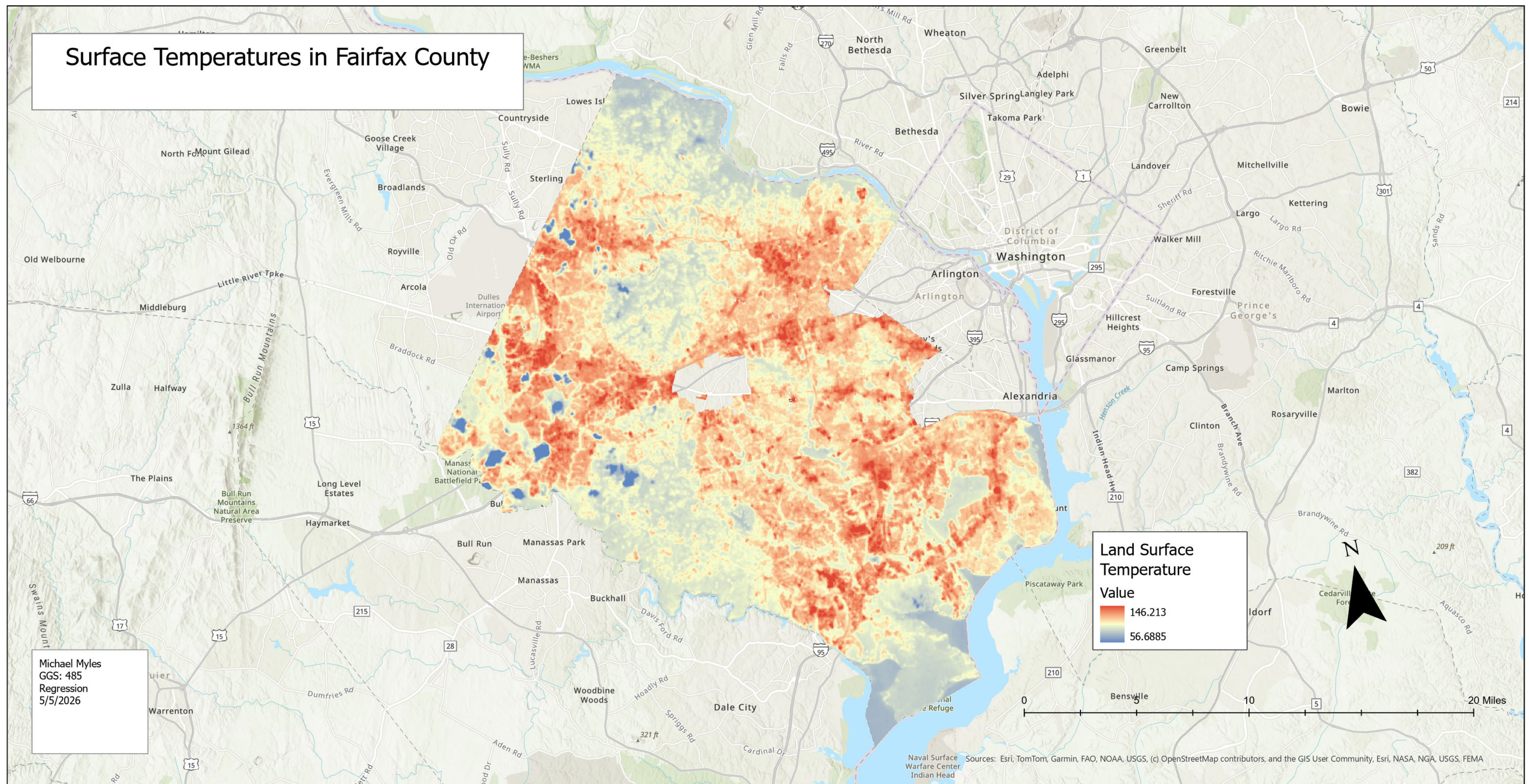
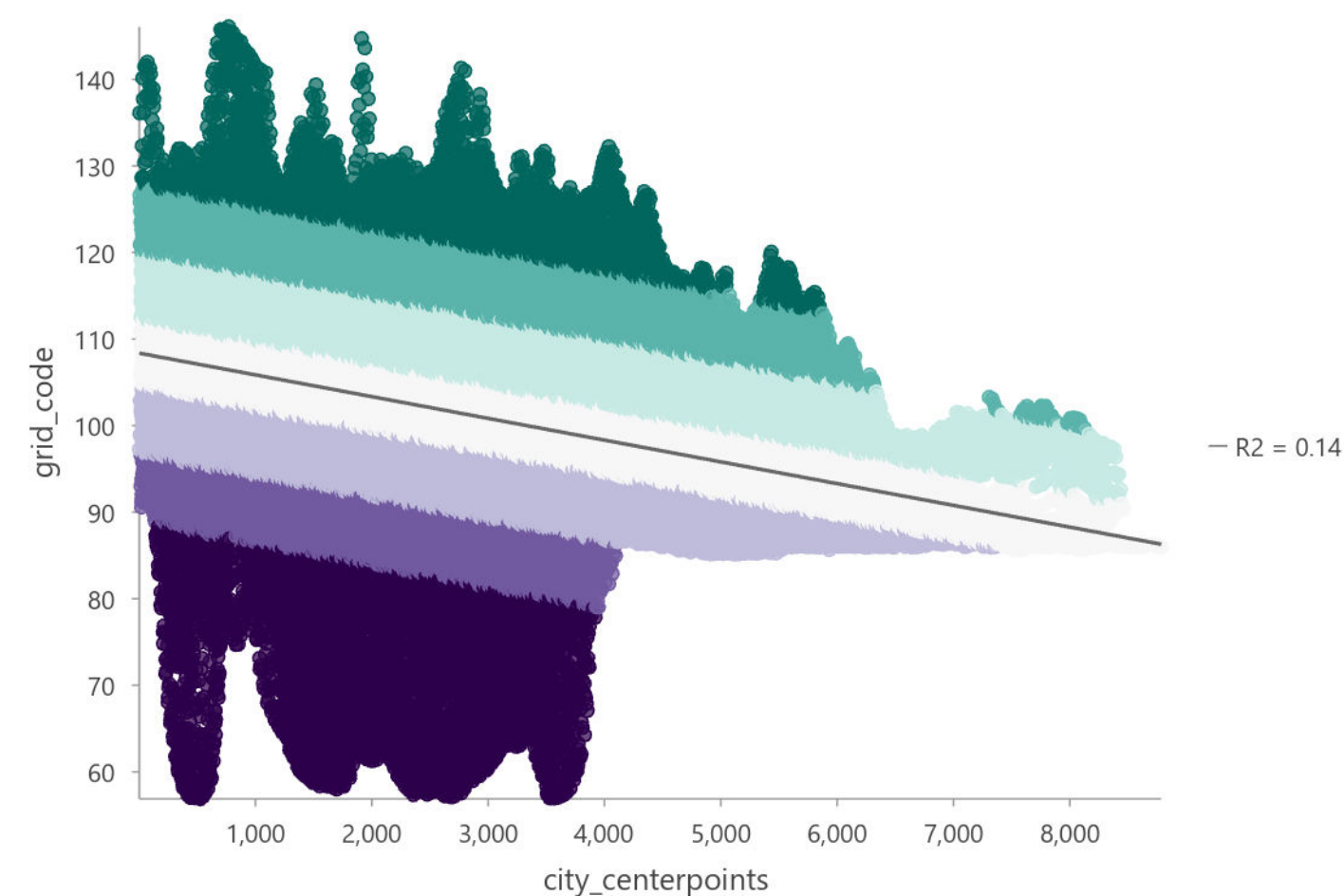




Relationship between Variables



Linear Regression Analysis

The regression line trends downward, indicating a negative relationship between the variables being analyzed. The independent variable (distance from urban centers) increases and the dependent variable (surface temperature) decreases. This means, areas that are farther from dense development tend to be cooler. However, the reported  $R^2$  value of 0.14 indicates that this relationship is weak. This means that only about 14% of the variation in surface temperature is explained by the distance from the urban center. While the trend is visible, the weak relationship indicates that surface temperature is influenced by multiple factors (development, concrete, humidity, data centers).