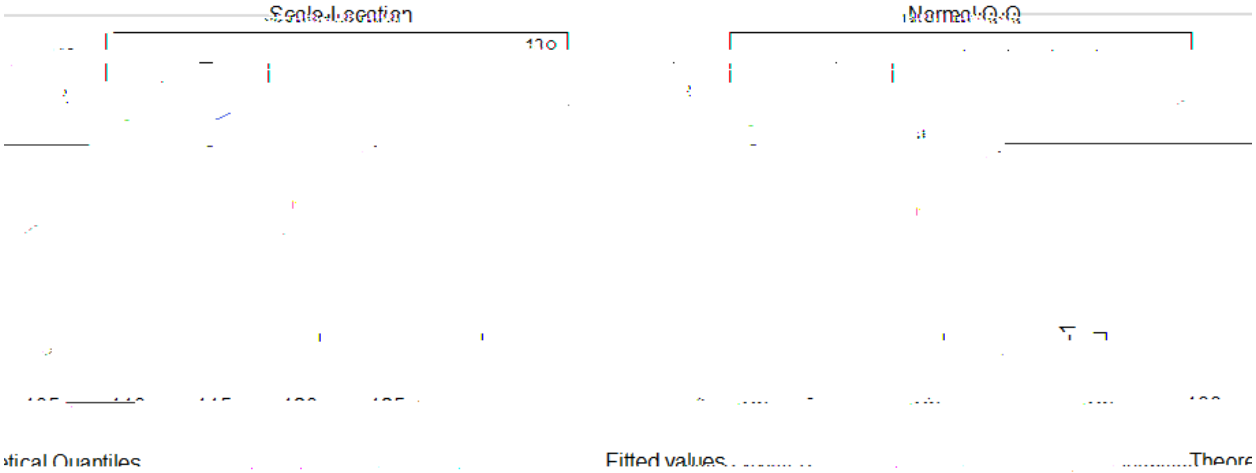

Figure 10. Total chlorine (ppm) standardized residuals scale location and normal quantile-quantile for Campus Creek 2023.

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Figure 13. Total nitrogen (ppm) histogram and normal quantile-quantile plots for Campus Creek 2023.

Figure 14. Total nitrogen (ppm) standardized residuals scale location and normal quantile-quantile for Campus Creek 2023.

Figure 17. pH histogram an^

Figure 21. Total dissolved solids (mg/L) histogram and normal quantile-quantile plots for Campumaße Ḡ

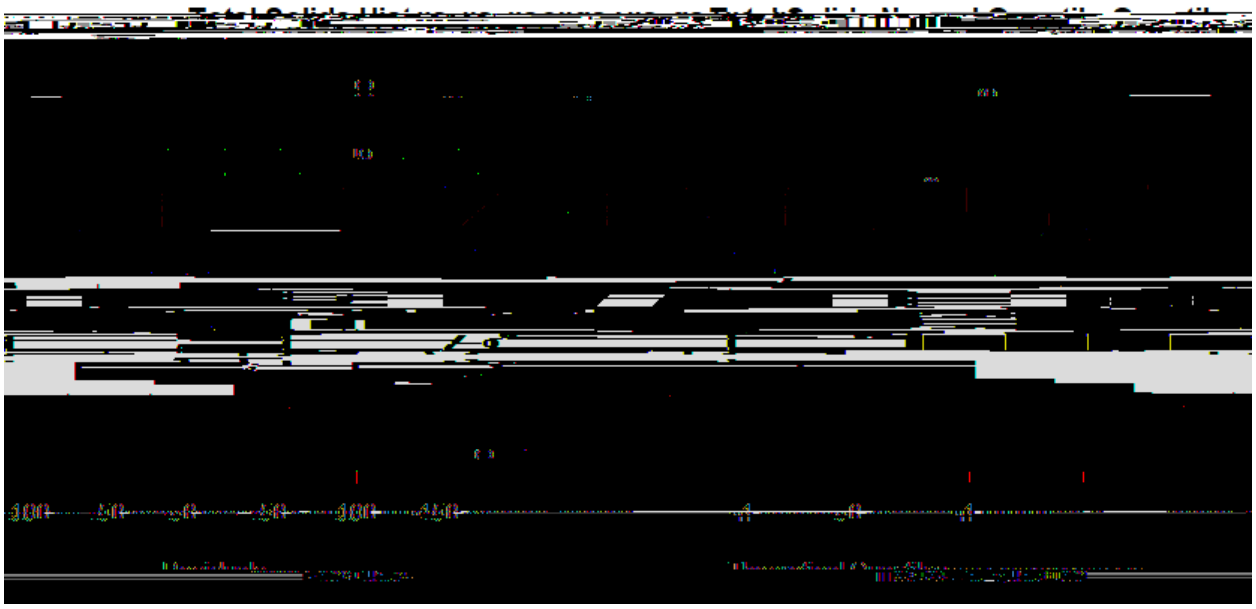

Figure 25. Total solids (ppm) histogram and normal quantile-quantile plots for Campus Creek 2023.

Figure 26. Total solids (ppm) standardized residuals scale location and normal quantile-quantile for Campus Creek 2023.

Figure 27. Total suspended solids (ppm) histogram and normal quantile-quantile plots for Campus Creek 2023.

Figure 28.