



Geographic Information Systems

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ITAC

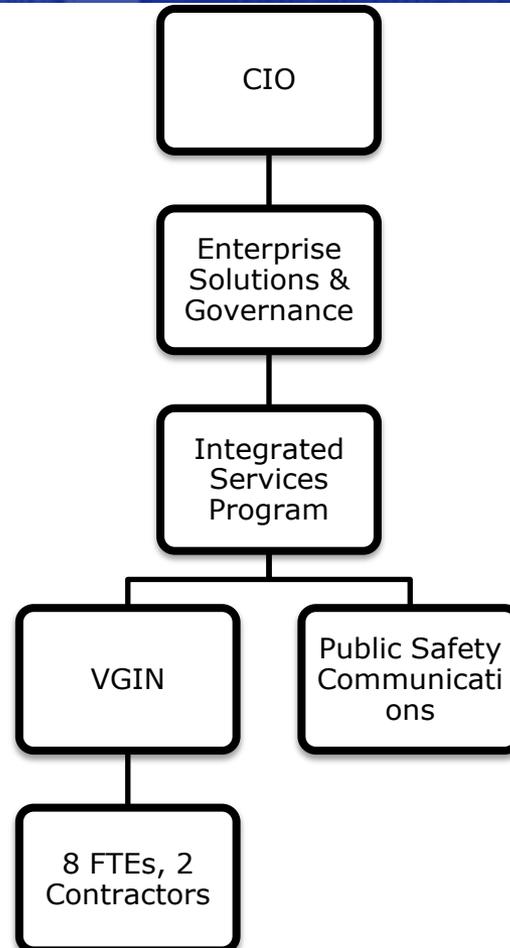
May 7, 2012



Information Topics

- Enterprise Offerings
- Broadband Mapping

Organizational Context





VGIN and Code of Virginia

- VGIN Responsibilities
 - § 2.2-2026 and § 2.2-2027
- On our website...
 - Develop, recommend **policies and guidelines**
 - Compile a **data catalog**
 - **Setting priorities** for the development of state digital geographic data and base
 - Provide **services**, geographic data **products**, and access to the repository at rates established by the division



VGIN and Code of Virginia

- VGIN Advisory Board - § 2.2-2423
 - *"To facilitate the cost-effective development and use of spatial data, GIS, and related technologies in organizations throughout the Commonwealth and to advise the Division of the Virginia Geographic Information Network..."*
- Consists of gubernatorial and legislative appointees
 - Senator John Watkins, Chair



VGIN Customers

- State agencies *
- Local governments *
- Private sector
- Utilities
- Non-profits
- Citizens

* *Primary customers*



Strategic Plan & Top Programs

- 2010 created Five-Year GIS Strategic Plan
 - Endorsed by VGIN Advisory Board
- Top programs/activities
 - Virginia Base Mapping Program (VBMP)
Orthophotography (statewide contract)
 - VBMP Road Centerline (RCL)
 - GIS Clearinghouse
 - Outreach programs
 - Broadband mapping (grant funded)



VBMP Orthophotography Contract

- Four-year contract for mapping services
 - Through RFP process, contract with vendor to:
 - Procure and pay for base imagery product
 - Enable locality buy ups
 - We cover costs, get reimbursed by localities
- 2012 – release RFP for next four-year cycle
 - 2013 and 2015 spring flyover acquisition
- VGIN imagery Web services



Orthophotography Example





Road Centerline Program

- Aggregate locality road centerlines into regional and statewide datasets
 - Includes address data
 - Quarterly update cycle
 - Provide local, regional and statewide products
 - Data feeds into VGIN geocoding Web service



GIS Clearinghouse

- Planned for 2012
 - Online search and discover tool for GIS data
 - Will require education, participation from local/state data sources
 - Will leverage variety of hosted data sources



GIS Clearinghouse

Resource Center Show: Web Content Only My Organization Dan Widner Notifications Help Sign Out

HOME GALLERY MAP GROUPS MY CONTENT Find maps, applications and more... Q

VGIN Virginia GIS Clearinghouse

Virginia Geographic Information Network

Featured Content

- Virginia Road Centerlines March 2012
- VGIN Composite Geocoder (WGS84 Web Mercator)
- Virginia VBMP 2011 Infrared Imagery Service
- Virginia Most Recent VBMP Imagery Service from



Outreach Programs

- Collaboration with:
 - Google
 - MapQuest
 - ESRI
 - Navteq
 - TomTom

The value of GIS data is demonstrated by the extent of its usability



Broadband Mapping

- History
 - Virginia is the only state in the nation to produce a broadband availability map at no cost to our citizens pre-ARRA
- Five-year federal grant through CIT and SoTech (2010 – 2015)
 - VITA is a sub to CIT (along with VT)
- Primary purpose is to map broadband availability
- *mapping.vita.virginia.gov/broadband*



Broadband Availability

Virginia.gov Online Services | Commonwealth Sites | Help | Governor Search Virginia.gov GO

OFFICE OF TELEWORK PROMOTION & BROADBAND ASSISTANCE

Home Locality: Select a locality GO Find an address Identify LayerList Legend Print Help Report No Broadband

LayerList

- Broadband Community Information
- Layer Visibility
 - Broadband Wireline
 - Broadband Mobile Wireless Personal
 - Broadband Mobile Wireless Advanced
 - Broadband Fixed Wireless

Map scale: 100 mi, 200 km



Broadband Mapping Going Forward

- Now we have a critical mass of data
 - Identifying practical uses and leveraging the information source
 - Examples include:

JLARC Study

Tobacco Commission Broadband Coverage

A Production of Virginia's Center for Innovative Technology and Participating Service Providers

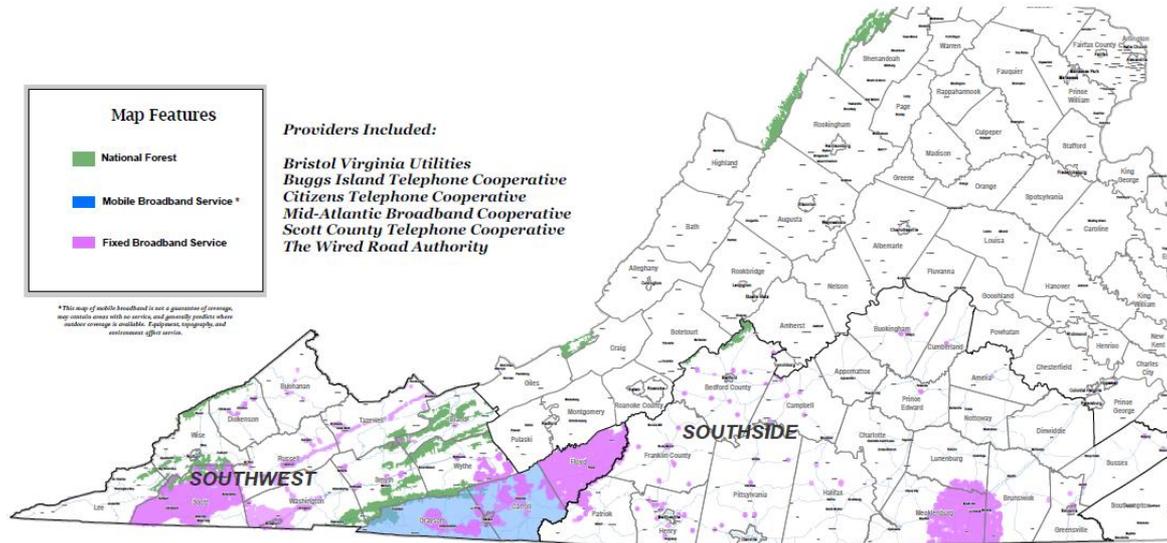
Map Features

- National Forest
- Mobile Broadband Service *
- Fixed Broadband Service

Providers Included:

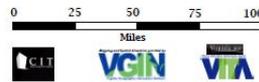
- Bristol Virginia Utilities*
- Buggs Island Telephone Cooperative*
- Citizens Telephone Cooperative*
- Mid-Atlantic Broadband Cooperative*
- Scott County Telephone Cooperative*
- The Wired Road Authority*

*This map of mobile broadband is not a guarantee of coverage, map omits areas with no service, and generally profiles where outdoor coverage is available. Equipment, topography, and network congestion affect service.



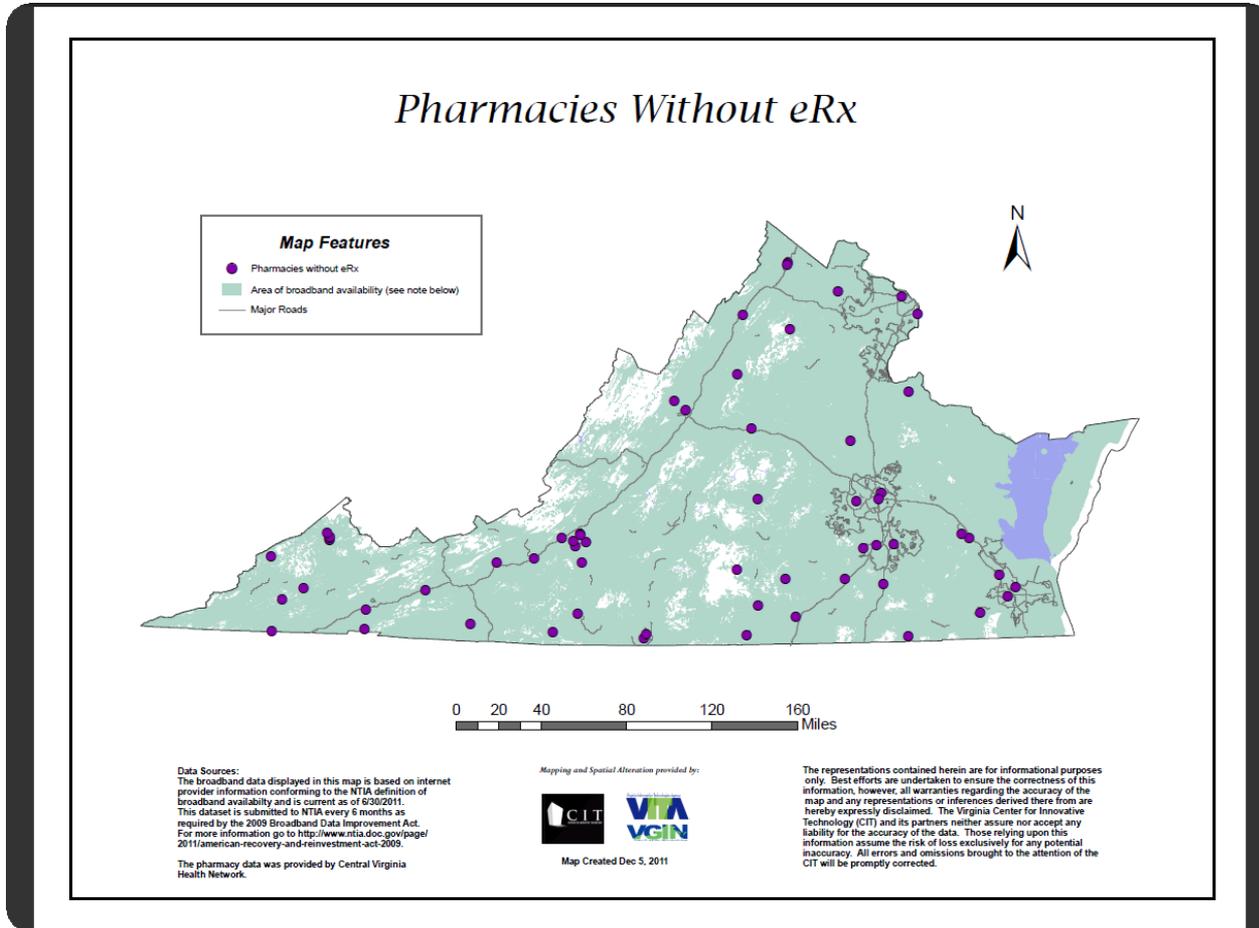
This map is a compilation of service areas provided by participating broadband providers and it includes wireless, fixed wireless, and mobile wireless providers. Not all providers in the Commonwealth are participating. This map does not depict satellite broadband service.

Map Updated: April 11, 2011

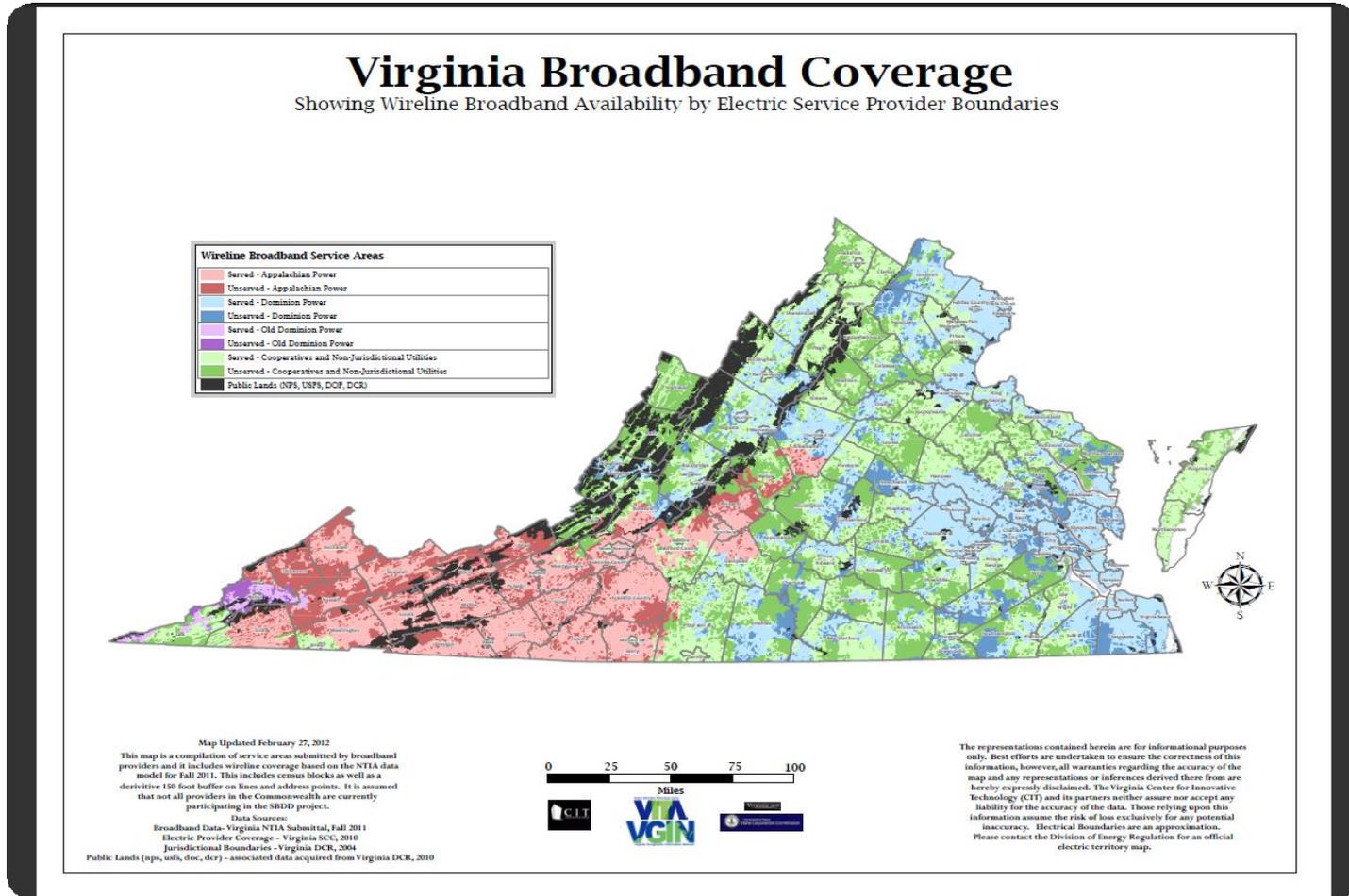


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eR/x and Broadband

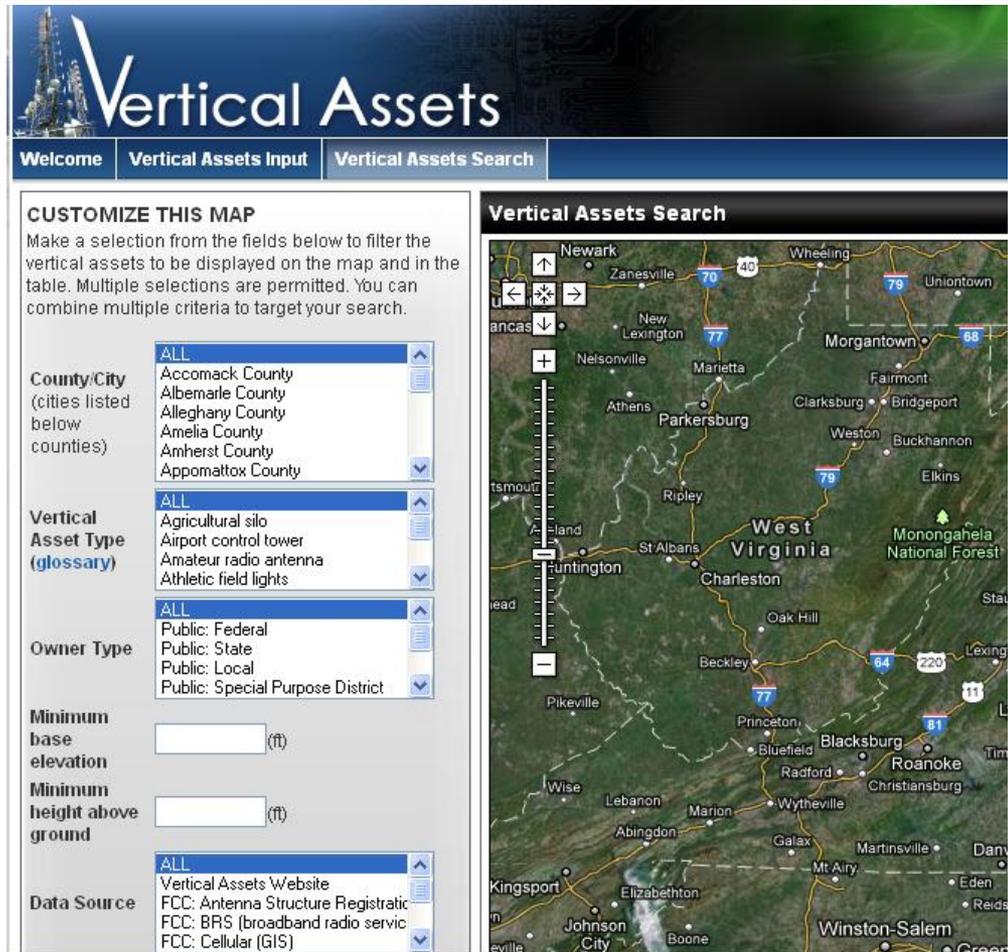


Electric Coops & Broadband - SCC



Vertical Assets Mapping Tool – Virginia Tech

- Developing vertical assets inventory tools to map existing power stations and non-traditional assets
- Identify structures that have the potential to serve as wireless transmission sites
- Assumption is that readily available vertical asset data can shorten the decision timeframe and lower initial costs of investment and system development



Vertical Assets

Welcome | Vertical Assets Input | Vertical Assets Search

CUSTOMIZE THIS MAP
Make a selection from the fields below to filter the vertical assets to be displayed on the map and in the table. Multiple selections are permitted. You can combine multiple criteria to target your search.

County/City (cities listed below counties)
 ALL
 Accomack County
 Albemarle County
 Alleghany County
 Amelia County
 Amherst County
 Appomattox County

Vertical Asset Type (glossary)
 ALL
 Agricultural silo
 Airport control tower
 Amateur radio antenna
 Athletic field lights

Owner Type
 ALL
 Public: Federal
 Public: State
 Public: Local
 Public: Special Purpose District

Minimum base elevation [] (ft)

Minimum height above ground [] (ft)

Data Source
 ALL
 Vertical Assets Website
 FCC: Antenna Structure Registratic
 FCC: BRS (broadband radio servic
 FCC: Cellular (GIS)

Vertical Assets Search

Map showing West Virginia with various locations and roads labeled, including Newark, Zanesville, Marietta, Morgantown, Fairmont, Clarksburg, Bridgeport, Parkersburg, Ripley, Charleston, Beckley, Princeton, Blacksburg, Roanoke, Christiansburg, Martinsville, Danville, Johnson City, Boone, and Winston-Salem.

BARC Electric Coop



- Broadband penetration analysis and smart grid potential assessment
 - VGIN is geocoding customer addresses
 - VT's speed test tools also are being used



Broadband and Health IT

- Health IT across the state
 - Supported SoTech by mapping results from Broadaxe's Health IT survey (EHR, Telemedicine, HIE)
 - Cited by NTIA Administrator Strickling as a model for other states to follow

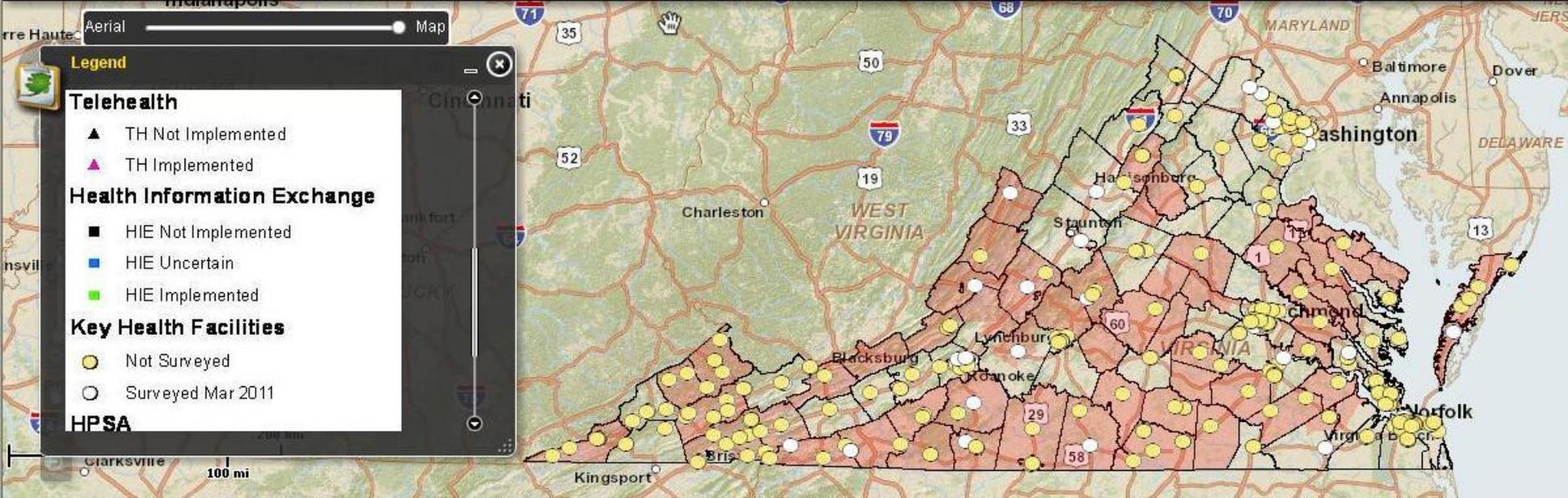
mapping.vita.virginia.gov/healthbroadband



Broadband & Health IT



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Geographic Information Systems

Questions

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