

Mobile Home Parks

Indicator Name

- *Mobile Home Parks, Count in Watershed (WS)*

Indicator Category | **Social**

Subcategory | *Community Context*

Available in RPS Tool files for all lower 48 states

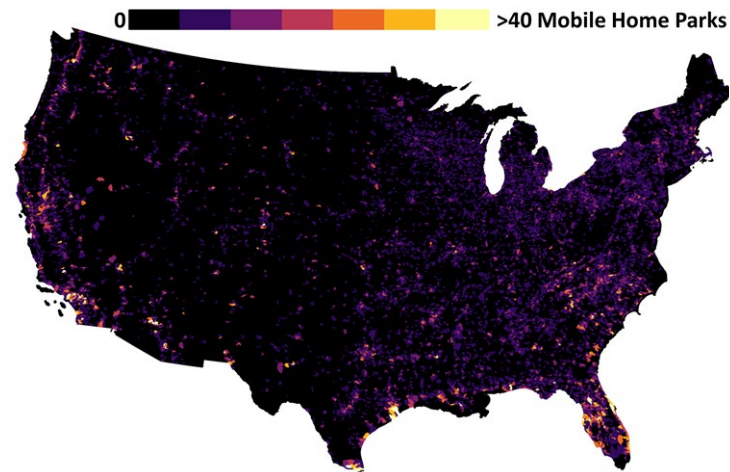
Indicator Description

Background

Mobile home parks provide a permanent or temporary space for populations to live in residential trailers, recreational vehicles, and other types of mobile homes. Mobile home park residents can face challenges related to clean drinking water access, wastewater disposal, and safety during natural disasters (hurricanes, tornadoes, flooding, etc.).

What the Indicators Measure

This indicator measures the number of mobile home parks within a HUC12 subwatershed* (Figure 1).



Relevance to Water Quality Restoration and Protection

Many mobile home residents rely on drinking water supplies from park operators or other small private water systems.¹ While these systems are often regulated and subject to quality standards, they may be more prone to water quality and supply issues compared to public water systems. For example, an analysis of California drinking water violations between 2010 to 2014 found that health-related violations were more common in water systems that served mobile home parks compared to other water systems.¹

Mobile home parks are also more likely to use on-site systems, such as septic systems, for the disposal and

treatment of domestic wastewater compared to the general population.² Pollution from malfunctioning or improperly designed septic systems can result in the contamination of drinking water supplies with pathogens and the addition of excess nitrogen and phosphorus to surface and groundwaters.³ In extreme cases, mobile home parks have been shut down by local governments due to failing septic tanks that left raw sewage standing on park grounds.²

Residents of mobile home parks have been identified as having a disproportionately higher risk of impact from floods, hurricanes, and other natural disasters.⁵⁻⁷ For example, mobile home parks are more likely to be in flood zones compared to other types of housing^{5,6}, and mobile homes are more easily damaged or destroyed when exposed to intense windstorms relative to conventional housing, with about 45% of all tornado fatalities in the US from 1985 to 2010 occurring in mobile homes.⁷

This indicator can be used with additional indicators of pollutant exposure and demographic characteristics (income, race, education, etc.) to identify HUC12s with populations that may face a greater pollution burden and associated health impacts. Such HUC12s may be considered priorities for follow-up restoration or protection efforts.

Processing Method

This indicator was derived from a map layer of mobile home park locations from the Homeland Infrastructure Foundation-Level Data (HIFLD) dataset maintained by the US Department of Homeland Security. The August 10, 2018 version of the HIFLD mobile home park map layer was used for indicator processing.

The count of mobile home parks per HUC12 was determined by overlaying HUC12 boundaries with the mobile home parks map layer and calculating the number of parks within each HUC12. An example overlay map of mobile home parks and HUC12 boundaries is provided in Figure 2.

* HUC12s are subwatershed delineations in the [National Watershed Boundary Dataset](#). HUC12s are referenced by their 12-digit Hydrologic Unit Code.

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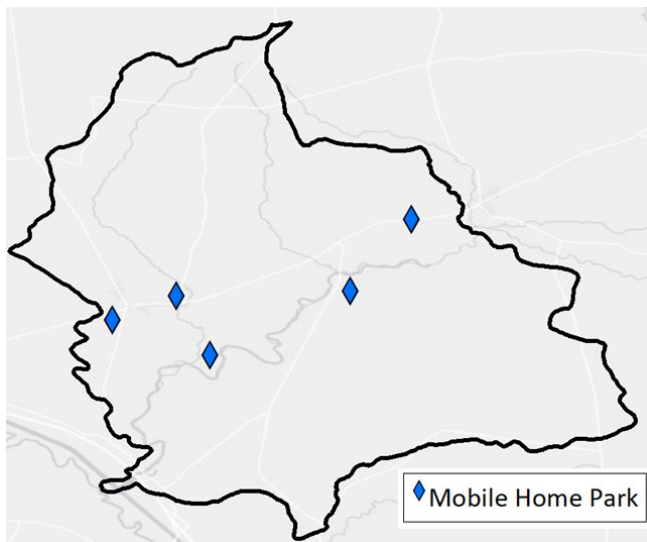


Figure 2. Map of mobile home park locations from the Homeland Infrastructure Foundation-Level Data (HIFLD) dataset in an example HUC12.

Limitations

- The presence of mobile home parks is a general indicator of community vulnerability to contaminated drinking water, flooding, or other degraded environmental conditions in a HUC12. However, the vulnerability of any single mobile home park is dependent on site-specific geography, demographics, and other factors.

Links to Access Data and Additional Information

HUC12 indicator data can be accessed within Recovery Potential Screening (RPS) Tool files, available for download from the [EPA RPS](#) website.

Indicator data are also available for download or as web services on the [EPA Watershed Index Online \(WSIO\)](#) website.

The mobile home park map layer used to calculate this indicator can be accessed from the [Department of Homeland Security HIFLD Open Data](#) website.

References

- ¹Gregory P., et al. 2017. [Public Drinking Water System Coverage and Its Discontents: The Prevalence and Severity of Water Access Problems in California's Mobile Home Parks](#). *Environmental Justice*. 10(5): 168-173.
- ²US Census Bureau. [2019 National - Plumbing, Water, and Sewage Disposal - All Occupied Units](#). *American Housing Survey (AHS) Table Creator*. Accessed September 13, 2021.
- ³US EPA, 2002. [Onsite Wastewater Treatment Systems Manual](#).
- ⁴Capps, K., et al. 2020. [Assessing the Socio-Environmental Risk of Onsite Wastewater Treatment Systems to Inform](#)

[Management Decisions](#). *Environmental Science & Technology*. 54(23): 14843-14853.

⁵Shen, G. 2005. [Location of manufactured housing and its accessibility to community services: a GIS-assisted spatial analysis](#). *Socio-Economic Planning Sciences*. 39(1): 25-41.

⁶Baker, D., et al. 2014. [Rapid flood exposure assessment of Vermont mobile home parks following Tropical Storm Irene](#). *Natural Hazards Review*. 15(1): 27-37.

⁷Simmons, K., et al. 2011. [Economic and societal impacts of tornadoes, Chapter 1: Tornado Climatology and Society's Tornado Risk](#). *American Meteorological Society*.