

NJ Land Use + Transit Data Application (njlutrans.org) Overview

FRAMEWORK/TOOLS

The NJ Land Use + Transit Data Application functions on an ESRI ArcGIS Server platform, which provides a streamlined workflow that integrates spatial datasets while providing GIS support through Map Services. The application is designed to offer a broad array of features to allow users to explore and analyze various data elements around public transit lines, routes, stations and stops. Currently the application database is populated only for NJ TRANSIT rail lines and bus routes. Future iterations of the application will include data for other public and private transit operators providing services in New Jersey. Data application features and tools include:

- **Database-Driven Spatial Overlays**

Through the use of Dynamic Workspaces, the njlutrans.org data application links tabular datasets such as demographic data from the US Census, development application data collected through primary research, and others to spatial boundary datasets. This allows the creation of spatial mapping overlays that use up-to-date data. The njlutrans.org application displays user-selected variables spatially on a map interface while automatically generating appropriate symbology and legends on the fly. Datasets are updated either through uploads of CSV data or automatically through scripts pulling updated datasets from Application Programming Interfaces (APIs).

- **Interactive Data Layers**

The njlutrans.org data application allow users to query different spatial elements to retrieve detailed data specific to those geographies. Users can select between Parcel Blocks, Census Block Groups, Municipalities, Counties, NJT Light Rail Stations and Lines, NJT Rail Stations and Lines, and NJT Bus Stops and Lines. Selecting an individual element generates a pop-up window with basic information and an “Information” button which brings up a data panel with more detailed data regarding that element. Each spatial dataset is linked to data in the PostgreSQL database, allowing us to pull from a variety of joined datasets.

- **Custom Spatial Selection Tool**

An additional feature available when using the Interactive Data Layers is the ability to perform custom selections of geographies for use with the Download Tool and Report Tool detailed below. The user can choose between multiple selection tools including: point, line, freehand line, circle, and freehand polygon. These allow users to get aggregated data for various levels of geography, from the neighborhood level to large regions.

- **Report Tool**

The njlutrans.org data application allows users to generate custom data reports that provide snapshot information for a variety of geographies. Each report contains tabular and graphical data in a printer friendly format. Users can select from various pre-defined geographies such as County, Municipality, Rail Station (0.25 or 0.5 mile station buffer aresa), or from a custom selection from the Spatial Selection Tool. Users can also select from various data topics to include in the report such as: Ridership Data (Rail Station Only), Development Data, Demographic Data, Travel Data, Economic Data, and

Environmental/Planning Data. All data for the report is extracted from the PostgreSQL database and compiled in real-time.

- **Download Tool**

In addition to generating reports, the njlutrans.org data application also allows users to download the raw tabular data utilized throughout the application. Users can select from the same geographies (including the custom spatial selection tool) and data topics as with the Report Tool and receive a ZIP file containing an organized set of CSV files with all the relevant datasets. The CSV files are generated in real-time from the PostgreSQL database based on the user's selections.

- **Map Services**

All Map Services utilized by the data application are made available via the ArcGIS Server REST Services Directory. This encourage use of the available spatial datasets by GIS professionals and others.

DATASETS

One of the primary benefits of the njlutrans.org data application is its ability to leverage data from a broad array of sources, in a variety of formats, and integrate them into a single portal for exploration and analysis. Available datasets are organized into six primary categories: Development Data, Demographic Data, Transit Data, Travel Data, Economic Data, and Environmental/Planning Data. The specific data types and sources currently included in the data application are outlined below:

Data Category	Dataset	Year	Source	Data Type
Development	Development Application Data	2016	Alan M. Voorhees Transportation Center, Primary Data Collection	Tabular
Development	MOD IV Data (Parcel Data)	2015	State of New Jersey Division of Taxation	Tabular
Development	Residential and Non-Res. Construction data	2015	New Jersey Department of Community Affairs	Tabular
Demographic	American Community Survey 5-year Estimates	2015	US Census Bureau	Tabular (API)
Transit	NJ Transit Rail/Light Rail Lines	2016	New Jersey Transit	Spatial
Transit	NJ Transit Rail/Light Rail Stations	2016	New Jersey Transit	Spatial
Transit	NJ Transit Bus Stops	2016	New Jersey Transit	Spatial
Transit	NJ Transit Bus Routes	2016	New Jersey Transit	Spatial
Transit	NJ Transit Rail/Light Rail Ridership Data	2016	New Jersey Transit	Tabular
Transit	NJ Transit Rail/Light Rail Schedule Data	2016	New Jersey Transit	Tabular (API)
Travel	Census Transportation Planning Products - Travel to Work Data	2010	American Association of State Highway and Transportation Officials	Tabular

Economic	Historic Monthly Mortgage Costs	2015	US Census Bureau	Tabular
Env./Planning	NJ Redevelopment Areas	2016	New Jersey Department of Community Affairs	Spatial
Env./Planning	NJ Transit Village Centers/Half Mile Buffers	2016	New Jersey Office of Information Technology	Spatial
Env./Planning	NJ Urban Enterprise Zones	2013	New Jersey Office of Information Technology	Spatial
Env./Planning	NJ Brownfield Development Areas	2013	New Jersey Department of Environmental Protection	Spatial
Env./Planning	NJ Contaminated Sites	2017	New Jersey Department of Environmental Protection	Spatial
Env./Planning	NJ Land Use/Land Cover 2012 Generalized	2015	New Jersey Department of Environmental Protection	Spatial
Env./Planning	NJ Land Use/Land Cover 2007 Generalized	2010	New Jersey Department of Environmental Protection	Spatial
Env./Planning	NJ State/County Open Space	2016	New Jersey Department of Environmental Protection	Spatial
Env./Planning	NJ Preserved Farmland	2017	New Jersey Department of Agriculture	Spatial
Geography	US Census Tracts	2016	US Census Bureau	Spatial
Geography	US Census Block Groups	2016	US Census Bureau	Spatial
Geography	NJ County Boundaries	2016	New Jersey Office of Information Technology	Spatial
Geography	NJ Municipal Boundaries	2016	New Jersey Office of Information Technology	Spatial
Geography	NJ Parcel Blocks	2017	NJAES Office of Research Analytics/NJ OIT	Spatial

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