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**Memorandum**

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To: Derek Wu, Neil Cholli

From: Dylan Craig

Date Created: 12/26/2024

Subject: Data Analysis Memo on Bad ZipCounty Rates

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**Purpose:** To generate a Heat Map describing Bad ZipCounty Rates by County

*Note*: Bad ZipCounty rates refers to the rate of mismatches between the VDSS local office a resident is *supposed* to go to, based on their county/city of residence, and the VDSS local office they end up getting served by.

The unit of analysis is the zip code level; however the shapefile is only offered at the ZCTA level. ZCTA’s are “generalized areal representations of the geographic extent and distribution of the point-based ZIP Codes built using 2020 census tabulation blocks” but they may not be an accurate visualization of zip codes themselves.

*Heat Map:*



A map of the state of minnesota

Description automatically generated

*Findings:*

Most zip codes have an error rate below 2%. Those that have a higher error rate tend to be concentrated along county borders. This pattern makes sense for two key reasons: 1) residents along county edges may be uncertain which office they should visit, and 2) they may live much closer to another county's office than their assigned one.

These findings are significant since one of our key measurements is resident distance from their designated VDSS local office. However, if residents are frequently visiting offices in other counties, this distance measurement becomes less meaningful as a metric of accessibility.