

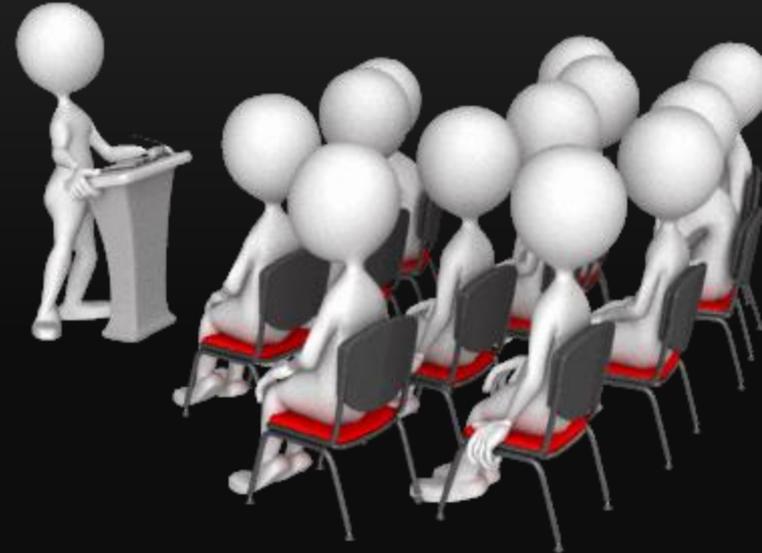


Economic Impact of Broadband in New York

David Salway, Director
NYS Broadband Program Office

NYS Broadband Program Office

- Single Point of Contact for NYS Broadband
- Supports Broadband Initiatives for 10 REDCS
- Recommends Broadband Programs and Policies
- Administers Broadband Grant Programs
- Partners with Local, State and Federal Agencies
- Conducts Outreach – Public, Provider, and Other Stakeholder





NYS Broadband Program Office established to increase access and affordable broadband services for all New Yorkers.



Expanded partnerships with 80+ broadband providers, adoption partners and state and federal agencies including NYS DOT, NYS PSC, NYS OGS, NYS Thruway Authority, the FCC, and the USDA.



NYS launches a state-wide broadband mapping initiative to increase broadband penetration throughout New York's communities.



NYS receives \$8.9M grant from ARRA funding to expand broadband mapping and planning, with \$1.2M to expand the Broadband Program Office.



First New York State broadband adoption rate study released.



NYS Broadband Program Office transitions to ESD with a mission to increase economic and social opportunities through universal broadband deployment.



Statewide minimum speed thresholds to measure broadband availability in New York State are raised to 6 Mbps download/ 1.5 Mbps upload.



NYS hosts 1st state-wide broadband summit. More than 200 national, state and local broadband leaders attend. Kenneth Adams and Lt. Governor Robert Duffy deliver remarks. 2014 NYS Broadband Summit June 5, 2014.



NYS hosts Provider and Partner Summit which brought together nearly 100 participants to discuss increasing broadband adoption in NYS and barriers to broadband infrastructure deployment.



\$68M in funding awarded to date under the Cuomo Administration to expand broadband access, including \$25M in Connect NY funding, Round I, II and III REDC Funding, and NYSTAR Innovation Matching Grants.

New York State Broadband

by the numbers



Broadband Access & Speed

1 Million People Lack Access

North Country has highest percentage of unserved residents - 17% or 74,893 people

Greene and Columbia Counties represent highest # of unserved citizens per county (80% Greene and 84% Columbia)

100 Mbps or Higher Download — 47 counties (10M people) have no access to these download speeds

New York State Broadband

by the numbers

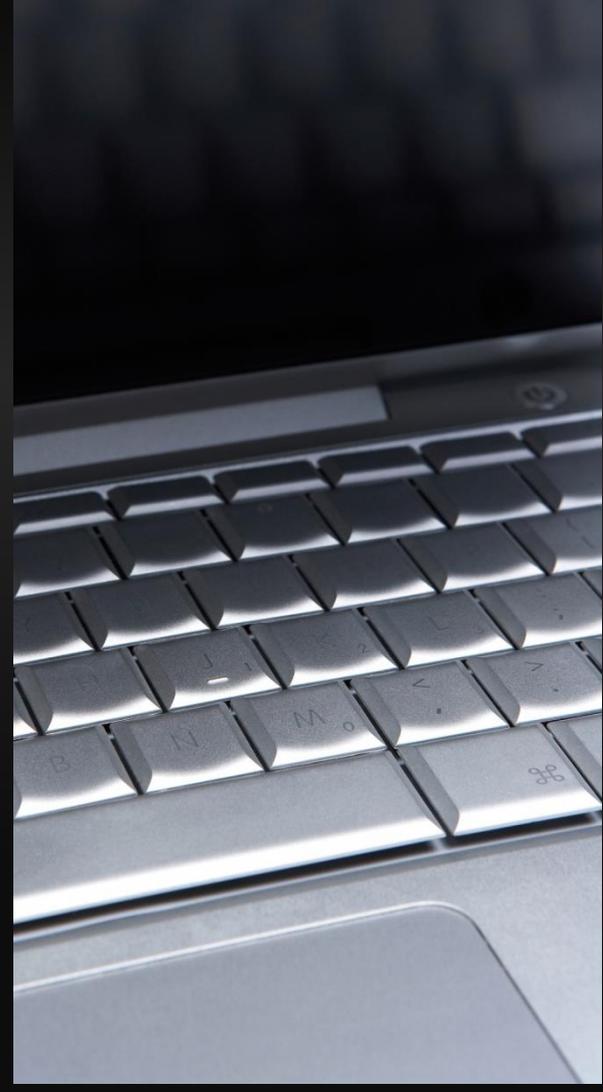


6.4M New Yorkers Do Not Use Broadband (30%)



Closing the Digital Divide Requires a Solution to...

- 1. Connect Every Community**
- 2. Provide Ultra-Fast Networks for Economic Development**
- 3. Make Broadband Affordable and Provide Digital Literacy Training**



Newly Created New York State Task Forces

Broadband Availability Task Force



Examining challenges to broadband deployment & identify opportunities to address them

Broadband Adoption Task Force



Examine disparities in broadband adoption & identify opportunities to address them

Benefits of Broadband

1. **Economic**, including increased innovation and productivity in business
2. **Social**, including better access to services and improved healthcare
3. **Environmental**, including more efficient energy consumption

Economic Impact

(Broadband Adoption Increase of 7%)

- The Annual Economic Impact Associated with Accelerating Broadband for **New York State**
 - Total Annual Economic Impact - \$9.9 Billion
 - Jobs Created or Saved Annually – 147,884
 - Direct Annual Income Growth from the Increase in Broadband – \$6.8 Billion
 - Average Annual Healthcare Costs Saved – \$42.8M



Environmental Impact

The Environmental Impact Associated with Accelerating Broadband for **New York State**

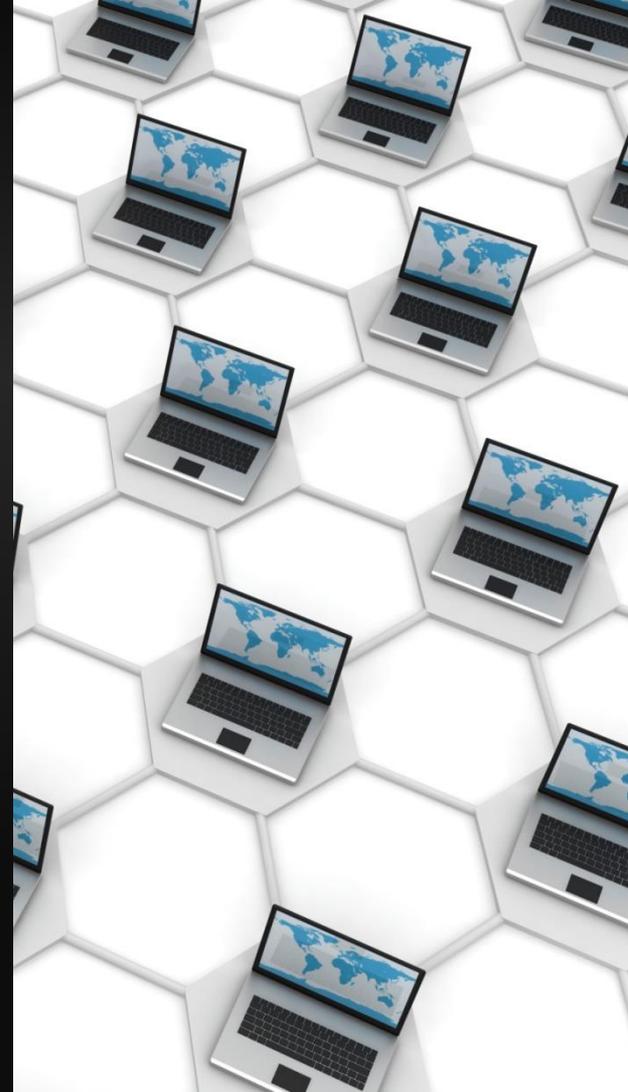
- Average Annual Mileage Costs Saved – \$420.6M
- Average Annual Hours Saved – 242.3M
- Annual Value of Hours Saved – \$2.7 Billion
- Average Annual lbs. of CO2 Emissions Cut - 213M
- Value of Carbon Offsets - \$1.15M

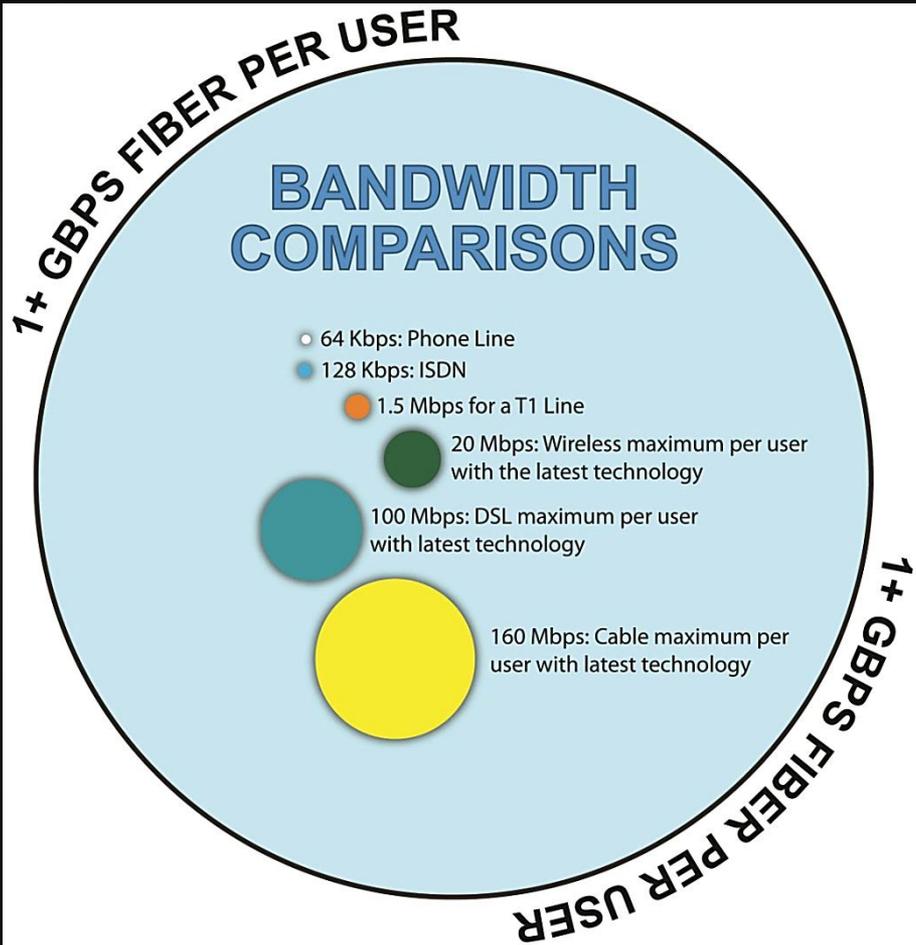
Source: Connected Nation, Inc.: The Economic Impact of Stimulating Broadband Nationally

Social Impact

- **\$662 million in savings in U.S. health care costs**
- **3.8 billion hours of time saved by U.S. consumers**

Source: Connected Nation, Inc.: The Economic Impact of Stimulating Broadband Nationally





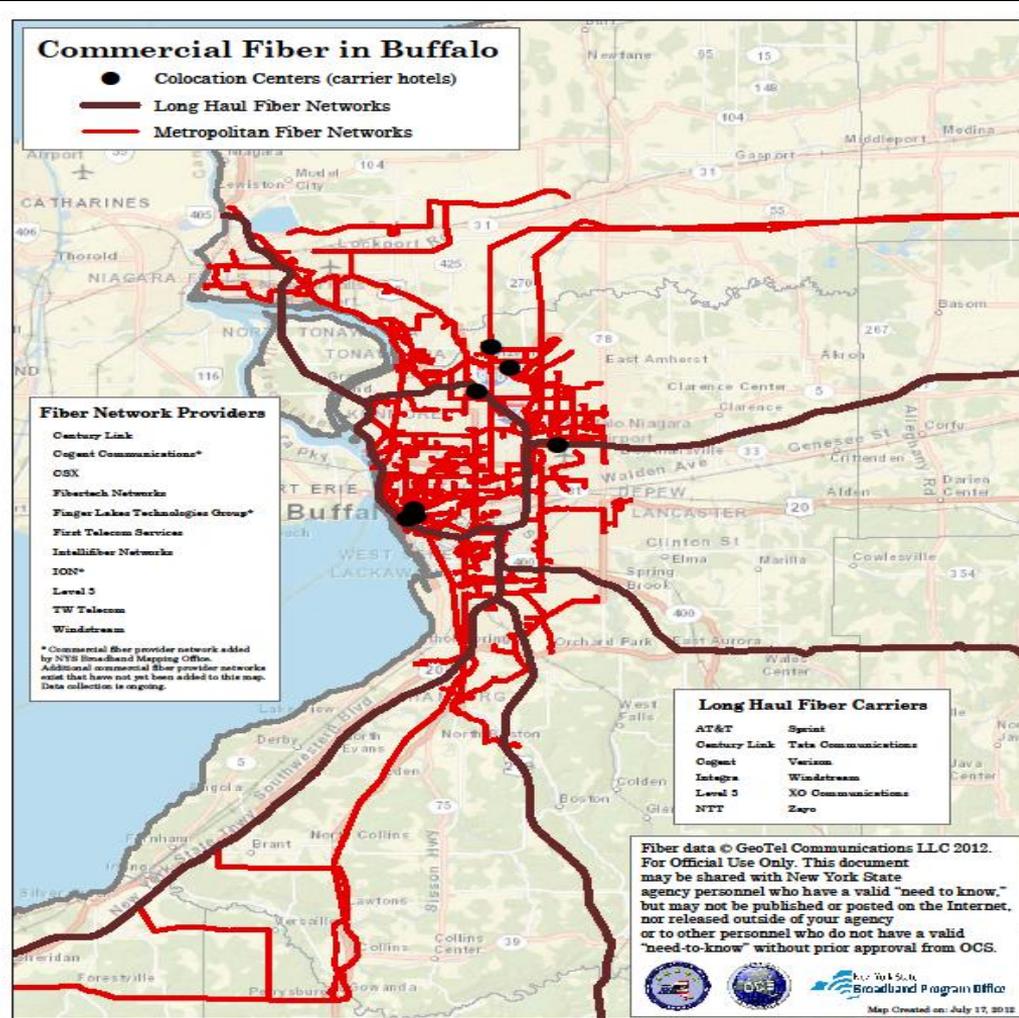
Download Speed	Application
768K-1.5 Mbps	Email, Web Browsing, Voice Over IP (Vonage)
1.5-3 Mbps	Streaming Music, Standard Definition Video, Remote Surveillance, Telecommuting
3-6 Mbps	File Sharing, Internet Protocol Television (IPTV)
6-10 Mbps	Online Gaming, Streaming Video
10-25 Mbps	Telemedicine, Remote Education, IPTV High Definition
25-50 Mbps	HD Video Surveillance
50-100 Mbps	Video Conferencing, Remote Super Computing
>100 Mbps	Real-Time Data Collection, Real-Time Medical Image Consultation, Research

Minimum Broadband Speeds Needed

	2-4 Mbps	10-12 Mbps	25-50 Mbps	100-120 Mbps	500 Mbps	1 Gigabit
Lure Businesses	3.6%	6.8%	13.6%	32.1%	16.3%	27.6%
Local Companies Grow	4.1%	11.8%	23.5%	32.1%	13.1%	15.4%
Revive Business Districts	7.4%	14.4%	21.4%	29.3%	11.2%	16.3%
Revive Communities	8.4%	16.3%	24.2%	25.6%	10.2%	15.3%
Boost Worker Training	6.4%	16.0%	26.5%	26.5%	12.3%	12.3%
Support Home Business	8.3%	15.6%	28.4%	27.1%	11.5%	9.2%
Improve Individuals	4.2%	15.3%	25.0%	31.8%	15.3%	8.5%

Using Broadband Data to Attract and Retain High Tech Institutions

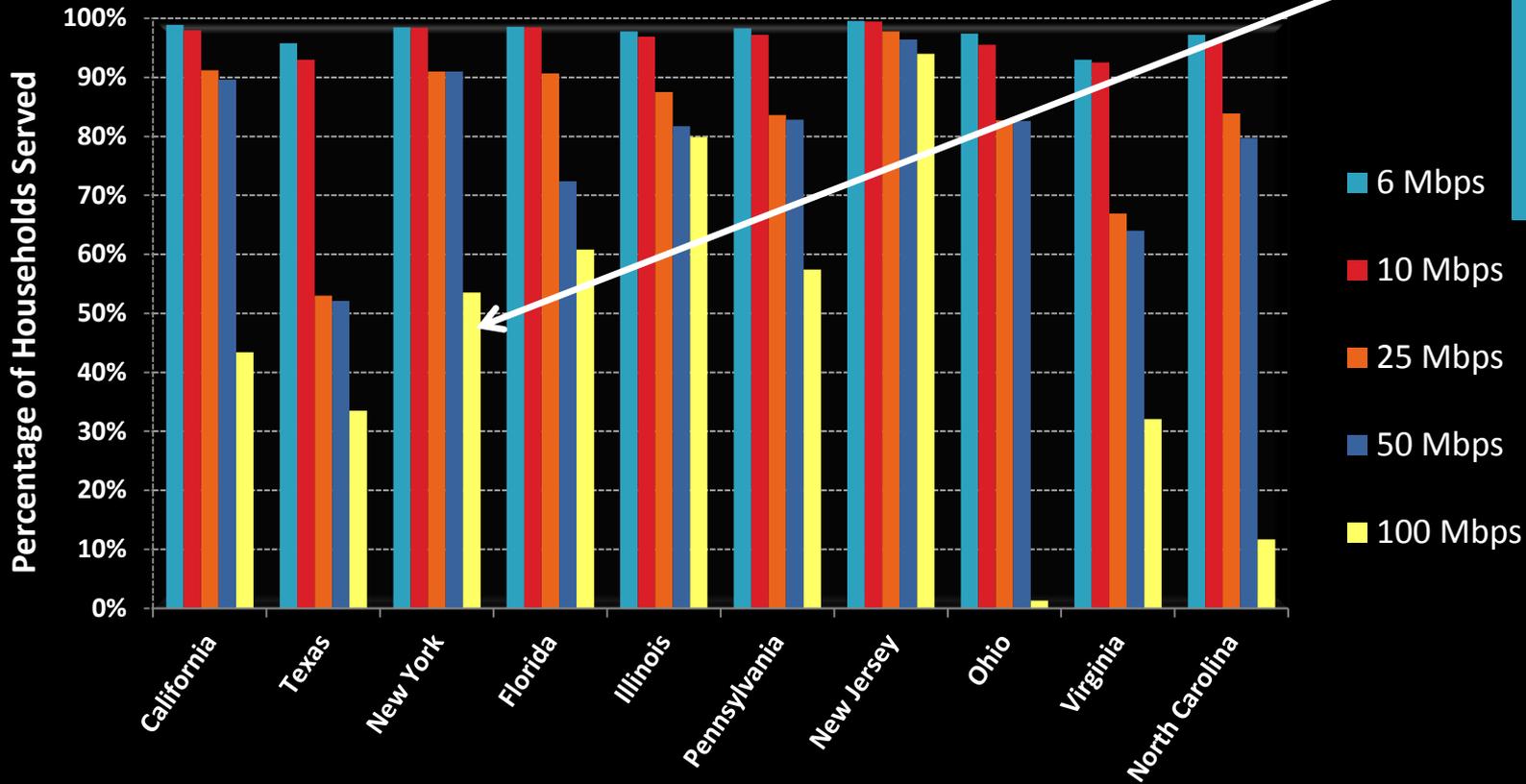
- Data Centers
- Distribution Centers
- R&D
- Educational Institutions
- Healthcare Facilities
- Public Safety Networks



National Speed Comparisons

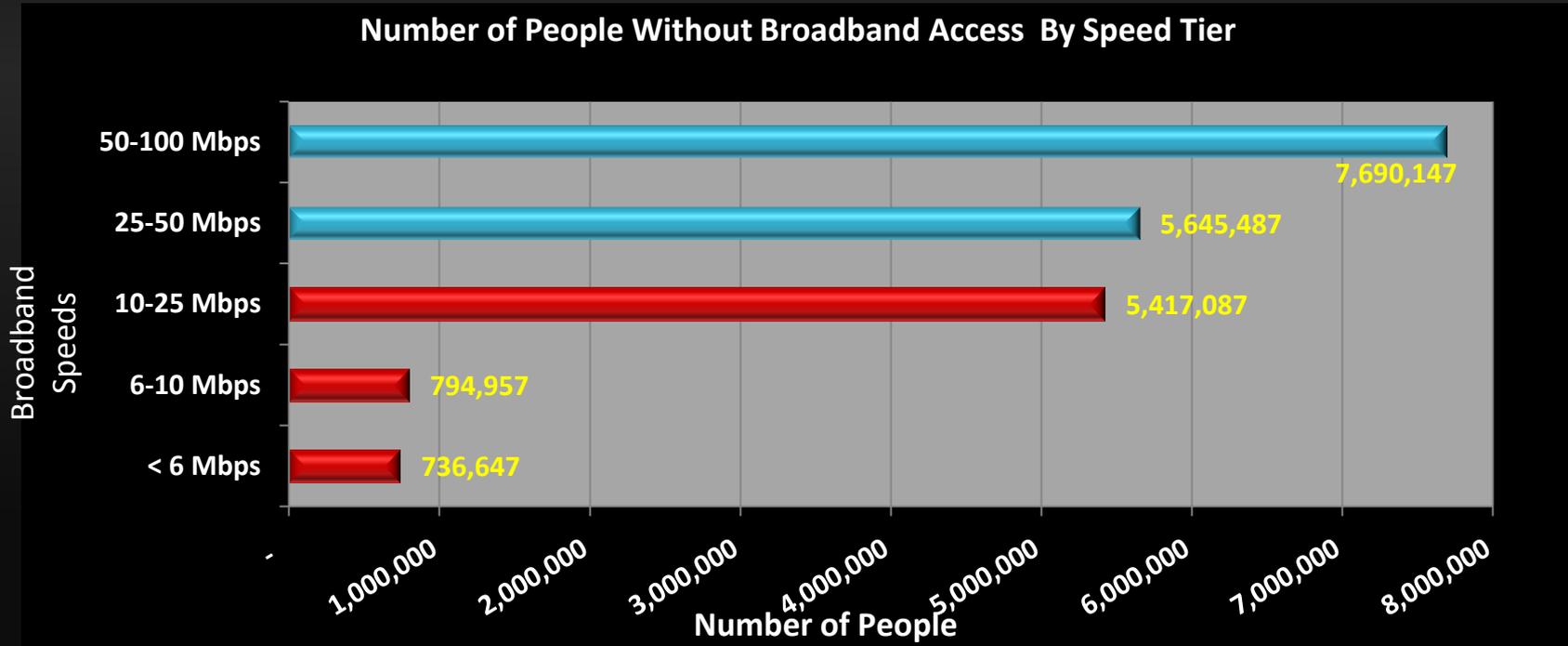
Top 10 States with Highest GDP

~54% of New Yorkers have access to speeds of 100 Mbps or Greater



8.4M New Yorkers (3.7M Households) Living Upstate

- Only 679,940 New Yorkers Can Access Speeds >100 Mbps.
- 736,647 New Yorkers Have No Access to Broadband



Broadband for Business

Businesses Using Broadband Report Median Annual Revenues ~\$300,000 Higher than Business that Don't

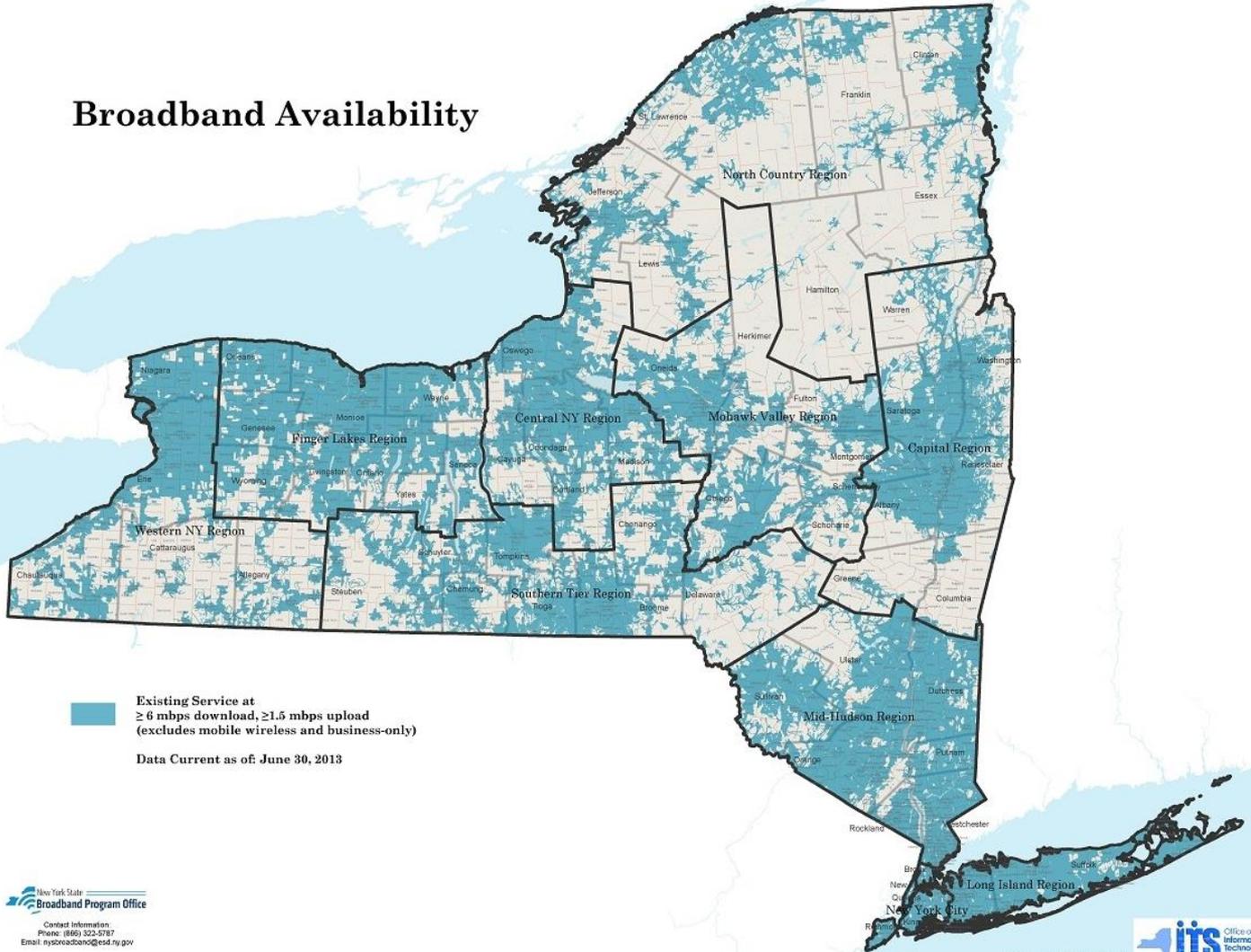
Nearly 1/3 or 2.4M Businesses Earn Revenues from Online Sales Accounting for ~ \$411B Annually

Over 2.5M U.S. Businesses Use the Internet To Advertise Job Openings Or Accept Job Applications and ~ 139,000 Businesses Only Accept Online Applications

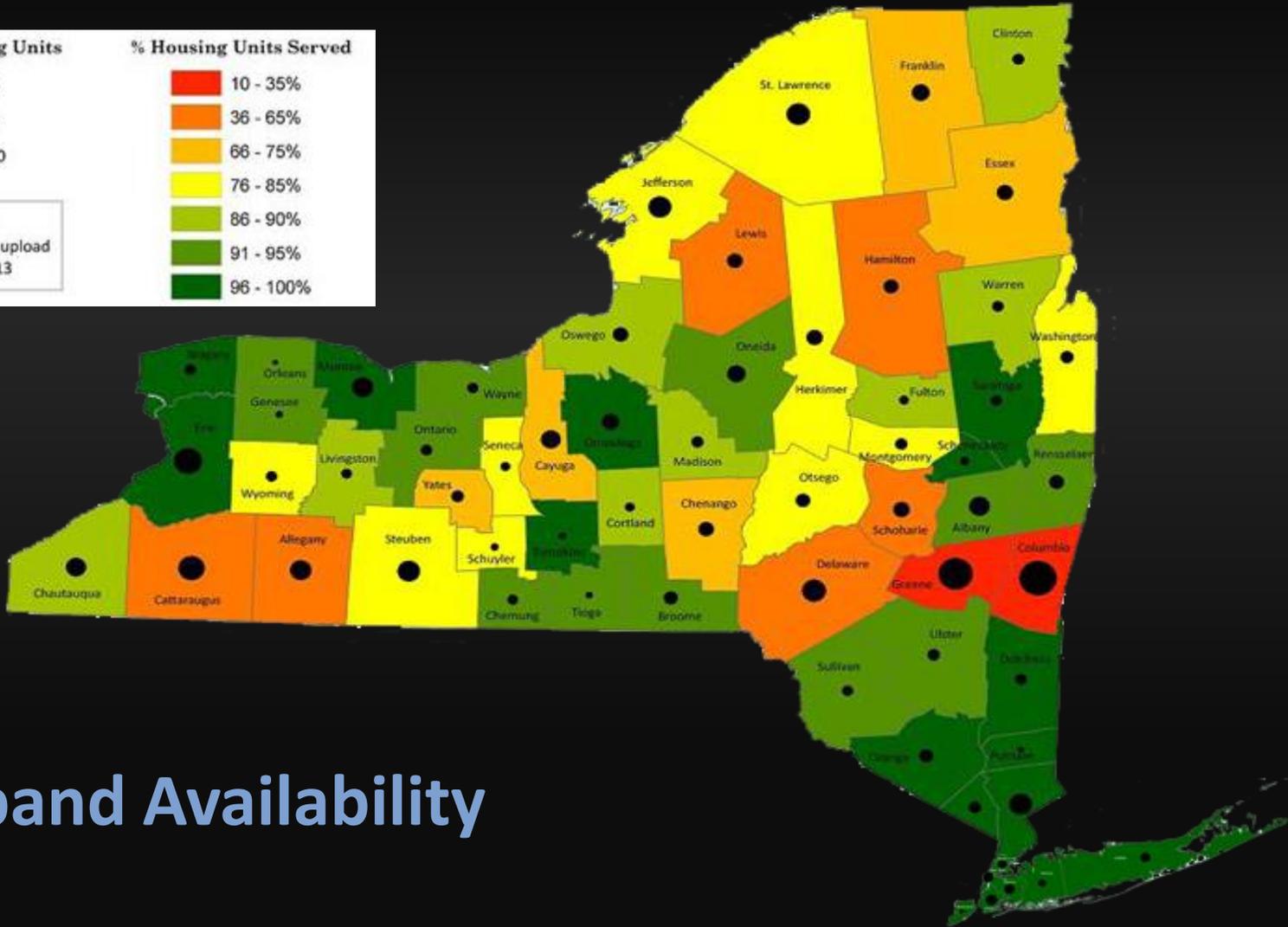
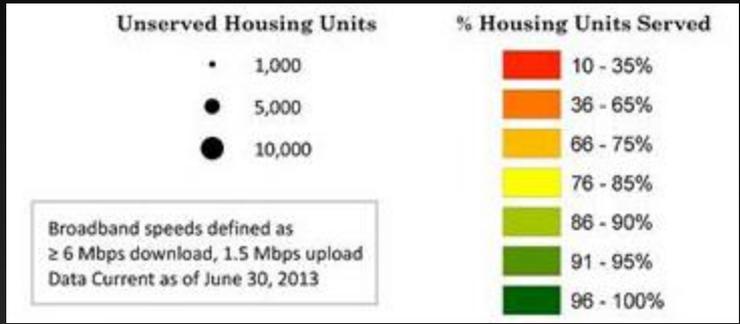
~2.4M U.S. Businesses Allow Employees to Telework

Nearly Two Out of Three Home-based Businesses Use the Internet to Stay in Touch with Customers and 59% Advertise or Sell Goods Online.

Broadband Availability

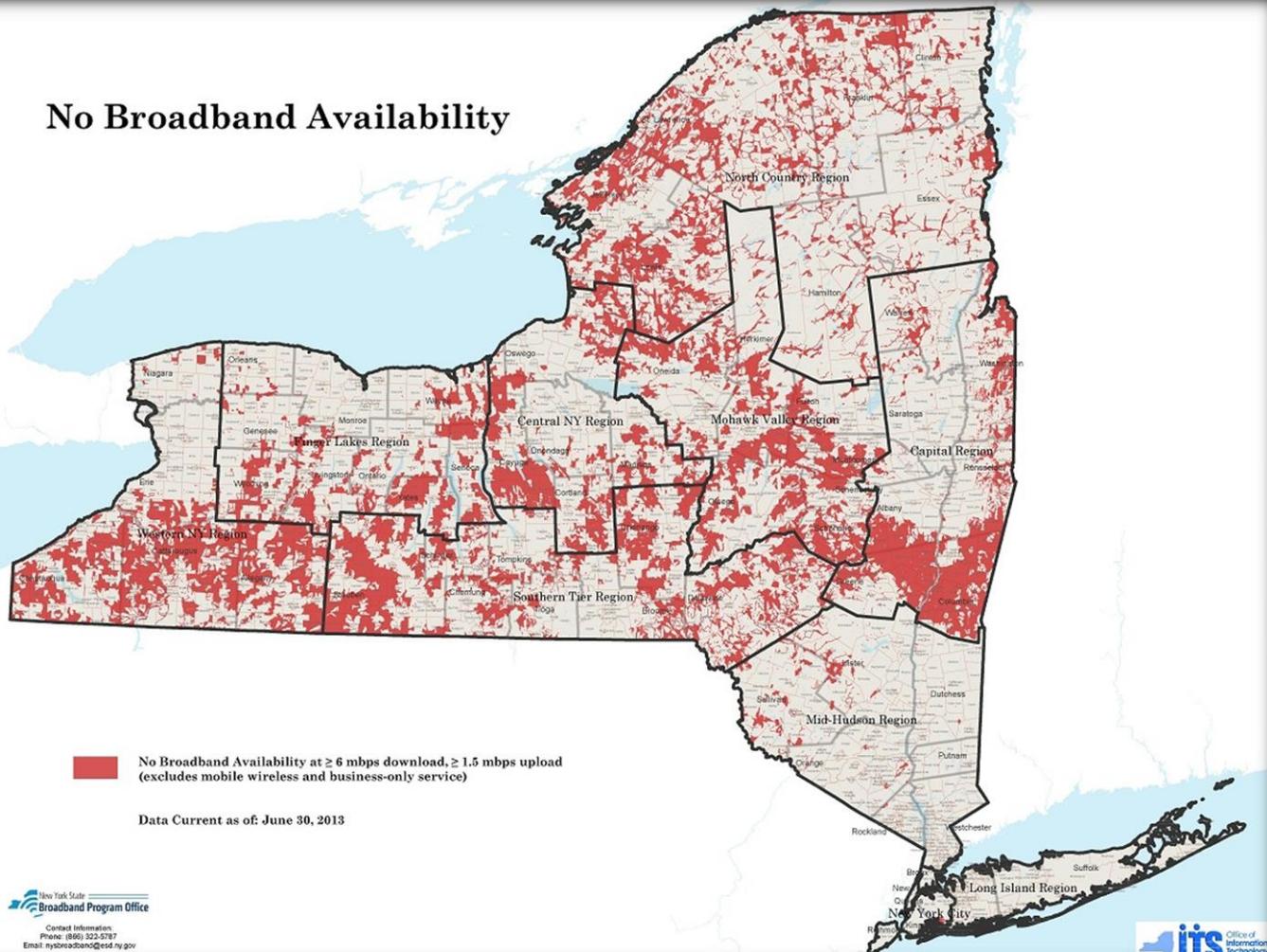


**1.03 Million or
5% of New
Yorkers Lack
Access to
Speeds of
6 Mbps
Download/
1.5 Mbps
Upload**



Broadband Availability

No Broadband Availability



Broadband Funding

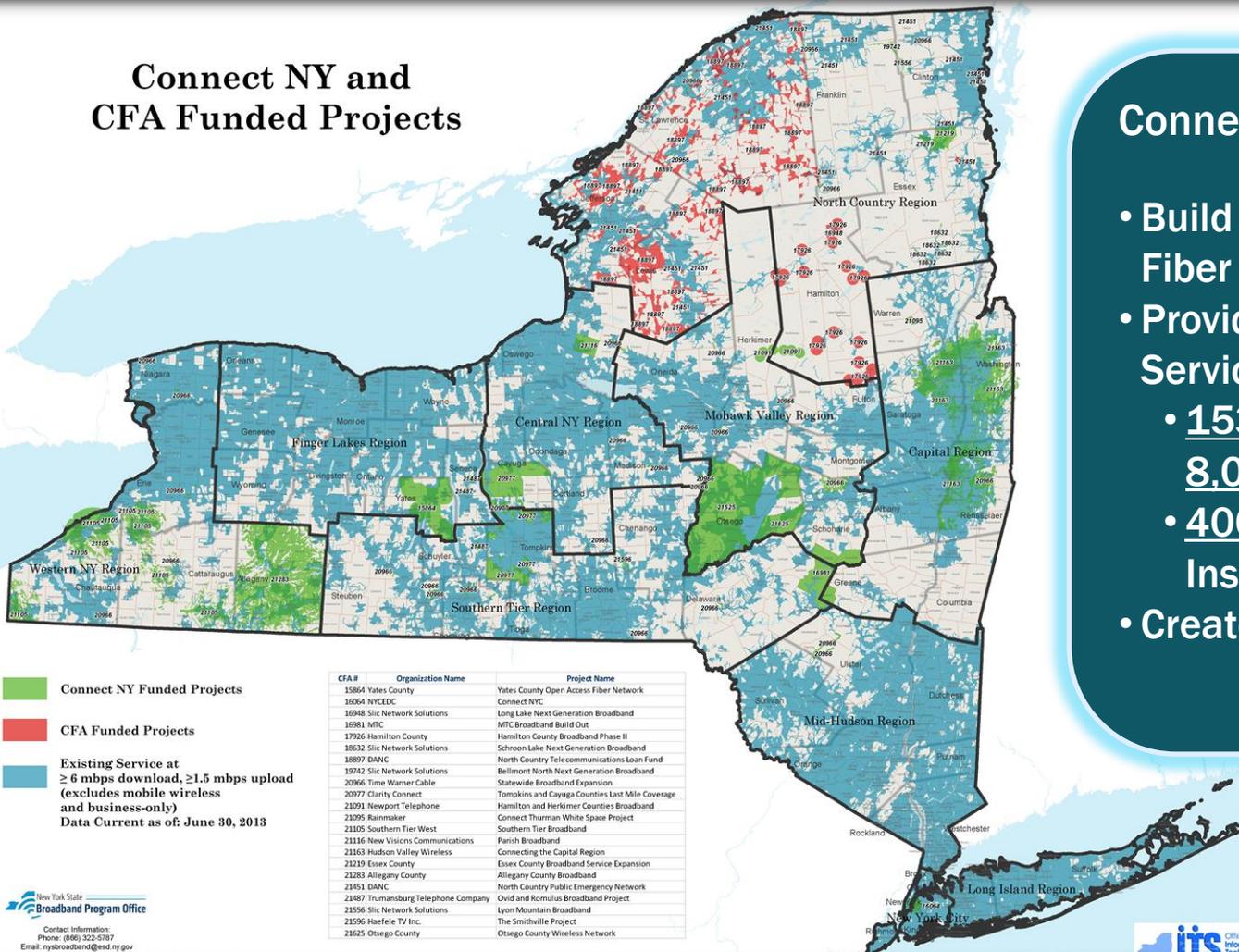
- **CFA Round 3** - \$11M Awarded to 3 Project Sponsors and North Country Broadband Fund (Dec 2013)
- **Connect NY Broadband Grant Program** - \$25M Awarded March 2013
 - 18 Project Sponsors - Expand Last-Mile Access in Un/Underserved Communities
- **CFA Round 2** - \$6M Awarded to 4 North Country Project Sponsors (Dec 2012)
- **CFA Round 1** –\$2M Awarded to 4 Project Sponsors (Dec 2011)
- **ARRA Broadband Federal Funding** - \$160M (2009)
 - 15 ARRA Awards to Private/Public Entities
 - \$9M For Broadband Mapping and Planning
 - \$1.2M to Expand Broadband Program Office
- **NYS Universal Broadband Grants** - \$5M Awarded to 9 Public/Private Partnerships (2008-2011)

\$68M
The Total Amount of Funding Awarded for Broadband Projects During Governor Cuomo’s Administration

The Largest Statewide Broadband Funding Commitment in the Nation.



Connect NY and CFA Funded Projects



Connect NY Projects Will ...

- Build 6,000 Square Miles of Fiber
- Provide High-Speed Internet Service to:
 - 153,000 Households,
 - 8,000 Businesses
 - 400 Community Anchor Institutions
- Create 1,400 New Jobs

- Connect NY Funded Projects
 - CFA Funded Projects
 - Existing Service at ≥ 6 mbps download, ≥ 1.5 mbps upload (excludes mobile wireless and business-only)
- Data Current as of: June 30, 2013

CFA #	Organization Name	Project Name
15864	Yates County	Yates County Open Access Fiber Network
16064	NYCEDC	Connect NYC
16948	Silic Network Solutions	Long Lake Next Generation Broadband
16981	MFC	MFC Broadband Build Out
17206	Hamilton County	Hamilton County Broadband Phase II
18632	Silic Network Solutions	Schoon Lake Next Generation Broadband
18897	DANC	North Country Telecommunications Loan Fund
19742	Silic Network Solutions	Bellmont North Next Generation Broadband
20066	Time Warner Cable	Statewide Broadband Expansion
20977	Clarity Connect	Tompkins and Cayuga Counties Last Mile Coverage
21091	Newport Telephone	Hamilton and Herkimer Counties Broadband
21095	Rainmaker	Connect Thurman White Space Project
21105	Southern Tier West	Southern Tier Broadband
21116	New Visions Communications	Fairch Broadband
21163	Hudson Valley Wireless	Connecting the Capital Region
21219	Essex County	Essex County Broadband Service Expansion
21283	Allegany County	Allegany County Broadband
21451	DANC	North Country Public Emergency Network
21487	Trumansburg Telephone Company	Ovid and Romulus Broadband Project
21556	Silic Network Solutions	Lyon Mountain Broadband
21596	Haeefe TV Inc.	The Smithville Project
21625	Otsego County	Otsego County Wireless Network



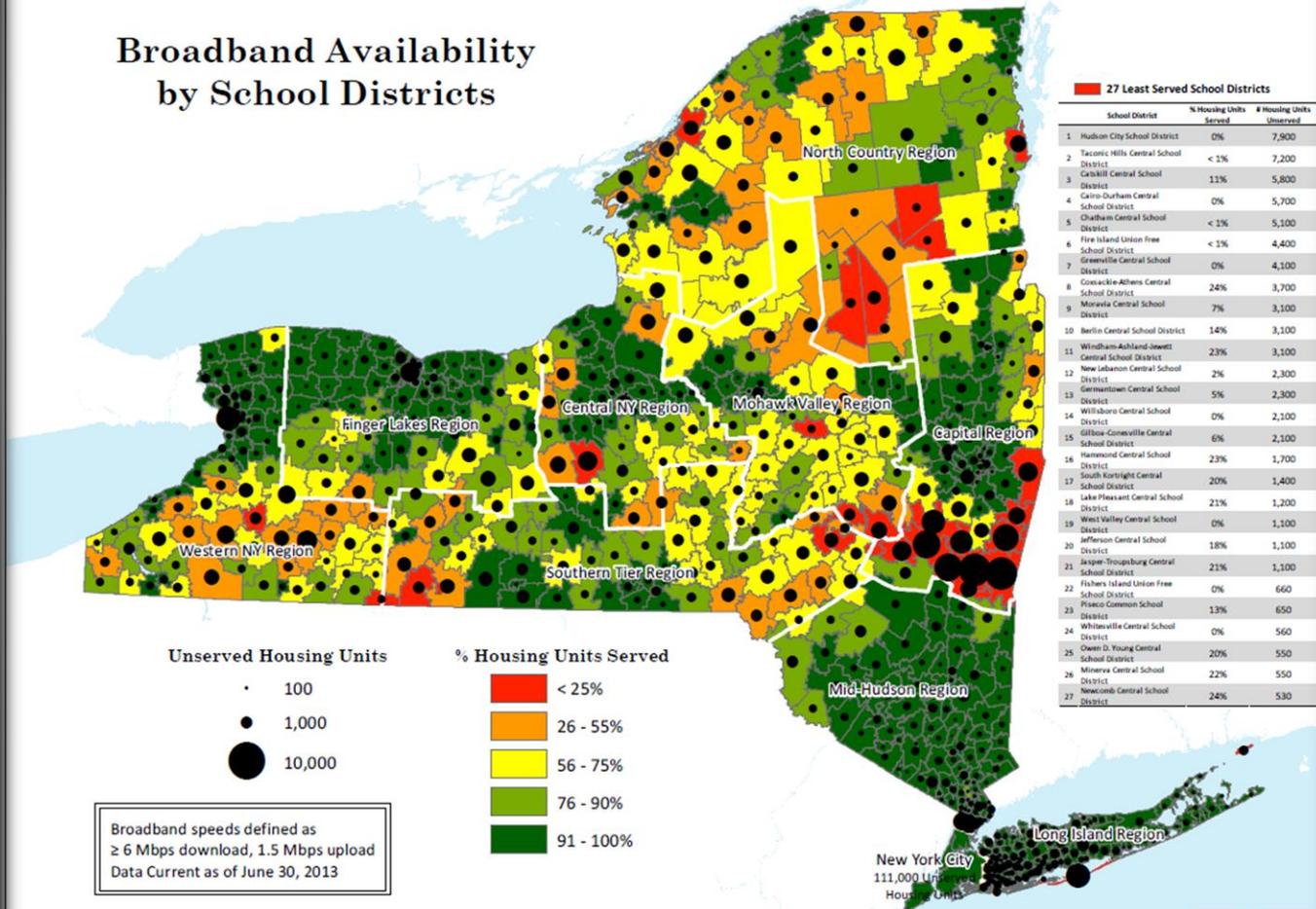
Governor Cuomo's 2014 State of the State Address

\$2 billion "Smart Schools" Bond Referendum:

- A World-class Broadband Network Delivering High Speed Broadband to Meet The Needs Of Education, Public Safety, Healthcare, and Government
- Enable students' access to state-of-the-art classrooms
- Enable Communities access to high-speed Internet
- Enhanced Economic Development and Job Creation, Furthering New York's National Leadership And International Competitiveness.

"The students get the skills they need to succeed within the 21st century economy, they have access to advanced courses, parents and teachers can communicate and teachers can access the assistance and training that they need." – Gov. Andrew Cuomo

Broadband Availability by School Districts



Unserved Housing Units

- 100
- 1,000
- 10,000

Broadband speeds defined as
≥ 6 Mbps download, 1.5 Mbps upload
Data Current as of June 30, 2013

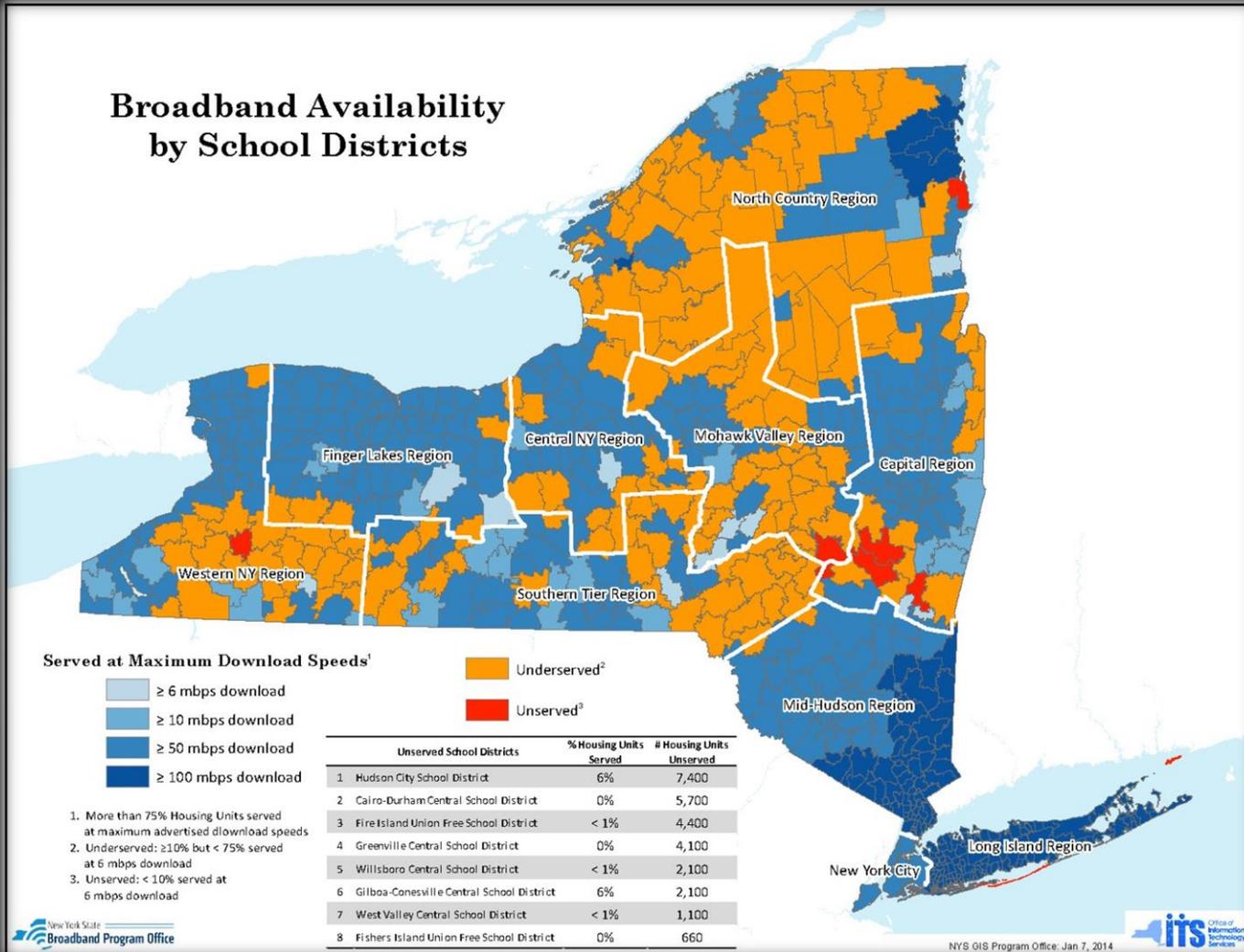
% Housing Units Served

- < 25%
- 26 - 55%
- 56 - 75%
- 76 - 90%
- 91 - 100%

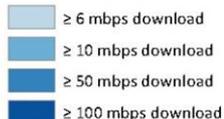
27 Least Served School Districts

School District	% Housing Units Served	# Housing Units Unserved
1 Hudson City School District	0%	7,900
2 Taconic Hills Central School District	< 1%	7,200
3 Canball Central School District	13%	5,800
4 Cairo-Durham Central School District	0%	5,700
5 Chatham Central School District	< 1%	5,100
6 Fire Island Union Free School District	< 1%	4,400
7 Greenville Central School District	0%	4,100
8 Conesville-Athens Central School District	24%	3,700
9 Moravia Central School District	7%	3,100
10 Berlin Central School District	14%	3,100
11 Windham-Ashland-Jewett Central School District	23%	3,100
12 New Lebanon Central School District	2%	2,300
13 Germantown Central School District	5%	2,300
14 Willboro Central School District	0%	2,100
15 Gilboa-Conesville Central School District	6%	2,100
16 Hammond Central School District	23%	1,700
17 South Kortright Central School District	20%	1,400
18 Lake Pleasant Central School District	21%	1,200
19 West Valley Central School District	0%	1,100
20 Jefferson Central School District	18%	1,100
21 Jasper-Troupsburg Central School District	21%	1,100
22 Fishers Island Union Free School District	0%	660
23 Piseco Common School District	13%	650
24 Whitenville Central School District	0%	560
25 Owen D. Young Central School District	20%	550
26 Minerva Central School District	22%	550
27 Newcomb Central School District	24%	530

Broadband Availability by School Districts



Served at Maximum Download Speeds¹



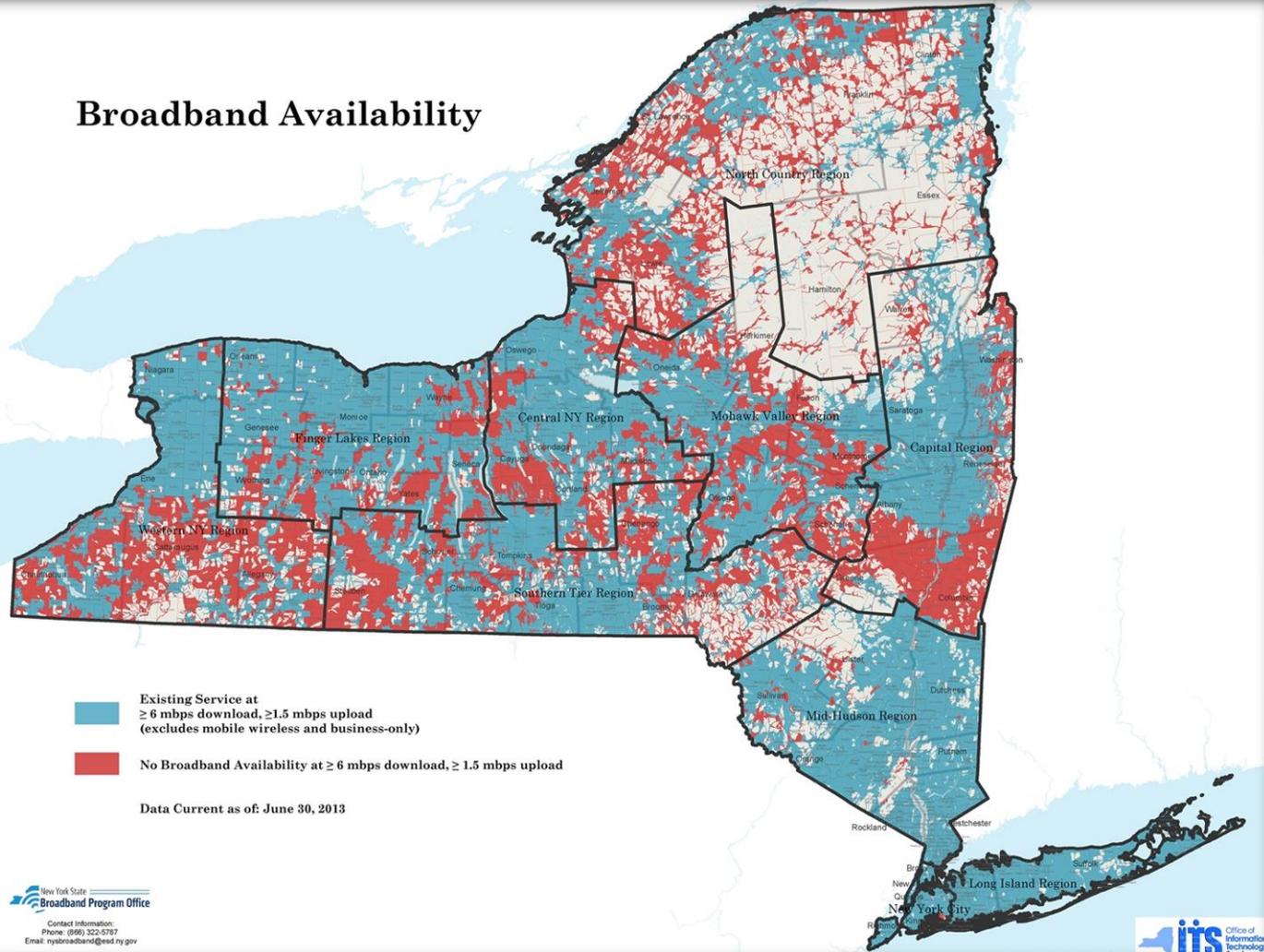
1. More than 75% Housing Units served at maximum advertised download speeds
2. Underserved: ≥ 10% but < 75% served at 6 mbps download
3. Unserved: < 10% served at 6 mbps download

Underserved²

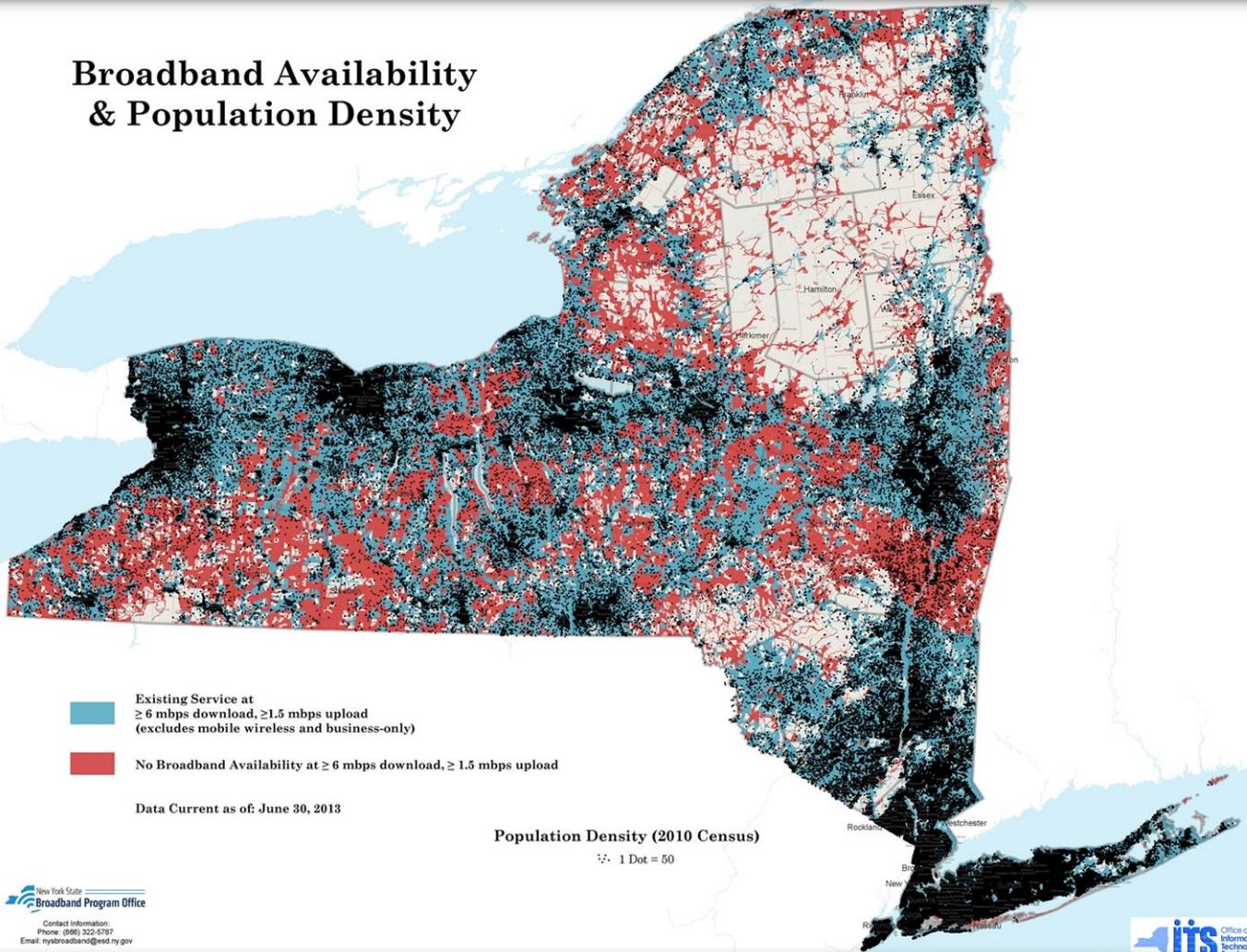
Unserved³

Unserved School Districts	% Housing Units Served	# Housing Units Unserved
1 Hudson City School District	6%	7,400
2 Cairo-Durham Central School District	0%	5,700
3 Fire Island Union Free School District	< 1%	4,400
4 Greenville Central School District	0%	4,100
5 Willsboro Central School District	< 1%	2,100
6 Gilboa-Conesville Central School District	6%	2,100
7 West Valley Central School District	< 1%	1,100
8 Fishers Island Union Free School District	0%	660

Broadband Availability



Broadband Availability & Population Density



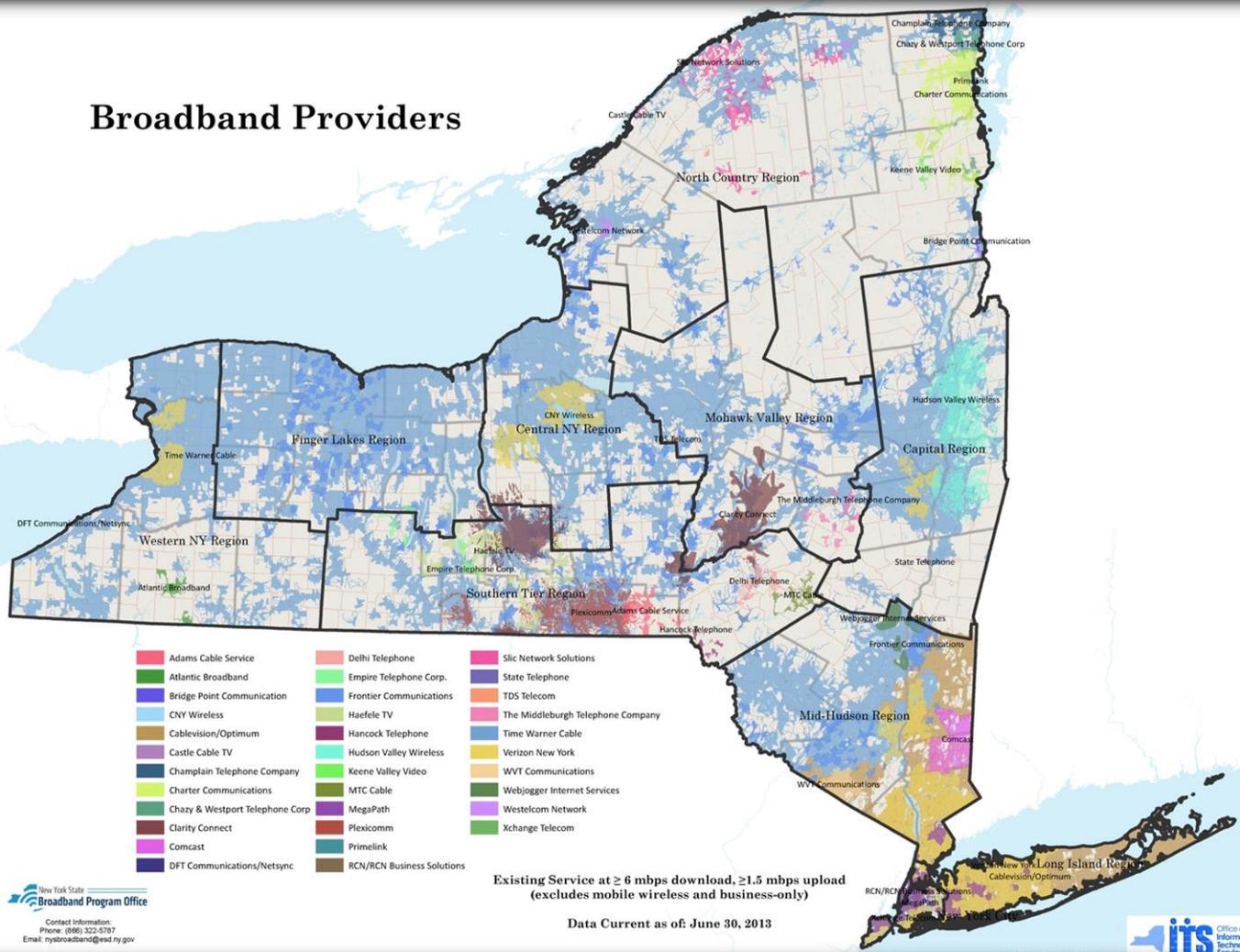
- Existing Service at ≥ 6 mbps download, ≥ 1.5 mbps upload (excludes mobile wireless and business-only)
- No Broadband Availability at ≥ 6 mbps download, ≥ 1.5 mbps upload

Data Current as of: June 30, 2013

Population Density (2010 Census)

1 Dot = 50

Broadband Providers

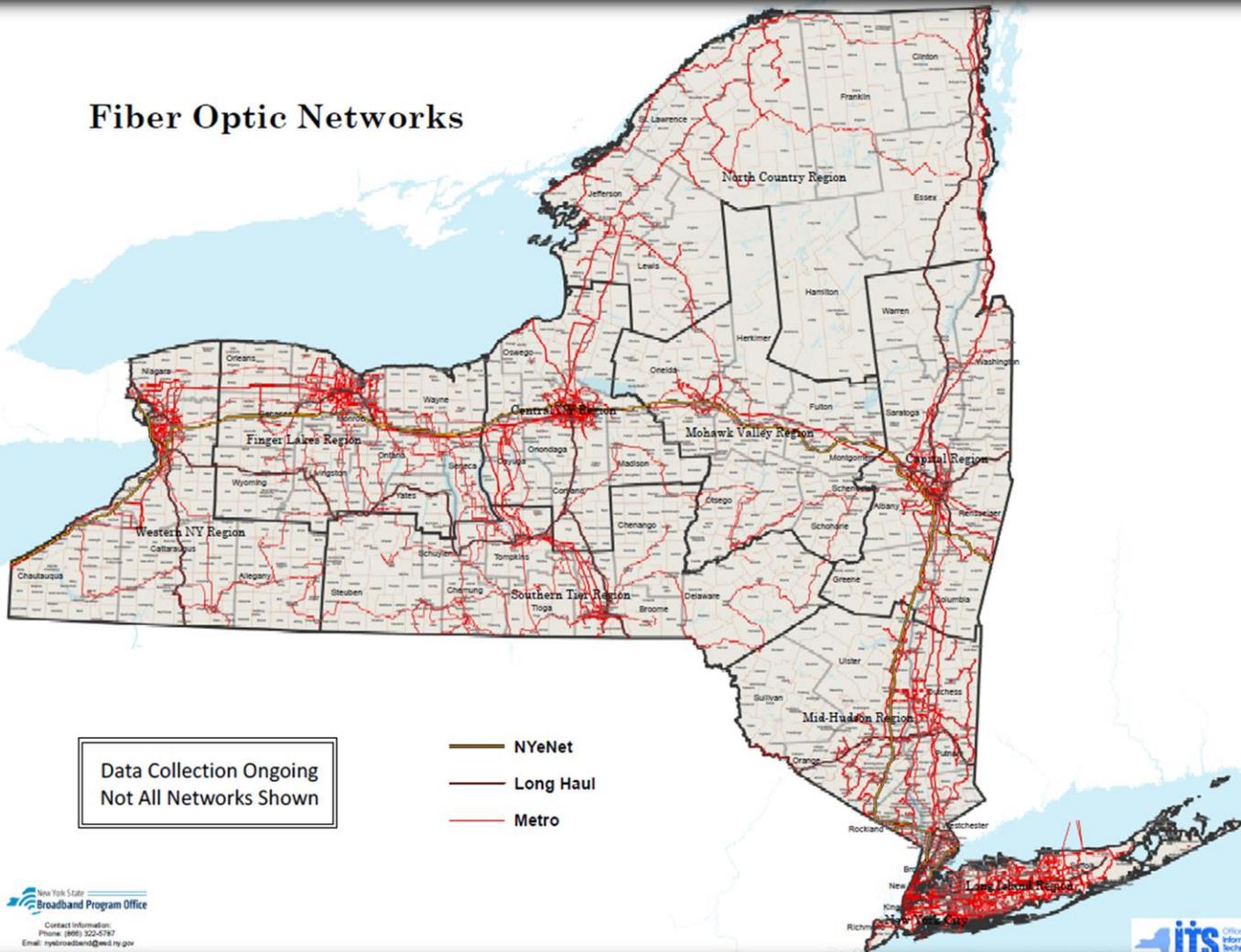


Existing Service at ≥ 6 mps download, ≥ 1.5 mps upload (excludes mobile wireless and business-only)

Data Current as of: June 30, 2013

New York State
Broadband Program Office
Contact Information:
Phone: (866) 322-5787
Email: nybroadband@esd.ny.gov

Fiber Optic Networks



Data Collection Ongoing
Not All Networks Shown

- NYeNet
- Long Haul
- Metro

The logo features a white silhouette of the state of New York on the left. To its right are three white curved lines of increasing size, resembling a Wi-Fi signal or a stylized 'B'.

New York State

Broadband Program Office

www.nysbroadband.ny.gov

nysbroadband@esd.ny.gov

877-322-5787