

High Resolution Population Estimates in Vermont

House Committee on Environment and Energy
April 25th, 2023

John E. Adams
Director, Vermont Center for Geographic Information



WHAT VCGI DOES



BUILD

Foundational
Datasets



LEAD

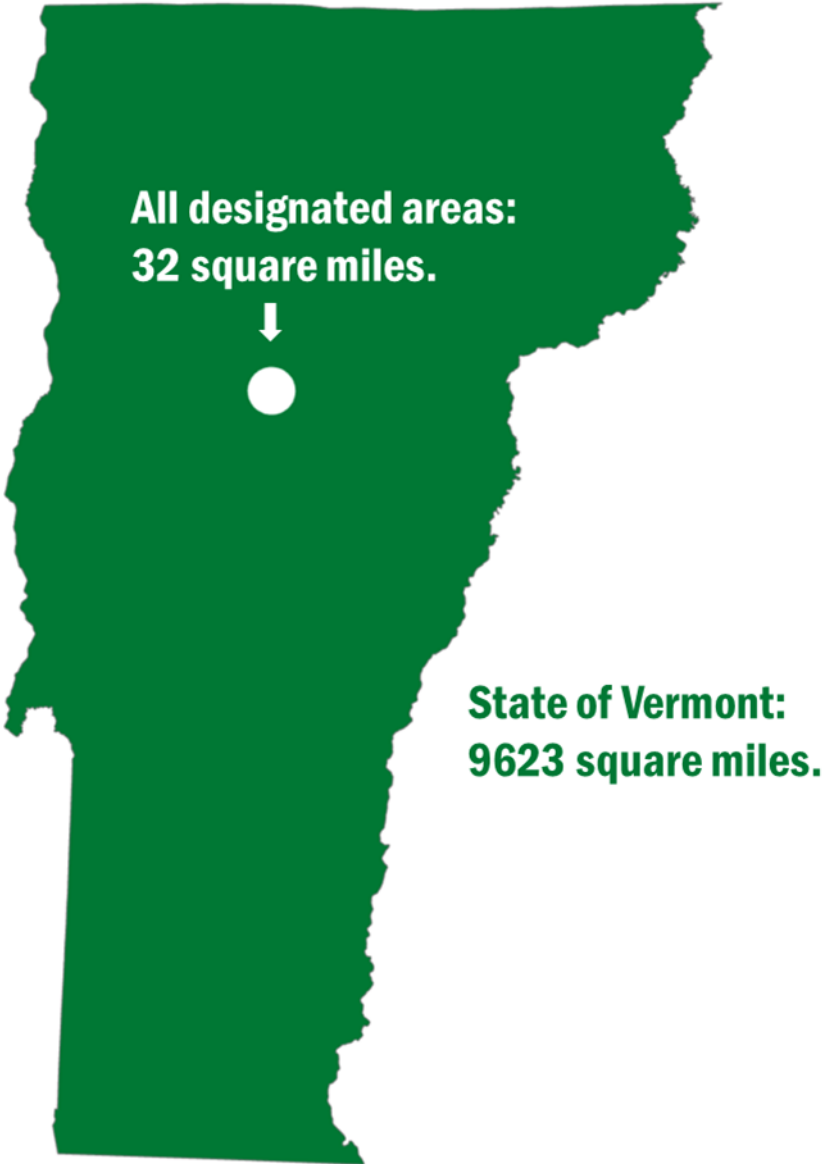
Development and
use of Statewide
Geographic Information
System (GIS) and the
coordination it requires



EMPOWER

Data access,
visualization and use

Relative Size of Land Areas



“Does anyone know the percent of the VT Population living in Designated Centers?”

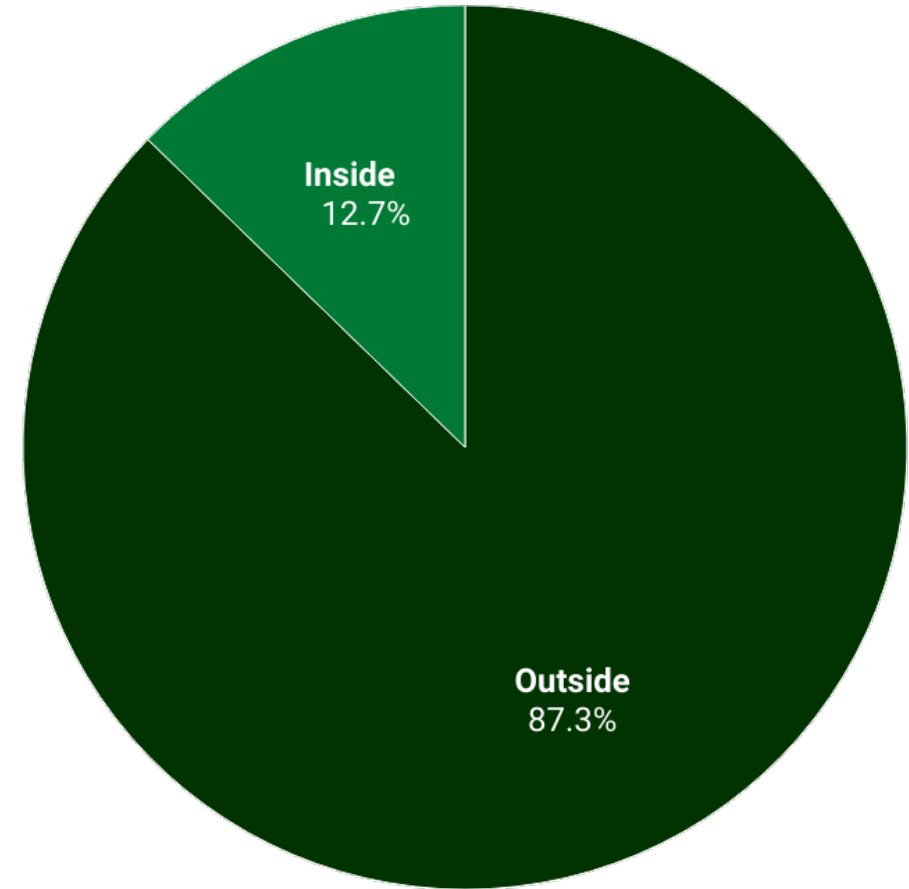


Estimated % of the VT Population living in Designated Centers in 2020

Estimate based on population model developed by VCGI using the following data sources:

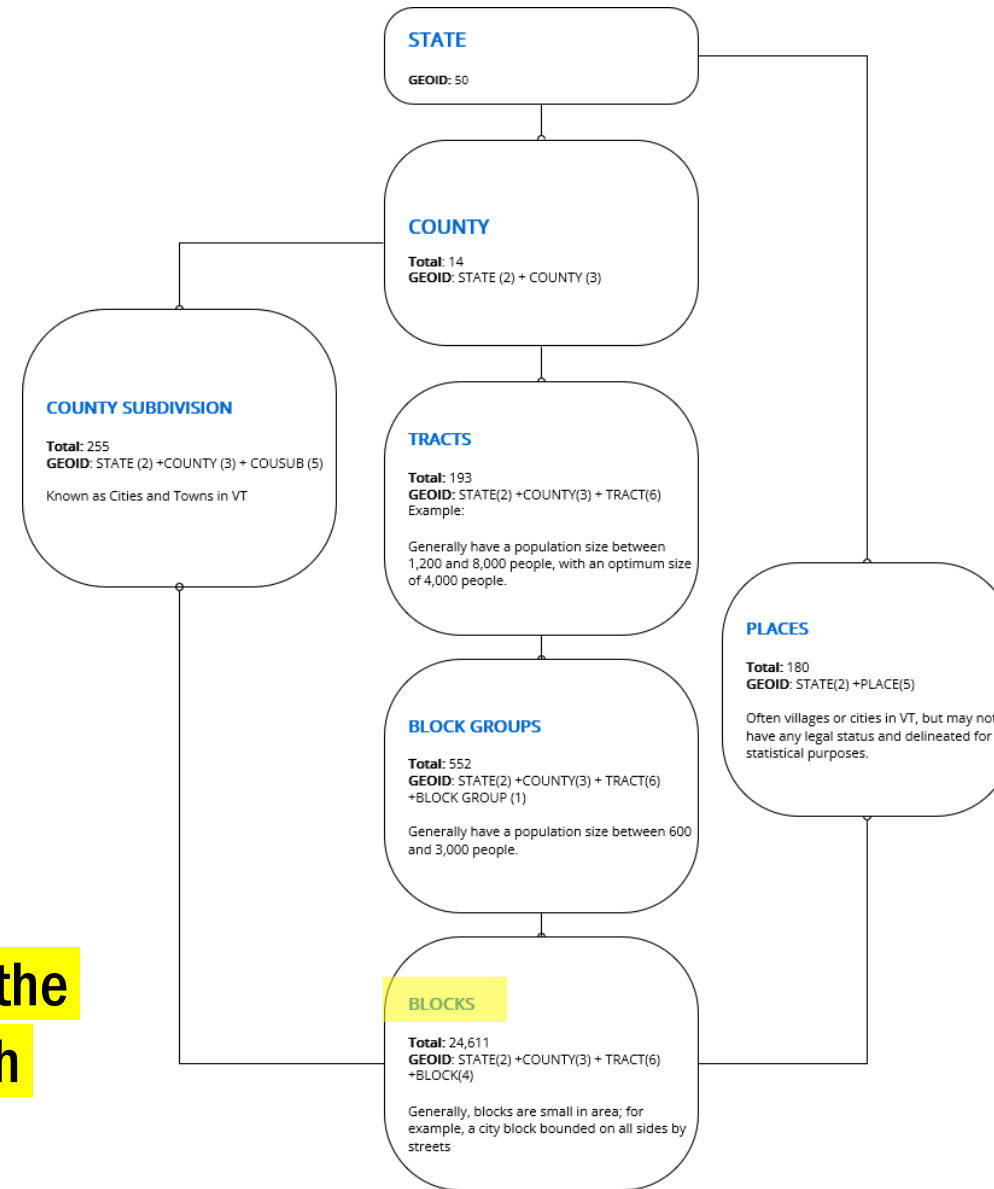
- [2020 Census](#)
- [E911](#)
- [CCRPC Housing Data \(Chittenden County\)](#)
- [Statewide Tax Parcel Data](#)
- Green Mountain Power
- Other local sources as available

2020 Census Population for Vermont: **643,077**

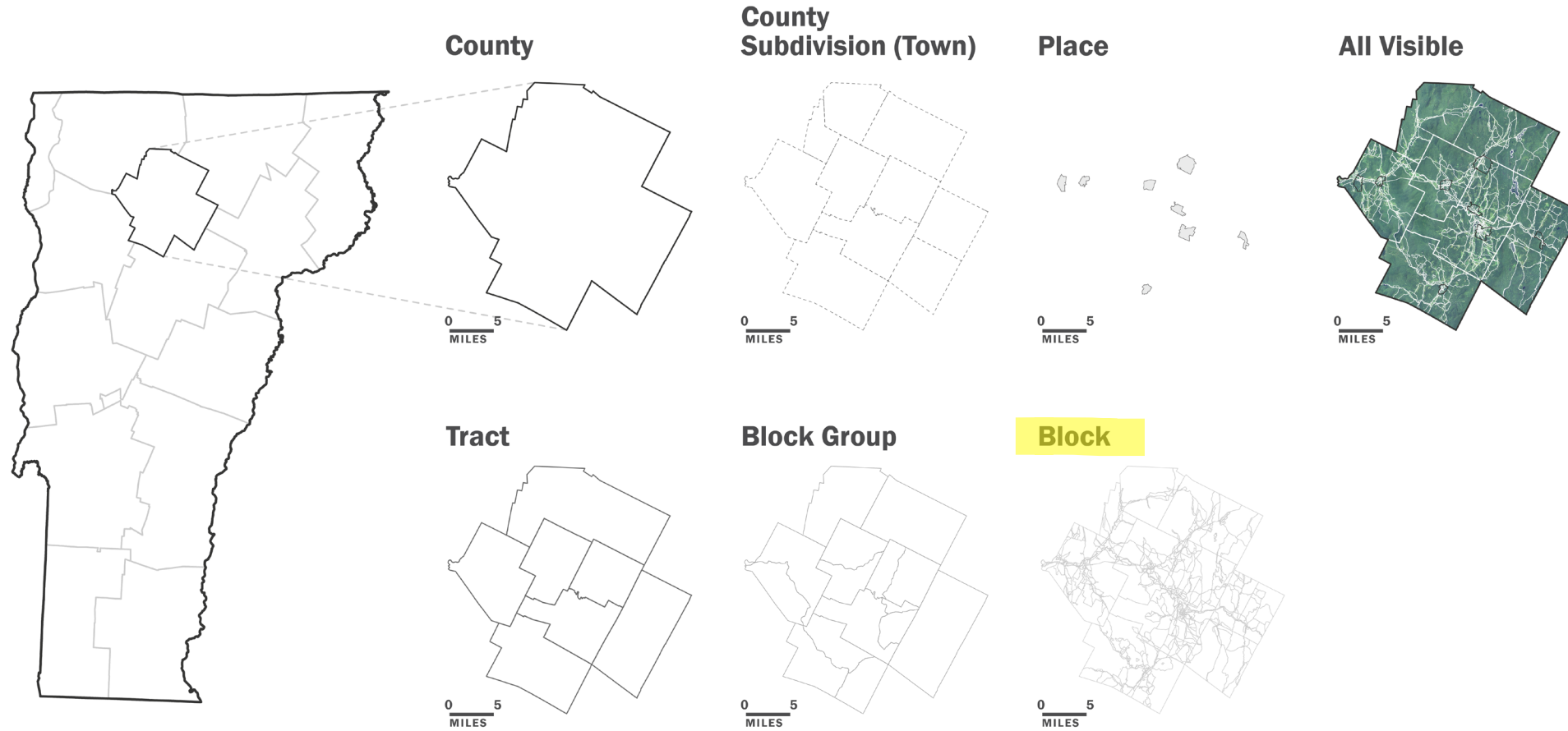


Census Geography

Census data are among the most accurate population estimates available, and **Census blocks are the most granular geography for which population counts are available.**



Census Geography



- GEODATA PORTAL LINKS
- [State](#)
 - [County](#)
 - [County Subdivision \(Town\)](#)
 - [Census Tract](#)
 - [Census Block Group](#)
 - [Blocks](#)



**Census Blocks don't line up well with
'Designated Areas.'** Additionally,
differential privacy methods used in the
2020 Census make the block counts at
this fine scale unreliable.



Building a High Resolution Population Model

- In-house model initially created by David Fox (VCGI) to assist Dept of Health with drive-time analysis and distribution of testing/vaccine locations.
- Primary components:
 - Residential E911 sites with number of units for each structure.
 - Excluded seasonal units in the grand list, camps, and adjustments made in some areas to account for second home ownership.
 - Account for institutional housing.
 - Town base units.
 - A population estimate (such as the 2020 Census.)

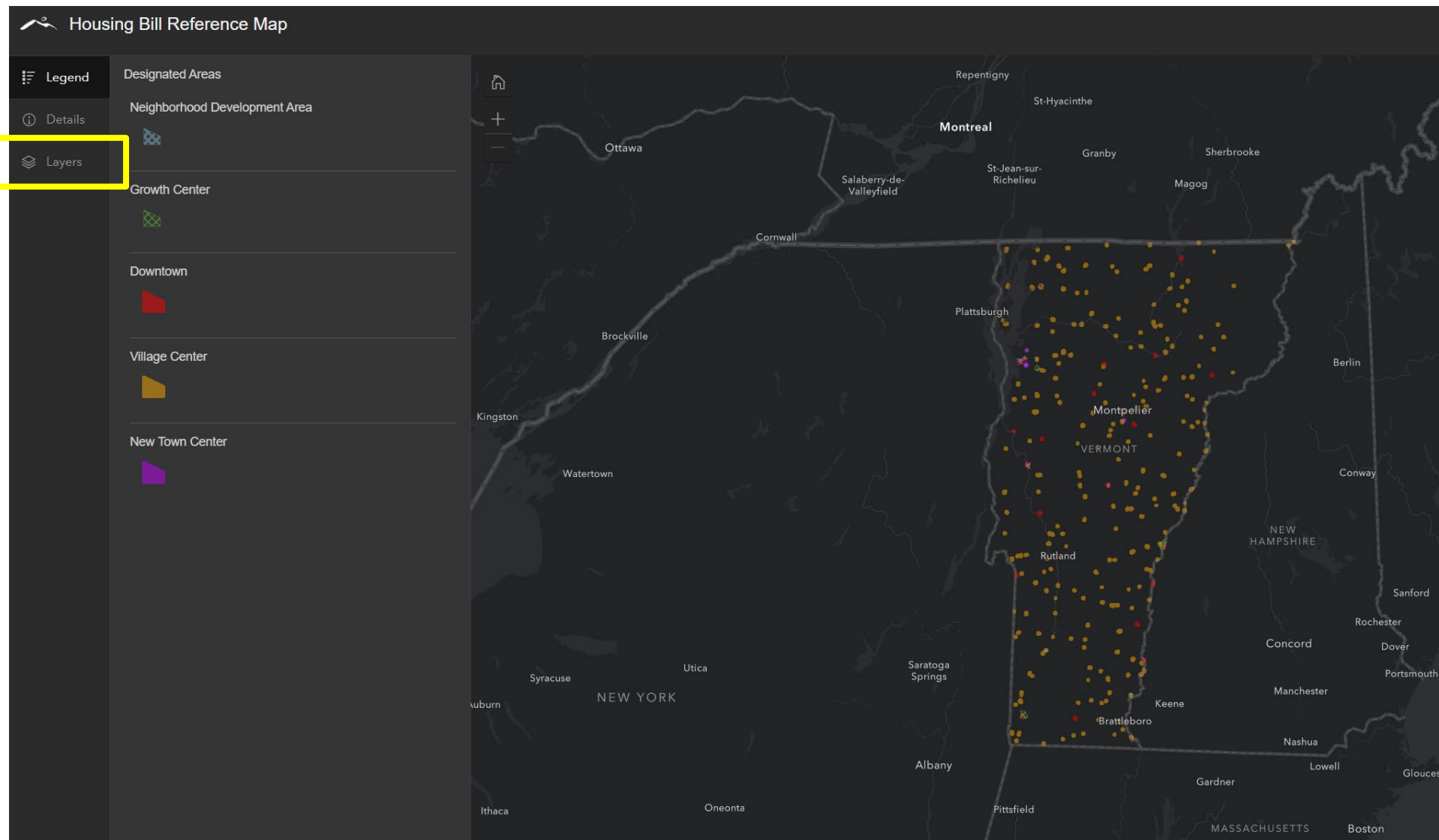


LandScan High Resolution Model

- Developed by [Oak Ridge National Laboratory](#), now publically available.
- Uses Census data, data published by the state (parcels, transportation infrastructure, imagery, lidar, automated building footprint extractions) and other local sources.
- 2021 estimate of population in VT Designated Centers: 12.4%

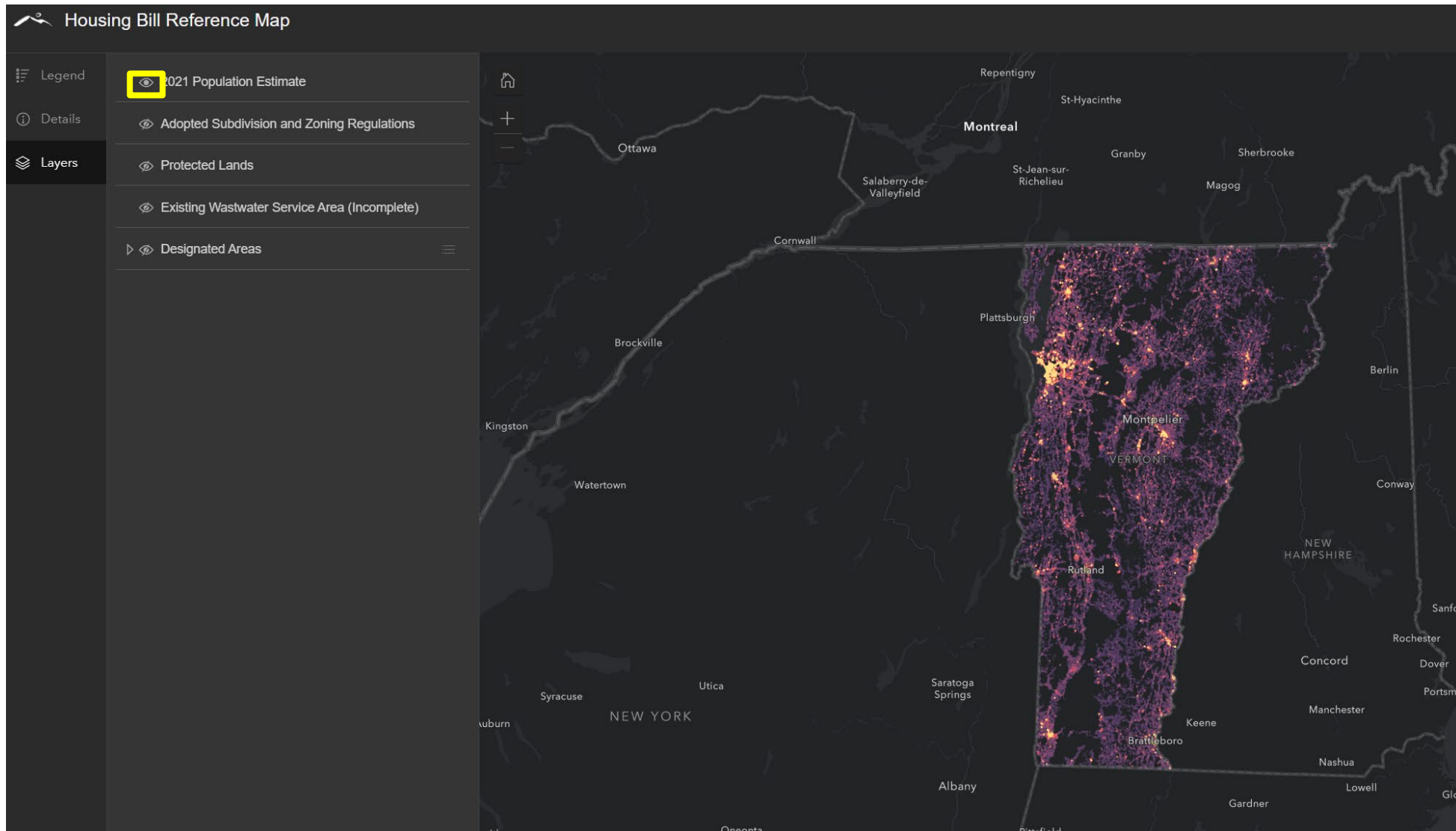


Housing Bill Reference map has LandScan population estimates as an available layer, they need to be toggled on the layer tab.



<https://s100.mapvt.com/>

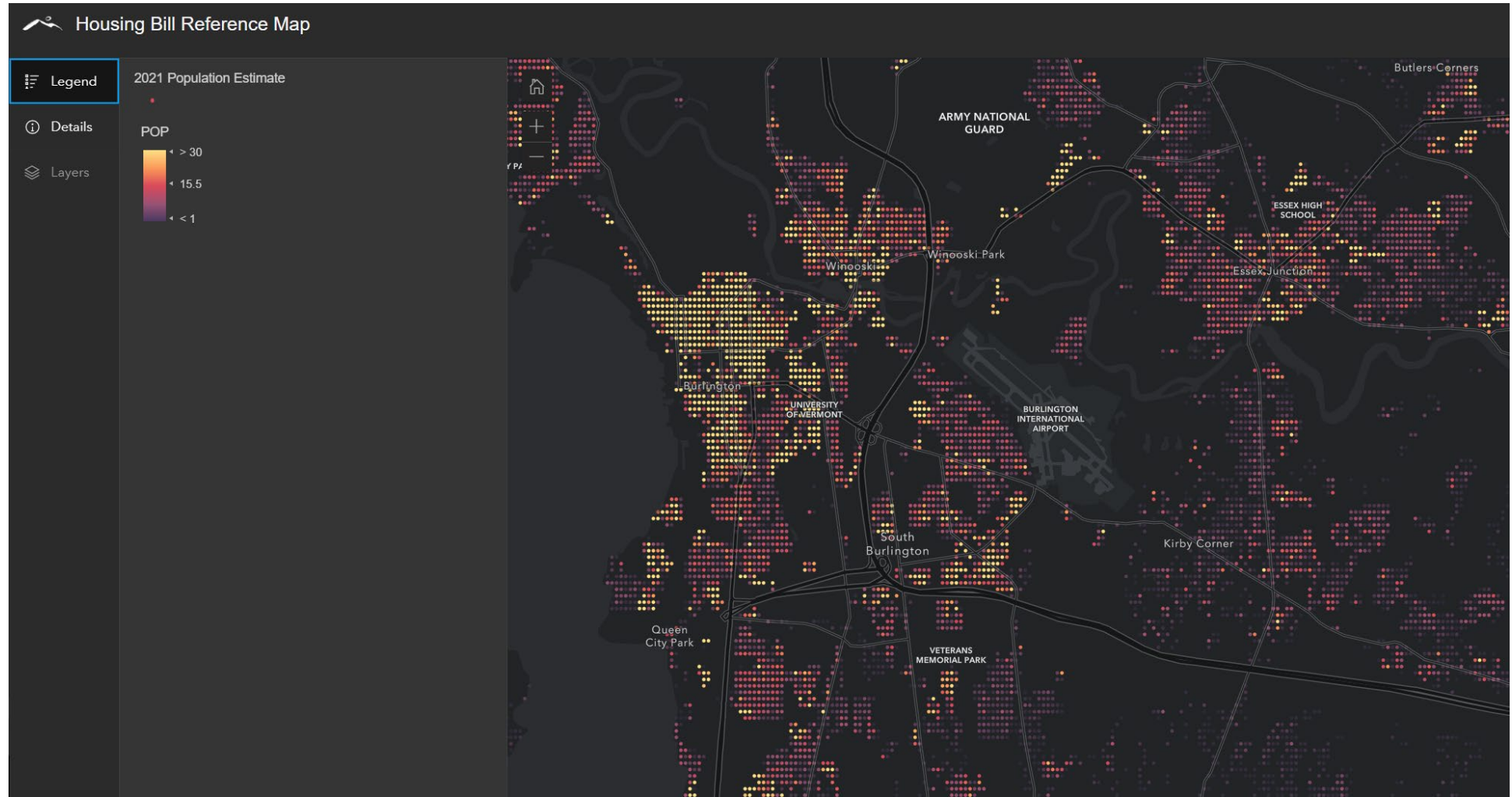
Toggle the 'eye' icon to show the map layer.



<https://s100.mapvt.com/>



Each point represents a population estimate for an area roughly 1.5 acres in size.



<https://s100.mapvt.com/>

Learn More about GIS in Vermont: [2022 Year in Review](#)

