FORECASTING DEMOGRAPHICS WITH ADMINISTRATIVE DATA
Fairfax County has relied on administrative data to estimate and forecast demographic data for the past 30+ years.

Our previous system sourced data directly from the county’s mainframe computer.

System Issues
- Outdated.
- Other agencies updated their systems.
- Data produced by limited geographies.

After much persistence, we received the support and funding necessary to develop a new system.
BUILD RELATIONSHIPS

• **Buy-in at the Top**
  • Work with department heads.
  • Show importance of a symbiotic relationship.
  • Not “what can we get” but “what our product can do for you.”

• **Establish contacts**
  • Providers and users.
  • Be responsive to needs and able to adapt.

• **Maintain Relationships**
  • Staff promotion/turnover.
SURVEY
• What are the users needs?
• Popular information requests.
• What improvements would they like to see?

LEARN
• Understand the administrative data.
• Translate data correctly.
• Prepare for changes.
  • Logs/Checks

DETAIL
• Business rules
  • Vision/Needs/Wants
• Methodologies
  • How/Formulas
• Tech Specifications
  • Log/Application
INTEGRATED PARCEL LIFECYCLE SYSTEM (IPLS)

• Create demographic data:
  • Population, Housing Unit, and Household estimates and forecasts.
  • GFA, Housing Values, and Residential Development.

• Parcels are the primary building blocks.

• Data is stored in a spatial database.
  • Primary Keys: PIN and Spatial Location

• Parcel centroids:
  • Users wanted flexibility.
  • Centroids (point data) can be summarized by ANY geography.

• Primary tools used:
  • Spatial Oracle
  • ESRI ArcGIS
  • SAS
CURRENT POPULATION
AT A PARCEL LEVEL
## Forecast Population

Showing 1 to 10 of 340,454

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CHALLENGES

• Messy Data
  • Data fields are not always what they appear to be.
  • Use multiple fields to read data.

• Parcel changes
  • Parcels are constantly split and consolidated.
  • Retained parcel history and load expired parcels to maintain connections.

• System Upgrades
  • We are not always notified when system or data formats change.

• Improve processing methods.
  • Preprocessed centroids
Fairfax County Geospatial Data

How to Search and Access Data

Fairfax County, Virginia offers over 170 GIS data layers to view and/or download. (View the full list)

Use the search bar at the top of the page, or the links below, to find data. Datasets can be filtered to contain only the features of the dataset of interest. Data are offered in several formats including: CSV, KML, shapefiles, and JSON. It is suggested that downloaded data be reprojected to the local coordinate system.

By accessing any of the data, maps, or applications provided by Fairfax County, you agree to the terms in our disclaimer.

Any error reports or questions about Fairfax County's geospatial data should be directed to the Fairfax County GIS Branch.

Explore Data Categories

- Boundaries
- Culture & Society
- Demography
- Education
- Election