FEMA Fact Sheet:

Hazus Inventory National Database Fact Sheet

The Hazus Inventory National Database was designed to make Hazus Inventory data for state and territories more accessible to Hazus users and non-users.

About the Hazus Inventory National Database

FEMA released a new, comprehensive Hazus Inventory National Database. This new dataset is designed to assist GIS professionals and the risk assessment community by making Hazus inventory data easily accessible. A comprehensive inventory database is essential for hazard risk assessments as it provides information about assets that may be affected by a hazard event, including people and property within a community.

Access to reliable inventory data allows hazard mitigation teams to understand the impact on the community's vulnerable structures and essential facilities, including essential facilities for the health and welfare of the population, transportation systems and utility systems. A detailed inventory enables communities to make informed decisions on how to protect critical facilities and determine the proportion of buildings, value of buildings and population of hazard areas.

Development of the Program

Since 1997 the Hazus Program has provided baseline inventory databases using SQL Server technology to store state data organized by state boundaries. To access the data outside of Hazus, users needed proficiency with SQL Server. This limited the usability of the baseline Hazus inventory data.

With the release of this new national database, we aim to make reliable inventory data and vulnerability attributes more easily accessible to the risk assessment community. The database is intended for two major types of end-users in the Risk Assessment Community: Open Source (i.e. QGIS) Users and Commercial (i.e. Esri) Users.

The Data

Hazus Inventory contains comprehensive inventory data with associated vulnerability attributes to estimate losses in the event of a natural hazard. The data represents the General Building Stock (GBS), includes demographic information, and data for essential facilities, transportation, and utility systems. The inventory can be used to estimate hazard exposure for buildings, population, essential facilities, transportation systems and utility systems. To download and access the new database, users can find it on the FEMA Flood Map Service Center Hazus webpage under the “Hazus Program Data Updates And Open Source Tools” tab.

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Learn More

For more information on how the Hazus baseline data was created and vulnerability attributes were assigned, check out the Hazus 6.0 Inventory Technical Manual and our Hazus 6.0 Data Updates Factsheet.

The national database compiles all of the Hazus baseline inventory data provided to users out-of-the-box for the continental United States, Alaska, Hawaii and U.S. territories, into a single file that is easy to download and use with any GIS software.

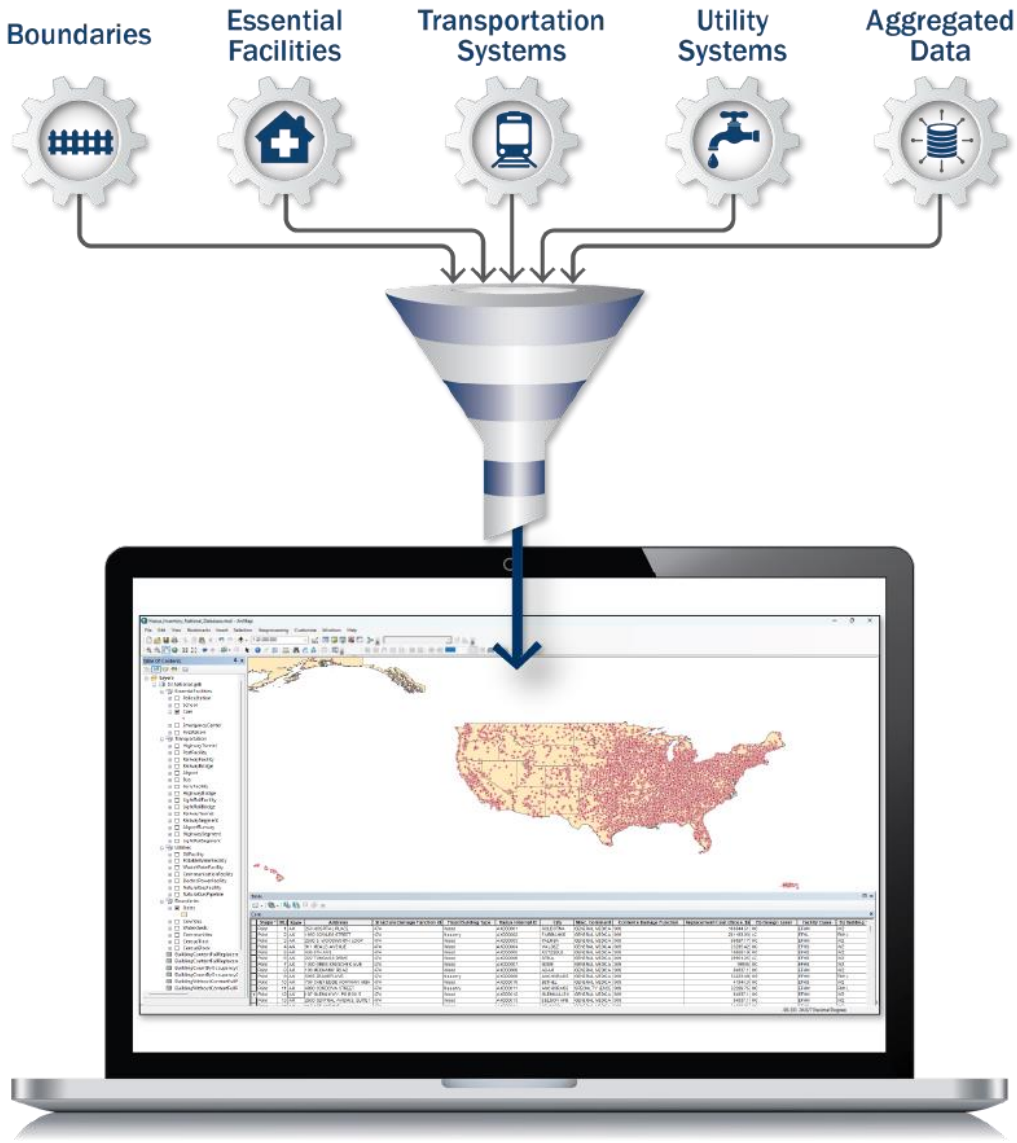

Figure 1. Highlights the five main data types: boundaries, essential facilities, transportation systems, utility systems, and aggregated non-spatial data, and shows an example of what the data looks like when opened in GIS software, like ArcMap.

The Hazus Inventory National Database is delivered in Esri formatted File Geodatabases and can be opened and used in ArcMap (Figure 1), ArcPro, QGIS, or other GIS software. The dataset consists of spatial and non-spatial data. The data is presented in views with labels and attributes and includes a data dictionary with the download for additional information about each spatial layer, table and associated fields. For GIS users, the non-spatial data from the tables can easily be mapped by performing a join using the unique identifier field and the subsequent matching boundary shapefile so that the vulnerability attributes and demographics data are easily accessible.

The zipped file, containing the database and help documents, is about 6GB. When the file is unzipped the data will take up roughly 25GB. Since the database is on a national, Census block scale, performing additional operations on the data resulting in new fields or values, could require large amounts of additional hard drive space.

Table 1: Shows a list of the spatial datasets provided in the national database grouped by type (feature datasets) and associated layers (feature classes).

Feature Dataset	Feature Classes
Boundaries	States, Counties, Watersheds, National Flood Insurance Program (NFIP) Communities, Census Tracts, Census Blocks
Essential Facilities	Police Stations, Schools, Care Facilities, Emergency Centers, Fire Stations
Transportation Systems	Highway Tunnels, Port Facilities, Railway Facilities, Railway Bridges, Airports, Bus Facilities, Ferry Facilities, Highway Bridges, Light Rail Facilities, Light Rail Bridges, Railway Tunnels, Railways Segments, Airport Runways, Highway Segments, Light Rail Segments
Utility Systems	Oil Facilities, Potable Water Facilities, Waste Water Facilities, Communication Facilities, Electric Power Facilities, Natural Gas Facilities, Natural Gas Pipelines

Table 2: Shows a list of the non-spatial tables provided in the national database and the field to use to join the table to a boundary feature class for mapping purposes.

Join Field	Table Name
Census Block	Building Content Full Replacement Value by Occupancy Census Block Level
Census Tract	Building Content Full Replacement Value by Occupancy Census Tract Level
Census Block	Building Count by Occupancy Census Block
Census Tract	Building Count by Occupancy Census Tract
Census Block	Building Without Content Full Replacement Value by Occupancy Census Block Level
Census Tract	Building Without Content Full Replacement Value by Occupancy Census Tract Level
Census Block	Demographics by Census Block

Join Field	Table Name
Census Tract	Demographics by Census Tract
Census Block	Square Footage by Occupancy Census Block Level
Census Tract	Square Footage by Occupancy Census Tract Level

The Hazus Inventory National Database is a valuable resource for the risk assessment community, providing comprehensive data to support hazard risk assessments. The database is user-friendly and easily accessible to both open source and commercial users, making it an essential tool in the hazard mitigation planning process. The database provides information on assets that may be affected by a hazard event, allowing communities to prioritize mitigation efforts and make informed decisions on resource allocation and response planning in the event of a disaster.

Hazus Resources

The Hazus Program offers technical guidance, training, and information about ongoing and recent projects to help stakeholders complete successful risk assessments. Please review the resources listed below for assistance using Hazus and reach out to the Hazus Team with questions.

- Self-Guided Course Materials
- YouTube Videos
- Sign up for Risk Assessment Guidance
- Visit the Hazus Loss Library
- User & Technical Manuals
- Contact the Hazus Team