**VDSS\_ZIP\_ZCTA\_CROSSWALK\_HRSA.R - README**

**Author: Dylan Craig**

**Date Last Updated: 12/29/2024**

**File Name: VDSS\_ZIP\_ZCTA\_CROSSWALK\_HRSA.R**

**Purpose**

This script processes the ZIP-to-ZCTA (ZIP Code Tabulation Area) crosswalk data provided by HRSA, filtering for Virginia ZIP codes. It selects relevant columns, renames them for clarity, and saves the cleaned data in an Excel file for further use.

**Overview**

The script:

1. Loads HRSA ZCTA data from an Excel file.
2. Filters for Virginia ZIP codes.
3. Selects and renames columns for consistency and clarity.
4. Exports the cleaned data to an Excel file.

**Datasets and Tools**

**Input File:**

1. **HRSA\_ZCTA.xlsx:** Contains the original ZIP-to-ZCTA crosswalk data, including state information.

**Output File:**

1. **HRSA\_ZCTA\_Cleaned.xlsx:** A cleaned dataset linking Virginia ZIP codes to their corresponding ZCTAs.

**Dependencies:**

* **R Libraries:**
  + readxl: For reading Excel files.
  + dplyr: For data manipulation.
  + openxlsx: For writing Excel files.

**Script Functionality**

**1. Loading the Data:**

* Reads the HRSA ZCTA dataset from the specified input file.

**2. Filtering and Cleaning Data:**

* Filters the dataset to include only Virginia ZIP codes (STATE == "VA").
* Selects the ZIP\_CODE and zcta columns.
* Renames the columns for clarity:
  + ZIP\_CODE renamed to ZIP.
  + zcta renamed to ZCTA.

**3. Saving the Cleaned Data:**

* Exports the cleaned dataset to the specified output file in Excel format.

**File Output**

**HRSA\_ZCTA\_Cleaned.xlsx:**

* Contains Virginia ZIP codes and their corresponding ZCTAs, formatted for clarity and consistency.

**Usage**

1. Place the input file (HRSA\_ZCTA.xlsx) in the Raw Data/VDSS\_Zip\_ZCTA\_Crosswalk/ directory.
2. Install the required R libraries.
3. Execute the script in an R project environment.
4. The cleaned data will be saved to Data Outputs/VDSS\_Zip\_ZCTA\_Crosswalk/HRSA\_ZCTA.xlsx.

**Notes**

* The accuracy of the cleaned data depends on the quality of the HRSA ZCTA crosswalk source file.
* Ensure that the input dataset is formatted correctly and includes Virginia ZIP codes.
* The output file is ready for integration into further analyses or mapping workflows.