U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

Metadata for High Population Areas

Version 6 (Derived from 2020 Census / 2024 TIGER/Line Geodatabases)

Metadata:

Identification_Information:

Citation:

Citation_Information:

Originator: U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA)

Publication_Date: 20250430

Title: HPA_V6

Edition: 6

Geospatial_Data_Presentation_Form: vector digital data

Description:

Abstract: High Population Areas (HPAs) are considered High Consequence Areas (HCAs) as defined in 49 CFR § 195.450. The HPA data is derived from the U.S. Census Bureau's TIGER Urban Areas geospatial data layer and Census Urban Areas tabular list containing 2020 Census population and population density values, which can be downloaded from the Census website. Within the Urban Areas data layer, features defined as Urban Areas containing 50,000 or more people with a population density of at least 1,000 people per square mile according to data from the Census Urban Areas table were extracted to become the High Population Areas data layer. Urban Areas with population densities lower than 1,000 people per square mile were not included in the High Population Areas data layer. Depending on the version, the metadata is included as an .XML file within the downloadable Esri Shapefile. Shapefile available for public download from www.npms.phmsa.dot.gov.Version: 6 (Derived from 2020 Census population values and the 2024 Urban Areas geospatial dataset) Census Urban Areas (Source Data): The TIGER/Line Files are shapefiles and related database files (.dbf) that are an extract of selected geographic and cartographic information from the U.S. Census Bureau's Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB). The MTDB represents a seamless national file with no overlaps or gaps between parts, however, each TIGER/Line File is designed to stand alone as an independent data set, or they can be combined to cover the entire nation. After each decennial census, the Census Bureau delineates urban areas that represent densely developed territory, encompassing residential, commercial, and other nonresidential urban land uses. In general, this territory consists of areas of high population density and urban land use resulting in

a representation of the "urban footprint." Each urban area is identified by a 5-character numeric census code that may contain leading zeroes. In order for others to use the information in the Census MAF/TIGER database in a geographic information system (GIS) or for other geographic applications, the Census Bureau releases to the public extracts of the database in the form of TIGER/Line Shapefiles.HCAs are defined in 49 CFR § 195.450. This dataset is one resource available to assist operators with identifying locations that meet the regulatory definition of an HCA. If a location meets the regulatory definition of an HCA but it is not mapped in the HCA data currently available from PHMSA, that location is still an HCA. Operators must continually assess the locations in which their lines are located, to include reference to NPMS as one avenue to obtain data but not the sole avenue, to determine if they are in or could affect an HCA.

Purpose: A High Population Area (HPA) is defined in 49 CFR 195.450 as an urbanized area, as defined and delineated by the Census Bureau, that contains 50,000 or more people and has a population density of at least 1,000 people per square mile. HPAs are one type of High Consequence Area (HCA) used by pipeline operators for integrity management purposes. Available for public download from www.npms.phmsa.dot.gov.

Supplemental_Information: The High Population Areas (HPA) data is derived from the U.S. Census Bureau's TIGER Urban Areas geospatial data layer, which is released yearly, and Census Urban Areas table, which is reproduced with every decennial census and was downloaded from the Census website. Within the Urban Areas data layer, features defined as Urban Areas containing 50,000 or more people with a population density of at least 1,000 people per square mile were extracted to become the "High Population Areas" data layer.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 20200101

Currentness_Reference: High Populated Areas Version 6 represents the 2020 U.S. Census count. HPA data is updated biannually if the Urban Areas geospatial data layer is updated, and when new Census Urban Areas data becomes available, usually several years after a new census count is completed.

Status:

Progress: Complete

Maintenance_and_Update_Frequency: Biannually

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -158.231282

East_Bounding_Coordinate: 144.948330

North_Bounding_Coordinate: 61.276464

South_Bounding_Coordinate: 13.393432

Keywords:

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Topic Categories

Theme_Keyword: boundaries

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: High Population Area

Theme_Keyword: HPA

Theme_Keyword: High Consequence Area

Theme_Keyword: HCA

Theme_Keyword: PHMSA

Theme_Keyword: 2020 Census

Theme_Keyword: Urban Areas

Theme_Keyword: boundaries

Theme_Keyword: National

Theme_Keyword: United States

Theme_Keyword: Polygon

Access_Constraints: None

Use_Constraints: The TIGER/Line Shapefile products are not copyrighted however TIGER/Line and Census TIGER are registered trademarks of the U.S. Census Bureau. These products are free to use in a derived record or publication, however acknowledgement must be given to the U.S. Census Bureau as the source. The boundary information in the TIGER/Line Shapefiles are for statistical data collection and tabulation purposes only; their depiction and designation for statistical purposes does not constitute a determination of jurisdictional authority or rights of ownership or entitlement and they are not legal land descriptions. Coordinates in the TIGER/Line shapefiles have six implied decimal places, but the positional accuracy of these coordinates is not as great as the six decimal places suggest.

Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration

Contact_Person: Nathaniel Thompson

Contact_Position: GIS Coordinator

Contact_Address:

Address_Type: mailing

Address: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, East Building, 2nd floor, 1200 New Jersey Ave., SE

City: Washington

State_or_Province: DC

Postal_Code: 20590

Country: US

Contact_Voice_Telephone: 202-843-3818

Contact_Electronic_Mail_Address: nathaniel.thompson@dot.gov

Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration

Contact_Person: Leigha Gooding

Contact_Position: GIS Manager

Contact_Address:

Address_Type: mailing and physical

Address: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, East Building, 2nd floor, 1200 New Jersey Ave., SE

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Data_Set_Credit: Pipeline and Hazardous Materials Safety Administration (PHMSA); U.S. Census Bureau

Native_Data_Set_Environment: Esri ArcGIS 13.3.2.52636

Data_Quality_Information:

Logical_Consistency_Report: The 2020 Census Urban Area List Record Layouts table was joined to the U.S. Census Urban Areas layer based on the UACE field. A search was performed for all records that have a population of greater than or equal to 50,000 and a population density greater than or equal to 1,000. Any data records not meeting these criteria were omitted from the final dataset.

Completeness_Report: Data was visually checked to assure completeness, including comparisons with source data to ensure no data that meets the criteria of an HPA was ommitted. Data was compared to the equivalent dataset from the 2010 Census as well as previous versions of HPA data based on the 2020 Census; large differences in the data were examined individually to ensure understanding of changes between the dataset based on the 2010 Census and the dataset based on the 2020 Census.

Lineage:

Process_Step:

Process_Description:

Within the U.S. Census Urban Areas data layer, features defined as Urban Areas containing 50,000 or more people with a population density of at least 1,000 people per square mile were extracted to become the “High Population Areas” data layer.

To achieve this result, the 2020 Census Urban Area List Record Layouts table was joined to the 2024 U.S. Census Urban Areas layer based on the UACE field. A search was performed for all records that have a population of greater than or equal to 50,000 and a population density greater than or equal to 1,000. Any data records not meeting these criteria were omitted from the final dataset.

Process_Date: 20250415

Process_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: U.S. Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA)

Contact_Address:

Address_Type: mailing and physical

Address: 1200 New Jersey Ave., S.E.

City: Washington

State_or_Province: DC

Postal_Code: 20590

Contact_Voice_Telephone: 202-366-0667

Spatial_Data_Organization_Information:

Direct_Spatial_Reference_Method: Vector

Point_and_Vector_Object_Information:

SDTS_Terms_Description:

SDTS_Point_and_Vector_Object_Type: GT-polygon composed of chains

Point_and_Vector_Object_Count: 5326

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: HPA_V6

Entity_Type_Definition: 2020 Census Urban Area National

Entity_Type_Definition_Source: U.S. Census Bureau

Attribute:

Attribute_Label: OBJECTID

Attribute_Definition: Internal feature number.

Attribute_Definition_Source: Esri

Attribute_Domain_Values:

Unrepresentable_Domain: Sequential unique whole numbers that are automatically generated.

Attribute:

Attribute_Label: Shape

Attribute_Definition: Feature geometry.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain: Coordinates defining the features.

Attribute:

Attribute_Label: Shape_Length

Attribute_Definition: Length of feature in internal units.

Attribute_Definition_Source: Esri

Attribute_Domain_Values:

Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:

Attribute_Label: HPA_NAME

Attribute_Definition: Name of High Population Area (Same as "Name20" attribute from 2020 Census Urban Area data)

Attribute_Definition_Source: U.S. Census Bureau

Attribute_Domain_Values:

Codeset_Domain:

Codeset_Name: Refer to the online Census 2020 Urban Area information at URL: https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html

Codeset_Source: U.S. Census Bureau

Attribute:

Attribute_Label: DATA_YEAR

Attribute_Definition: Year of Census from which data was obtained

Attribute_Definition_Source: NPMS

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: Free text

Enumerated_Domain_Value_Definition: year - 4 characters in length

Enumerated_Domain_Value_Definition_Source: U.S. Census

Attribute:

Attribute_Label: SHAPE_Area

Attribute_Definition: Area of feature in internal units squared.

Attribute_Definition_Source: ESRI

Attribute_Domain_Values:

Unrepresentable_Domain: Positive real numbers that are automatically generated.

Attribute:

Attribute_Label: HCA_Type

Attribute_Definition: Type of High Consequence Area.

Attribute_Definition_Source: PHMSA

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: HPA

Enumerated_Domain_Value_Definition: High Population Area

Enumerated_Domain_Value_Definition_Source: PHMSA

Metadata_Reference_Information:

Metadata_Date: 20250415

Metadata_Contact:

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Metadata_Standard_Name: FGDC Content Standard for Digital Geospatial Metadata

Metadata_Standard_Version: FGDC-STD-001-1998

Metadata_Time_Convention: local time