



THE NATIONAL TRANSPORTATION ATLAS

Latest Developments

WHO ARE WE

- Bureau of Transportation Statistics (www.bts.gov)
- A program within the Office of the Assistant Secretary of Transportation – Research (OSTR) (<http://www.rita.dot.gov/>)
- The US Department of Transportation's statistical agency (<http://www.dot.gov>)

WHAT WE DO

- Measure volumes of freight and passenger movement by mode, origin, and destinations
- Publish the National Transportation Atlas Database
- Analyze the performance of the Nation's Transportation Systems
- Airline Statistics, Ferry Statistics
- Safety Data Program
 - integrates safety data across modes and to address gaps in existing safety data programs
- Home of the National Transportation Library
- Provide Statistical Coordination to the department

WHAT'S NTAD?

- The National Transportation Atlas Database
- A set of about 35 transportation-related geospatial datasets gathered, processed, documented, reviewed, and released by BTS
- Data is gathered from different departments and is collected in different formats
- Attributes are scrubbed and validated
- FGDC compliant metadata is created explaining the source, methods, and contact information
- BTS distributes the data through an annual DVD release and Internet publication

NTAD BACKGROUND

- BTS is congressionally mandated to produce the NTAD on an annual basis.
- The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 contained the original mandate and it has remained in the following legislation
- The purpose is to consolidate all of the department's transportation networks and facility databases.
- Facilitates the production of quality, up-to-date maps and applications
- Enable national level transportation analyses.

MORE NTAD BACKGROUND

- BTS enhances data quality and comparability by integrating common field definitions
- Adhering to good statistical practices when aggregating data
- Validates statistics used in performance measures and other applications.
- Ensures the data and statistics are relevant for transportation decision makers at all levels of government, transportation-related associations, private businesses and consumers.
- The goal is to have an increasingly detailed transportation data including datasets provided by state and local governments and the private sector through cooperative partnership arrangements

CONTENT

- Airports
- Alternative Fuel Stations
- Amtrak Stations
- Border Crossing Port
- Dams over 50 feet
- Intermodal Terminal Facilities
- Intermodal Passenger Connectivity Database
- Crash characteristics and environmental conditions
- Inland waterway locks
- National Bridge Inventory
- National Populated Places
- Ports
- Top 150 major ports

MORE CONTENT

- Railroad Grade Crossings
- Travel Monitoring Analysis System
- Urbanized Area Boundaries
- Core based statistical area representing Metropolitan & Micropolitan Statistical Areas
- The 113th Congressional Districts Boundaries
- U.S. County Boundaries
- U.S. County Boundaries representing the U.S. political boundaries
- Freight Analysis Framework
- Hydrographic Features
- U.S. Military Installations
- Metropolitan Planning Organization

EVEN MORE CONTENT

- Non-Attainment Areas
- National Parks
- U.S. State Boundaries
- U.S. State Boundaries representing the U.S. political boundaries
- Freight Analysis Framework, version 3.4
- Hazardous Material Routes
- Highway Performance Monitoring System
- National Highway Planning Network
- Railway Network
- Airport Runways
- Airport Ends and Thresholds
- Fixed-Guideway Transit Facilities
- Navigable Waterway Network

DATA COLLECTION

- Collection begins in mid-November
- Because BTS is usually not the originators of the datasets, it is undetermined if the data is going to be updated or remain the same.
- The new datasets may or may not be released, because BTS is depending on other agencies to complete their data collection in a timely manner.

MORE DATA COLLECTION

- Priorities are set based on when datasets need to be collected and checked for quality.
- If the dataset is determined to be unchanged from the following year, it will not go to processing until mid-March.
- If the dataset is being updated or is a new dataset, it is preferred to have the data by February.

CONTRIBUTORS

- NTAD is a cooperative effort led by BTS and has participation from the following Federal agencies
- Federal Highway Administration (FHWA)
- Federal Aviation Administration (FAA)
- Federal Motor Carriers Safety Administration (FMCSA)
- Federal Transit Administration (FTA)

MORE CONTRIBUTORS

- Census Bureau
- Bureau of Economic Analysis (BEA)
- Army Corps of Engineers
- National Park Service (NPS)
- Military Traffic Management Command Transportation Engineering Agency
- United States Geological Survey (USGS)

PROCESSING

- All data collected are imported into a geodatabase.
- FIPS and State Abbreviation and State Name fields are added and populated if they don't exist
- If they do exist ArcMap is used to ensure spatial and attribute integrity.
- If the location and the FIPS, State Abbreviation or State Name do not match, the attribute is updated.

MORE PROCESSING

- BTS adds version and revision fields to all of their datasets to track their release and any updates that occur between releases.
- Quality control is dependent on each dataset and the quality of the data that was received.
- Published in World Geodetic System 1984.
- Projection: Auxiliary World Geographic Web Mercator.
- ArcCatalog is use to populate the metadata

PUBLICATION

- DVD from the BTS book store
 - <https://1bts.rita.dot.gov/pdc/user/products/src/products.xml?p=33653&c=-1>
- Internet
 - http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_atlas_database/index.html
- REST Services
 - <http://gis.rita.dot.gov/ArcGIS/rest/services>

NATIONAL TRANSPORTATION ATLAS

- What and Why
 - A web Mapping application (<http://gis.rita.dot.gov/nta/>)
 - Communication
 - Data Visualization
 - Spatial Awareness
 - Spatial Analysis
 - Assist in Policy decisions

THE MAP

- Consumes Map Service Layers and Feature Layers
- Attribute data for map service layers are stored on the server
- Attribute data for feature layers are cached locally
- Try to use feature layers judiciously because they cache data locally it takes longer for those layer to load.
- Feature Layers offer a rollover function though

IDENTITY WINDOWS

- Marks map with graphic
- Queries all layers beneath the point.
- Reports about features within buffer
- Developing
 - Highlight queried features
 - Option to zoom to feature
 - More aesthetic reporting interfaces

IDENTITY WINDOWS

- Marks map with graphic
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 - Highlight queried features
 - Option to zoom to feature
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- Feature Rollover and Click
 - Feature Layers are cached locally
 - Enable rollover

MENUS

- Background Change
- Tools
 - Extent
 - Legend (Map Contents)
 - NTAD
 - National Map
 - ESRI
 - Full Screen
- Help
 - Map Use
 - About
- To Come: Content Meta Data

MENUS – WHAT DO YOU WANT TO SEE

- What do you want to see?
 - Aviation
 - Deficient Bridges
 - State Facts and Figures
 - Congressional Districts

DEVELOPMENT ENVIRONMENT

- Visual Studio 2010
- Silverlight
- ArcObjects

THANKS FOR LISTENING

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