

Urban Areas and Small MS4s: Definition and Description



As discussed in [Fact Sheet 2.1](#), Who's Covered? Designation and Waivers of Regulated Small MS4s, the Phase II rule covers all small municipal separate storm sewer systems (MS4s) located within an “urban area with a population of 50,000 or more people.” Such urban areas constitute the largest and most dense areas of settlement. Urban area calculations delineate boundaries around these dense areas of settlement and, in doing so, identify the areas of concentrated development. Urban area designations are used for several purposes in both the public and private sectors. For example, the federal government has used urban areas to calculate allocations for transportation funding, and some planning agencies and development firms use urban area boundaries to help ascertain current, and predict future, growth areas.

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History of Urban Areas

What is an Urban Area?

The Bureau of the Census determines urban areas by applying a detailed set of published urban area criteria to the latest decennial census data. Although the full urban area definition is complex, the Bureau of the Census's general definition of an urban area is based on population and population density.

The basic unit for delineating the urban area boundary is the census block. Census blocks are based on visible physical boundaries, such as the city block, when possible, or on invisible political boundaries, when not. An urban area can comprise places, counties, Federal Indian Reservations, and minor civil divisions (MCDs - towns and townships).

An urban area (UA) is a densely settled core of census tracts and/or census blocks that have population of at least 50,000 or more people, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas.

Urbanized Areas

Until the 2020 Census, urban areas were delineated into two categories. Populations of 2,000 to 49,999 people were designated as urban clusters and populations of 50,000 or more people were designated as urbanized areas. As of March 24, 2022, the Census Bureau stopped distinguishing urbanized areas and urban clusters and only identified urban areas. See 87 FR 16706, March 24, 2022.

Small MS4s

Below in Figure 1 is a simplified urban area illustration that demonstrates the concept of urban areas in relation to the Phase II Rule. The "urban area" includes, within its boundaries, incorporated places, a portion of a Federal Indian reservation, an entire MCD, a portion of another MCD, and portions of two counties. All operators of small MS4s, located within the boundaries of the urban area, are regulated under the Phase II rule, regardless of political boundaries. Operators of small MS4s located outside of the urban area are not automatically designated as regulated under the Phase II rule but may be brought into the program by the National Pollutant Discharge Elimination System (NPDES) permitting authority (see [Fact Sheet 2.1](#)). Keep in mind that the urban area boundaries are important in some cases for determining the specific regulated MS4s within a municipality's boundaries (e.g., a county included in Phase II might only be required to implement their program for the urban area portion of the county).

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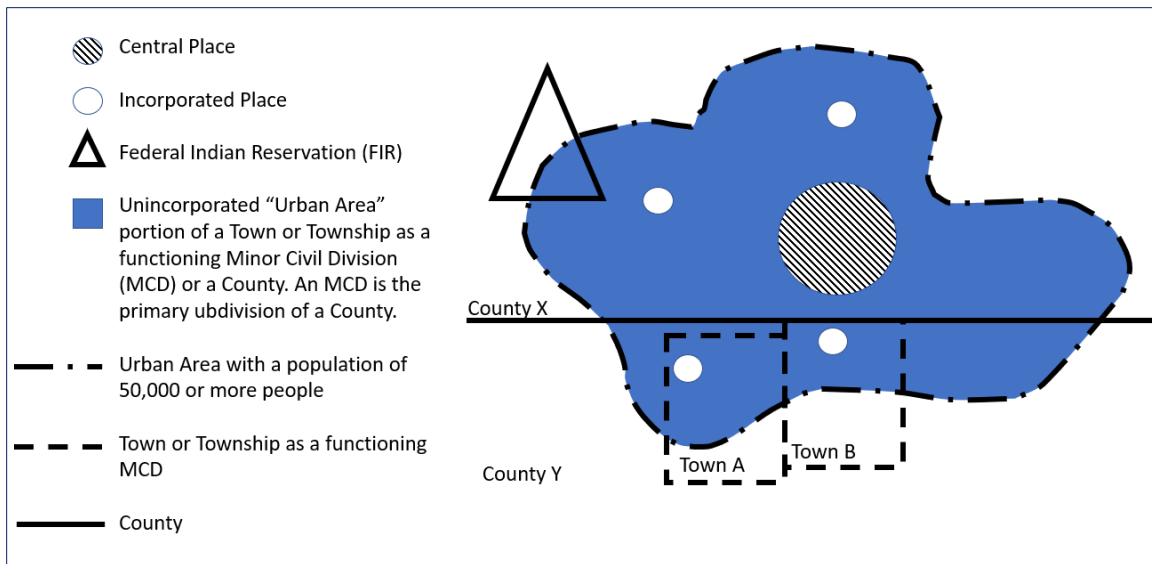


Figure 1. Urban Area Illustration Example

Mapping of Small MS4s

Designation Process/Mapping Process

To identify the location of newly designated small MS4s using the 2020 Census data, it is necessary to know both the current urban area locations and their associated populations. Knowing these two pieces of information enables the identification of urban areas with a population of 50,000 or more people. [EPA's MS4 Stormwater webpage](#) will have links to the most up to date maps and data available.

Resources from Previous Censuses

As noted above, prior to the 2020 Census, the criteria for automatic designation were based on Census-defined urbanized areas.

- For reference purposes, the location of urbanized areas in prior censuses, including the 2010 Census, can be found on the [Census Bureau's website](#). Each urbanized area folder contains a series of Portable Document Format (PDF) files:
 - The first PDF contains a reference map and additional detailed maps.
 - The remaining PDFs are individual copies of the detailed maps.

Note: The folders for some smaller urbanized areas contain only one map.

- For reference maps of each urbanized areas from the 2010 Census, refer to the [Census Bureau's 2010 Urban Area Reference Maps](#). The urbanized areas and urban clusters both appear in green on the reference maps, which makes it difficult to distinguish

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them. However, the urbanized area labels appear in regular font while the urban clusters are slightly italicized.

The Census Bureau provides additional helpful information:

- Identify the correct urban area using a series of files relating the [2010 urban areas to counties, incorporated places, and zip codes](#).
- The original GIS shapefiles used to generate the maps can be downloaded under “boundaries and shapefiles” on the [Census 2010 Urban Area website](#).

For Additional Information

Contacts

A list of contacts for the U.S. EPA’s Office of Wastewater Management (Headquarters), each EPA regional office, and state office is located at:
<https://www.epa.gov/npdes/contact-us-stormwater>

Your NPDES Permitting Authority

Most states and territories are authorized to administer the NPDES Program, except the following, for which EPA is the permitting authority:

- American Samoa
- District of Columbia
- Guam
- Johnston Atoll
- Massachusetts
- Midway and Wake Islands
- New Hampshire
- New Mexico
- Northern Mariana Islands
- Puerto Rico
- Most Indian country lands

Reference Documents

- [EPA’s Stormwater Website](#)
- [Stormwater Phase II Final Rule \(64 FR 68722\)](#)
- [Final MS4 General Permit Remand Rule \(81 FR 89320\)](#)
- [Final Small MS4 Urbanized Area Clarification \(88 FR 37994\)](#)
- [Stormwater Phase II Rule Fact Sheet Series](#)
- [National Menu of Best Management Practices for Stormwater Phase II](#)
- [EPA Urban Area Information](#)
- [Census General Information](#)

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