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New York State Public Service Commission
Broadband Report

2024 Report on the Availability, Reliability, and Cost of High-Speed Broadband Services in New York State

June 2024

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Introduction

On April 16, 2021,[1] the Governor and the Legislature enacted the Comprehensive Broadband Connectivity Act of 2021 (herein referred to as the "Act"),[2] which directed the New York Public Service Commission (Commission) to study, on an annual basis, the availability, reliability, and cost of high-speed broadband service in the State.

As with prior years, the Department of Public Service (Department) engaged with a multitude of partners across the New York including county and local government officials, the ConnectALL Office (ConnectALL), internet service providers (ISPs), and consumers. Through this collaboration, the Department is pleased to submit this year's Report and Interactive Map. The Department will continue to work with interested stakeholders throughout the coming year to map high-speed broadband with even greater granularity to help ensure universal deployment and affordable access to those New Yorkers most in need.

The first Report and Interactive Map was submitted to the Governor and Legislature on June 16, 2022.[3] The second Report and Interactive Map was submitted on June 22, 2023.[4] This submission marks the third iteration of the Report and interactive Map, in accordance with the Act's requirements.

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1 The Act's effective date was May 16, 2021.

2 The Act amended the Public Service Law (PSL) by adding a new §224-c.

3 Case 22-M-0313, In the Matter of the Commission's Broadband Study and Mapping Pursuant to the Broadband Connectivity Act, 2022 Report and Map on the Availability, Reliability and Cost of High-Speed Broadband Services in New York (submitted on June 16, 2022).

4 Id., 2023 Report and Map on the Availability, Reliability and Cost of High-Speed Broadband Services in New York (submitted on June 22, 2023).

Summary of 2024 Statewide Findings

Based on the data discussed below, the total percentage of locations[5] in New York that are "served,"[6] "underserved,"[7] or "unserved"[8] are as follows:

- **Served: 97.4%.**
- **Underserved: 0.1%.**
- **Unserved: 2.4%.**

The Comprehensive Broadband Connectivity Act of 2021

The Act directs the Commission, to the extent practicable, to:

- Identify areas at a census block[9] level that are served by a sole broadband provider and assess any regulatory and statutory barriers related to the delivery of comprehensive statewide access to high-speed internet;
- Review available technology to identify solutions that best support high-speed internet service in underserved and unserved areas as defined therein;
- Identify instances where local governments have notified the Commission of alleged non-compliance with franchise agreements, and instances of Commission or Department enforcement actions that have had a direct impact on internet access;
- Identify locations where insufficient access to high-speed broadband services or persistent digital divide, is causing negative social or economic impacts on the community; and

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5 A "location" is defined as "a geographic area smaller than a census tract." PSL §224-c(1)(f).

6 A location is "served" if it is a "location with at least two [ISPs] and at least one such [ISP] offers high-speed internet service." Id., §224-c(1)(a).

7 A location is "underserved" if it is a "location which has fewer than two internet service providers, or has internet speeds of at least 25 [Mbps] download but less than 100 Mbps download available." Id., §224-c(1)(b).

8 A location is "unserved" if it is a "location which has no fixed wireless service or wired service with speeds of less than 25 Mbps download available." Id., §224-c(1)(c).

9 A census block is the smallest geographic census unit. Blocks can be bounded by visible features, such as streets, or by invisible boundaries, such as city limits. A block group is a subdivision of a census tract and contains a cluster of blocks. Block groups usually have between 250 and 550 housing units.

- Produce and publish a detailed internet access map of the State, indicating access to internet service by location.

In accordance with the Act, the Map should include download and upload speeds advertised and experienced, the consistency and reliability of download and upload speeds including latency, the types of internet service and technologies, including but not limited to dial-up, broadband, fixed wireless, fiber, coax or satellite, and the number of ISPs and the price of their available internet service. In addition, the Act requires the Commission to provide, to the extent practicable:

- The overall number of residences with access to high-speed internet, identifying which areas are served, underserved and unserved as defined therein;[10]
- A regional survey of internet service prices in comparison to county-level median income;
- Any relevant consumer statistics; and
- The detailed map discussed above.

Finally, the Act requires the Commission to hold at least two public hearings - one in an Upstate location and one in a Downstate location - to solicit input from the public and other interested stakeholders.

The Broadband Report

The information contained in this third Report and interactive Map (referred to herein as the "Map," or collectively, the "Report") has primarily been collected from ISPs operating in New York who were asked to provide reasonable representations of their respective service areas.[11] The Map is intended to depict the current status of the State's broadband infrastructure and, therefore, does not include projects currently under construction or future planned infrastructure buildouts. Consumers are encouraged to contact ISPs directly to verify service information.

[10] The location fabric database used by the Department is not capable of distinguishing single-family residences versus multi-dwelling units.

[11] Determining each ISP's service area without a field inspection verification of every address could yield discrete inaccuracies, and while the Department conducts field inspections based on stakeholder input, it is not feasible to verify 100% of the addresses in the field. In some cases, although an ISP may populate on the Map as available to provide service, issues such as building access and line of sight may prevent an ISP from being able to provide service to a particular address location.

This third Report consists of four parts.

Part One provides an overview of previous findings and State initiatives since the first and second Reports to improve the availability and affordability of high-speed broadband in the State.

Part Two provides a summary of the research and analysis of the data used to outline the scope of high-speed broadband infrastructure, and the detailed mapping of high-speed broadband in New York.

Part Three provides this year's relevant statistics, such as served, unserved, and underserved address locations; available broadband speeds and pricing; a comparison of internet service pricing and median incomes; an assessment of the negative social and economic impacts on communities caused by insufficient availability of high-speed broadband service; potential barriers to entry; and, whether there were any cable franchise violations during the reporting period that impacted broadband expansion.

Part Four discusses future policy considerations.

Part One – Previous Findings and State Initiatives

2022 Statewide Findings

- **Served: 97.4%.**
- **Underserved: 0.1%.**
- **Unserved: 2.5%.**

2023 Statewide Findings

- **Served: 97.5%.**
- **Underserved: 0.1%.**
- **Unserved: 2.5%.**

Statewide Initiatives

The Public Service Commission

Over the previous year, the Commission has implemented several targeted initiatives to improve the availability and affordability of high-speed broadband service in the State. These actions include statewide telecommunications reviews, oversight over transactions involving regulated cable and telecommunication providers, enforcing service quality standards, and promoting measures to improve broadband affordability. Since last year's Report, the Commission has required additional broadband expansion and universal access as follows.

As part of the acquisition of Hancock Telephone Company and its subsidiaries (Hancock), the Commission required, among other things, that Hancock extend high-speed broadband service (defined for purposes of this commitment as an internet access service with minimum speeds of 100 Megabits-per-second (Mbps) download and 10 Mbps upload) to at least 227 incremental unserved/underserved/or overbuild addresses in and around its New York footprint. In addition, Hancock is required to continue to participate in the Affordable Connectivity Program (ACP) or its successor program(s) implemented by the Federal Communications Commission (FCC) for the remaining length of the ACP or its successor program(s), so long as the ACP or its successor program(s) retain materially similar terms and conditions as the ACP.[12]

Through the Order approving the acquisition of Alteva of Warwick, LLC, (Alteva), Alteva, among other things, is required to extend highspeed broadband service by investing at least $3.75 million of incremental capital expenditures to (a) extend fiber facilities capable of delivering high-speed broadband service using XGS-PON technology to pass at least 750 addresses to which Alteva does not currently offer high-speed broadband service within one year of the date of the closing of the transaction; and (b) extend fiber facilities that are capable of delivering high-speed broadband service using XGS-PON technology to pass at least 1,500 addresses, for a total of at least 2,250 addresses, to which Alteva does not currently offer high-speed broadband service within two years of the date of the closing of the transaction. The Commission similarly required Alteva to participate in the FCC's ACP or successor plan as discussed above. [13]

There continue to be several other pending cases before the Commission involving telephone and cable company mergers, acquisitions, and restructurings, wherein, additional opportunities for high-speed broadband expansion and affordability programs exist. The Department intends to pursue such opportunities and make additional recommendations for the Commission's consideration at the appropriate time.[14]

The Commission also continues to grant petitions for Orders or Entry (OOEs) to cable service providers seeking access to multi-dwelling units (MDUs). Pursuant to PSL §228(1), "[n]o landlord shall (a) interfere with the installation of cable television facilities upon his property or premises, except that a landlord may require: (1) that the installation of cable television facilities conform to such reasonable conditions as are necessary to protect the safety, functioning and appearance of the premises, and the convenience and well-being of other tenants; (2) that the cable television company or the tenant or a combination thereof bear the entire cost of the installation, operation or removal of such facilities; and (3) that the cable television company agree to indemnify the landlord for any damage caused by the installation,

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[12] Case 23-M-0042, Joint Petition of Archtop Fiber LLC, et al., Order Granting Joint Petition Subject to Conditions (issued September 15, 2023).

[13] Case 23-C-0290, Joint Petition of Archtop Fiber LLC, et al., Order Granting Joint Petition Subject to Conditions (issued December 19, 2023).

[14] See, Case 23-C-0743, Joint Petition of Consolidated Communications Holdings Inc., et al. (filed on December 28, 2023) and Case 24-C-0218, Joint Petition of Atlas Connectivity, LLC, et al. (filed on April 8, 2024).

operation or removal of such facilities." If a cable company is unsuccessful in gaining access to an MDU, under the Commission's rules, it may file a petition for an OOE and the Commission "may grant or deny the petition, schedule an administrative hearing on any factual issues presented thereby, or direct such other procedures as may be consistent with the installation of cable television service or facilities in accordance with section 228 of the Public Service Law."[15]

In the last year, the Commission has either granted OOEs or otherwise resolved access issues, in compliance with statutory and regulatory requirements, that authorized the installation of cable facilities capable of delivering high-speed broadband to over 30 MDUs in New York City.[16] Moreover, it has granted limited OOEs, that authorized cable providers to conduct engineering surveys for the installation of cable facilities, in several more MDUs in New York City. These efforts serve to enhance competition in the most densely populated areas of the State which is expected to result in lower prices for consumers in those areas.

Finally, pursuant to legislation,[17] the Commission is in the process of considering changes to its existing pole attachment rules. The Commission initiated a proceeding to examine a process for streamlining actions related to utility pole attachments, including consideration of dispute resolution models, cost-sharing models, impacts on the expansion of broadband into unserved and underserved areas, requiring new less expensive pole attachment methods, and modifying existing rules regarding the cost obligations associated with new pole attachments.

The Department has also significantly contributed to the rolling out of the FCC's ACP in the State. The ACP, as discussed above, was designed in late 2021 to help bridge the digital divide by offering affordable broadband access to eligible low-income families. The program provided discounts of up to $30 a month toward internet service and included a one-time $100 subsidy toward buying a laptop or tablet. The Department led a multi-agency outreach effort to advertise the ACP to New Yorkers and encourage participation among eligible households. Through this effort, over 1,792,187 qualifying New York households enrolled in the ACP.[18] However, on May 1, 2024, Congressional funding for the ACP expired and, at the time of this Report, the program had not been reauthorized. Efforts to obtain an extension of the ACP or similar program are ongoing.

Today, according to information obtained by the Department, of the 56 New York State ISPs that participated in the ACP, ten have maintained some form of a low-income program, while five have retained short-term discount programs for ACP enrollees in order to assist with

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15 16 NYCRR §898.4.

16 Since 2013, the Commission has approved thousands of OOEs and limited OOEs for cable providers seeking access to MDUs in New York City.

17 PSL §119-a.

18 https://www.whitehouse.gov/build/resources/affordable-connectivity-program-enrollment-fact-sheets/

the transition post-ACP. Specifically, as of this Report, Altice USA,[19] Astound,[20] Breezeline,[21] Spectrum,[22] Xfinity,[23] GoNetSpeed,[24] New Visions,[25] Starry,[26] TDS,[27] and Verizon Communications[28] have advised the Department that they will maintain some form of a low-income program, subject to potential changes, while Community Broadband Networks, Empire Access, Honest Networks, MHG-Telco, and Viasat have also retained some form of a short-term discount program to help transition ACP subscribers.

Finally, while New York also enacted a more permanent low-income broadband affordability program called the Affordable Broadband Act (ABA),[29] the status of the ABA is currently under review.[30]

ConnectALL

ConnectALL is Governor Hochul's initiative to transform New York's digital infrastructure.[31] In April 2022, the Governor signed the New York State WIRED Broadband Act (WIRED Act), establishing the Division of Broadband Development, referred to as the ConnectALL Office, within Empire State Development to carry out the initiative. As described in the WIRED Act, the goals of ConnectALL are "ending the digital divide, supporting a more robust and competitive internet marketplace, and carrying out other actions to ensure universal access to high-speed, reliable, and affordable broadband."[32]

ConnectALL is funded with $300 million from the 2022 Executive Budget and has secured approximately $345 million from the U.S. Treasury Department's Capital Projects Fund,

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19 https://www.optimumadvantageinternet.com/

20 https://www.internetfirst.com/

21 https://www.breezeline.com/support/internet/internet-assist-program

22 https://www.spectrum.com/internet/spectrum-internet-assist

23 https://www.xfinity.com/learn/internet-service/internet-essentials

24 GoNetSpeed is providing an "ACP Continuation Program"

25 https://www.newvisionsfiber.com/acp/

26 https://starry.com/starryconnect

27 https://tdstelecom.com/information/tds-connect.html

28 https://www.verizon.com/discounts/verizon-forward/

29 See, General Business Law (GBL) §399-zzzzz. The ABA requires ISPs to, among other things, offer broadband service at $15 per month to qualifying low-income households.

30 New York State Telecommunications Ass'n, et al. v. James, 21-1975-cv, Doc. 232-1 (2nd Cir., April 26, 2024).

31 Governor Hochul Announces New $1 Billion 'ConnectALL' Initiative to Bring Affordable Broadband to Millions of New Yorkers | Governor Kathy Hochul (ny.gov)

32 NY State Senate Bill S8008C (nysenate.gov)

established by the American Rescue Plan Act, and allocations from the National Telecommunications and Information Administration at the U.S. Department of Commerce of approximately $665 million from the Broadband Equity, Access, and Deployment Program and $37 million from the State Digital Equity Capacity Grant Program.

ConnectALL has launched the following signature programs to achieve the Governor's mandate:

- The **ConnectALL Deployment Program** will make grants to ISPs to serve the remaining locations in the State that do not have broadband service.
- The **Municipal Infrastructure Program** will fund public infrastructure to serve underserved communities with affordable service.
- The **Affordable Housing Connectivity Program**, a partnership with New York Homes and Community Renewal, will retrofit affordable and public housing with broadband installations.
- The **Digital Equity Program** to address non-infrastructure barriers to broadband adoption so all residents can use the internet for economic opportunity, education, health, civic engagement, and government services.

The priority of ConnectALL in the past year has been to secure the federal funds for these signature programs and prepare for grantmaking to begin in the second half of 2024. Recent highlights include:

- Published New York's first ever State Digital Equity Plan, secured federal approval for the Plan, and submitted a proposal for $37 million in federal funding to implement the Plan.
- Published the New York State Broadband Deployment Five-Year Action Plan and secured federal approval.
- Published the New York State Broadband Deployment Initial Proposal and secured federal approval to implement the ConnectALL Deployment Program with approximately $665 million of federal funding.
- Advanced a rigorous public review of federal broadband data with input from ISPs, local governments, nonprofit stakeholders, and the general public to arrive at the most accurate, address-level map possible to guide grantmaking.
- Secured participation in the ConnectALL Affordable Housing Connectivity Program from building owners and ISPs in every metro region in the State to bring high-speed, low-cost service to low-income households.

- Completed four new, future-proof municipal broadband infrastructure projects serving more than 3,000 households across four counties in the North Country and the Southern Tier and opened an application window to expand the Municipal Infrastructure Program statewide.

- Continued statewide outreach and coordination through public events, virtual forums, direct stakeholder engagement, technical assistance grants and office hours, and meetings of the Digital Equity Task Force and Broadband Deployment Advisory Committee.

ConnectALL's program plans, approved guidelines, existing projects, open applications, and materials from public events are all available on the ConnectALL website at: https://broadband.ny.gov.

New York State Department of Transportation

The New York State Department of Transportation (NYSDOT) continues to make improvements to the review and issuance of broadband/fiber permits requesting use of State rights-of-way.

In May 2022, the Utility and Energy Management Bureau (Bureau) was established with new dedicated staff to assist regions and focus on the permit processes and improvements. The Bureau currently consists of the Director and two Engineering staff to oversee the Highway Work Permit portion of the required PERM75 permits, and two Real Estate staff with right-of-way expertise to assist with the Use and Occupancy portion of the permits.

The February 2023 pilot program allowing for the use of an approximate highway boundary prepared by engineers and designers, relieving the requirement for a Licensed Land Surveyor stamp on applications for overhead installations on existing poles, has become part of the permanent practice. For new poles and underground conduits, the requirement for the higher standard of a true highway boundary established by a surveyor is still required to ensure needed accuracy. Industry/applicants were provided guidance in advance of the effective date of the pilot program.

NYSDOT continues to use the Permitrack Highway Work Permit system, implemented in February 2023 for use with Fiber/Broadband PERM75 applications, with success and improvements to permit issuance. PermiTrack establishes a business account with user profiles prepopulating applications with static information (e.g., name, address, insurance documentation) and allows applicants to pay the highway work permit fees online. The forms and review processes have been streamlined with this system and applicants now have visibility within the system about where their application is in the review process. Individual and/or small group sessions were conducted with applicants to create user accounts and provide instruction on using and navigating the system.

In March 2023, NYSDOT conducted a Best Practices webinar training for all Fiber/Broadband PERM75 applicants providing an overview of application requirements, the importance of the requirements, common issues in applications that lead to delay, the transition

to the PermiTrack system for processing applications, and discussion about the Stamped Land Survey pilot. The Webex was recorded and is posted on the Fiber Optics website.

According to NYSDOT, these steps have continued to improve process time on applications. Approximately 3,098 fiber permits have been issued between January 2021 and early May 2024. Since moving to PermiTrack in February 2023 (and fully implemented for Fiber as of May 1, 2023) NYSDOT has received 1,258 applications with 707 issued, 489 applications in process, and 62 withdrawn as of early May 2024. Of the 489 in process, 49 are in the final steps before issuance.

Part Two - Overview of the 2024 Broadband Report

Among other things, the Act requires the Commission to develop a current roster of ISPs that are capable of meeting New York's standard for high-speed broadband service defined as "a minimum throughput or speed of 100 [Megabits per second] Mbps downstream and 10 Mbps upstream,"[33] and demonstrate through mapping, ISP serviceability areas, along with speeds and prices.[34] Like last year's Report, the Department gathered data from four primary sources, described in detail below. By applying appropriate analysis to this data, the Department compared, confirmed, and contrasted information from these various sources. The ability to overlay the data aided in corroborating information or, alternatively, leading the Department to further assess certain discrepancies.

Broadband Availability Data Resources

The Department utilized the following four data sets to complete its mapping and analyses:

- The New York State Street and Address Maintenance (SAM) Program as a location fabric;
- New York ISP-provided data;
- Department field inspections; and
- Stakeholder input.

1. The State and Address Maintenance Program

The New York State GIS Program Office's SAM Program maintains a regularly updated statewide street and address point database. Its database is publicly available, was built to support Next Generation 9-1-1 (NG9-1-1) and is compliant with National Emergency Number Association (NENA) address standards.[35] The Department utilized the SAM Program address

[33] PSL §224-c(1)(d).

[34] Id.

[35] The NENA address standard is used nationwide for accurate and up-to-date geocoded street centerlines and address points required in NG9-1-1 systems.

point database to populate address locations on the interactive Map. The SAM Program address points applied to the Map reflect valid, primary addresses throughout New York State.

This year, a total of 5,320,504 address points were geocoded into the interactive 2024 Map. These points include "Primary Points" [36] which reflect rooftop-level, or individual structures/buildings, or may reflect driveway entrances. The Department also maintained address points called "Parcel Centroids."[37] Parcel Centroids are primarily address points placed for vacant but validly addressed parcels. These points represent 226,853 address points in the Map. The Department found that due to the frequency of new construction, Parcel Centroids may be homes and, therefore, the decision was made to maintain the use of Parcel Centroids in the Report's analysis. The Department did not include most[38] address points representing parks, cemeteries, boat launches, bridges, and fuel sources. These address points are known as "Miscellaneous Points."[39]

2. Internet Service Provider Data

This year the Department received data from 75 ISPs in one of three formats:

- **Polygons,** representing reasonable depictions of serviceable areas, by broadband technologies and speeds;
- **Line data,** representing where network infrastructure is located, along with standard and non-standard[40] installation distances, which were then applied to the line data to create polygons representing reasonable depictions of serviceable areas by broadband technologies and speeds; and
- **Serviceable and/or customer addresses** with standard and non-standard installation distances, which were then applied to each address to create polygons representing reasonable depictions of serviceable areas by broadband technologies and speeds.

3. Department Field Inspections

The Department worked with stakeholders and ISPs to refine each ISPs serviceability polygon. Since last year's Report, and through the use of both desktop and field audits, the

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36 https://gis.ny.gov/gisdata/supportfiles/Address-Points-Data-Dictionary.pdf.

37 Id.

38 To the extent counties did not categorize these types of location as Miscellaneous Points they were not eliminated due to how counties reported them to the GIS Program Office.

39 https://gis.ny.gov/gisdata/supportfiles/Address-Points-Data-Dictionary.pdf.

40 The Department interprets a standard installation to mean one where there is no or a nominal installation charges, and non-standard installation to mean one where the customer is required to pay an additional installation charges due to the distance from the network to the customer's premises (e.g., a long driveway).

Department examined over 26,205 addresses to determine if the addresses were passed by high-speed broadband infrastructure, and thus properly depicted in the Map.

4. Stakeholder Input

The Department received input from individual consumers, municipalities, counties, and ISPs through the feedback loop built into the interactive Map, a consumer survey, and two virtual public statement hearings held on March 27, 2024.

This year, the Department received a total of 69 responses across approximately 34 counties via the Map's feedback loop. Of those responses, 40 (58%) denoted an incorrect ISP populating at an address. Other respondents commented on lack of competition, lack of affordability, and unreliable service and speeds. In addition, in total, over the span of three years, the Department received 3,457 survey responses from consumers across all 62 New York counties.

The Commission also held two virtual public hearings. In total, 22 stakeholders attended the public hearings and three provided comments. Four written comments were also received in the Commission's Document and Matter Management system under Case 22-M-0313.

In last year's Report, the Department provided results of individual speed tests as a part of the survey. Unfortunately, results of this year's speed tests were not available at the time of this Report and, therefore, the Department is unable to depict those results here. The Department expects to include speed results in future iterations of the Report.[41]

Applying the Act and Mapping Broadband

As per previous years, the following definitions apply:

- A location to be an address point in the SAM Program database;
- A served location to be an address point with at least one wired or fixed-wireless high-speed ISP;
- An underserved location to be an address point with at least one wired or fixed-wireless ISP offering download speeds of at least 25 Mbps but less than 100 Mbps; and
- An unserved location to be one with no wired or fixed-wireless providers offering speeds of at least 25 Mbps download available.

The Department used ISP-provided data to create polygons depicting representations of each providers' serviceable areas by technology type(s) and speed(s). The Department reviewed

[41] Notably, many factors can lead to speed degradation such as how far away a person is from their router, the age of one's device or computer, how many applications are running at the same time, and how many devices are connected or operating at the time of the speed test.

these polygons against other data, and then met with virtually all of the ISPs operating in New York to confirm that the polygons were reasonable representations of their respective serviceability areas.

The Department engaged VHB, a civil engineering consulting and design firm to assist in comparing each address point in the SAM Program database to the providers' polygons to generate a list of ISPs by technology type(s) and speed(s) available at each address location, used the list to determine if the address location should be categorized as served, underserved, or unserved, and created this year's interactive Map.

The Map can be found at https://mapmybroadband.dps.ny.gov.

Part Three - Study Findings

Served, Underserved and Unserved

Based on the foregoing analyses, the Department determines that 97.4%, 0.1%, and 2.4% of locations in the State are served, underserved, and unserved, respectively. Although the percentages are similar to last year, the table below provides the inputs to these calculations and illustrates the more granular differences from last year's analysis and Report. Notable highlights of this year's analysis as compared to last year's, include the following:

- **Refinements are improving the Map's accuracy -** This year, the Department found that the Map's address points were refined by an increase of over 23,000 locations. These updates to the New York State SAM database from counties play a valuable role in improving existing data on the Map.

- **The number of served addresses across the State has increased -** The updated Map shows just over 21,000 additional served addresses as compared to last year.

- **The number of unserved addresses across the State has decreased -** The updated Map shows a decrease of over 1,200 unserved addresses.

- **Competition across the State is increasing -** Over 500,000 or roughly 20% of locations across New York now have access to more than one high-speed ISP compared to last year.

- **Broadband buildouts are underway -** Through State, federal, and privately funded programs and projects, ISPs in New York are deploying necessary infrastructure to connect previously unserved New Yorkers and, in some cases, creating greater competition throughout the State.

	2023 Analysis	2024 Analysis	Change	% Change
Address Points	5,297,234	5,320,504	23,270	0.44%
Served Address Points	5,163,282	5,184,380	21,098	0.41%
Served Address Points (One High-Speed Provider)	2,343,447	1,777,322	(566,125)	-24.16%
Served Address Points (More than One High-Speed Provider)	2,819,835	3,407,058	587,223	20.82%
Underserved Address Points	3,725	7,154	3,429	92.05%
Unserved Address Points	130,227	128,970	(1,257)	-0.97%

This year, the Department requested information from the three largest ISPs regarding new high-speed broadband infrastructure investments during 2023 and found that they invested in infrastructure to bring high-speed broadband to over 246,000 households/businesses.[42] However, this information does not distinguish between investment to pass addresses that were previously unserved and investment to pass addresses that were already served by another provider. Broadband infrastructure investment in either case benefits New Yorkers since those that either had no access to high-speed broadband or those that did but now have competitive choice now have these additional options.

With each update of the Map, the Department is able to make data-driven analyses that improve mapping overall. However, as with any mapping endeavor, there are numerous moving parts affecting the statistics above and conclusions that may be drawn from them. For example, ISPs continually refine their data to correct for over and under representations of their serviceability from year-to-year. And, among other things, the SAM database is updated daily based on input from counties, both adding and subtracting locations, as well as refining the latitudes/longitudes of addresses in their counties.[43]

While the statewide percentages remained approximately the same as last year, the statistics on a county basis show some differences. The Department believes those differences are driven by several factors such as additional SAM address points, refinement of ISP data since last year, and broadband deployment. The table below shows the percent served, underserved,

[42] 246,000 households/businesses in this context does not necessarily equate to the same number of address points on the map, as the map counts MDUs and multi-use buildings as one address point.

[43] The Department could surmise that 5,140,140 addresses included in the 2024 analysis could be matched to addresses in the 2023 analysis, and of those, 25,046 changed from un/underserved to served, while 23,142 changed from served to un/underserved, but the continual changes/improvements to both the SAM database and provider data prevent the ability to definitively correlate these changes with data refinements or broadband infrastructure expansion.

and unserved in each of New York's 62 counties, as well as the change in percent served from last year's Report.

NAME	2024 Map Served Address Points	%	2023 Map Served Address Points	%	% Change 2023 to 2024	2024 Under-served Address Points	%	2024 Unserved Address Points	%
Albany	115,125	97.63	115,056	97.76	(0.13)	115	0.10	2,682	2.27
Allegany	24,872	90.39	23,721	89.96	0.42	26	0.09	2,619	9.52
Bronx	105,408	99.81	105,419	99.86	(0.05)	0	0.00	202	0.19
Broome	84,478	95.45	84,849	95.99	(0.54)	23	0.03	4,007	4.53
Cattaraugus	38,617	95.18	38,435	94.56	0.62	376	0.93	1,580	3.89
Cayuga	38,949	95.32	39,117	95.97	(0.65)	43	0.11	1,871	4.58
Chautauqua	59,123	92.78	59,483	94.23	(1.46)	2,792	4.38	1,812	2.84
Chemung	37,908	97.70	37,942	97.63	0.07	7	0.02	886	2.28
Chenango	23,339	87.57	23,020	87.45	0.12	54	0.20	3,258	12.22
Clinton	35,381	95.71	29,494	80.07	15.63	37	0.10	1,550	4.19
Columbia	30,399	97.36	29,721	95.56	1.80	262	0.84	562	1.80
Cortland	18,377	96.92	18,438	97.49	(0.57)	8	0.04	576	3.04
Delaware	27,498	94.76	27,335	94.32	0.44	7	0.02	1,514	5.22
Dutchess	107,387	96.42	106,888	96.26	0.16	118	0.11	3,869	3.47
Erie	352,764	98.87	350,661	98.94	(0.07)	545	0.15	3,491	0.98
Essex	23,532	88.05	23,569	88.57	(0.52)	31	0.12	3,164	11.84
Franklin	21,343	85.93	21,894	89.61	(3.68)	23	0.09	3,472	13.98
Fulton	24,117	94.60	24,149	95.64	(1.03)	2	0.01	1,374	5.39
Genesee	22,872	95.36	22,352	94.85	0.52	27	0.11	1,085	4.52
Greene	28,523	94.99	27,843	93.25	1.74	38	0.13	1,466	4.88
Hamilton	6,436	79.79	6,797	84.37	(4.58)	0	0.00	1,630	20.21
Herkimer	30,239	89.66	28,880	90.77	(1.11)	43	0.13	3,444	10.21
Jefferson	51,050	95.25	50,736	95.43	(0.18)	26	0.05	2,519	4.70
Kings	308,575	99.96	308,662	99.96	(0.00)	0	0.00	135	0.04
Lewis	14,200	79.73	13,939	80.23	(0.51)	114	0.64	3,497	19.63
Livingston	23,773	89.24	23,613	88.80	0.44	50	0.19	2,815	10.57
Madison	29,759	95.16	29,875	95.53	(0.37)	164	0.52	1,351	4.32
Monroe	301,041	98.98	301,166	99.34	(0.36)	23	0.01	3,067	1.01
Montgomery	18,778	91.18	18,968	92.47	(1.29)	44	0.21	1,773	8.61
Nassau	419,536	99.87	419,366	99.88	(0.01)	12	0.00	535	0.13
New York	62,378	99.23	62,189	99.22	0.02	0	0.00	482	0.77
Niagara	93,289	98.47	93,374	98.74	(0.27)	8	0.01	1,441	1.52
Oneida	84,613	95.15	84,682	95.46	(0.31)	126	0.14	4,186	4.71

NAME	2024 Map Served Address Points	%	2023 Map Served Address Points	%	% Change 2023 to 2024	2024 Under-served Address Points	%	2024 Unserved Address Points	%
Onondaga	186,494	98.65	185,258	98.77	(0.12)	144	0.08	2,410	1.27
Ontario	47,432	95.16	47,431	95.67	(0.51)	36	0.07	2,377	4.77
Orange	130,160	97.05	130,228	97.14	(0.09)	352	0.26	3,603	2.69
Orleans	17,119	93.46	17,310	94.68	(1.21)	50	0.27	1,147	6.26
Oswego	52,451	97.00	52,657	97.33	(0.33)	192	0.36	1,428	2.64
Otsego	28,752	87.34	28,889	88.28	(0.94)	171	0.52	3,995	12.14
Putnam	40,356	98.80	40,216	98.66	0.14	12	0.03	479	1.17
Queens	360,391	99.92	360,130	99.93	(0.01)	0	0.00	293	0.08
Rensselaer	63,211	98.68	63,154	98.65	0.03	47	0.07	800	1.25
Richmond	129,748	99.96	129,602	99.97	(0.01)	1	0.00	48	0.04
Rockland	93,997	98.03	94,043	98.27	(0.24)	6	0.01	1,879	1.96
Saratoga	98,265	97.48	97,366	97.29	0.19	84	0.08	2,457	2.44
Schenectady	54,916	99.45	54,781	99.37	0.08	5	0.01	298	0.54
Schoharie	16,690	94.14	16,578	93.93	0.21	14	0.08	1,025	5.78
Schuyler	9,577	90.32	9,615	91.44	(1.12)	35	0.33	991	9.35
Seneca	14,132	96.11	14,051	95.79	0.32	20	0.14	552	3.75
St Lawrence	48,055	88.89	49,220	92.46	(3.57)	83	0.15	5,925	10.96
Steuben	47,005	88.55	46,664	88.02	0.53	121	0.23	5,957	11.22
Suffolk	533,195	99.19	530,580	98.89	0.29	185	0.03	4,186	0.78
Sullivan	50,221	94.93	49,880	95.28	(0.35)	60	0.11	2,622	4.96
Tioga	20,364	94.76	19,974	93.36	1.40	10	0.05	1,115	5.19
Tompkins	33,607	95.45	33,512	95.67	(0.23)	81	0.23	1,522	4.32
Ulster	85,051	96.76	84,518	96.99	(0.23)	29	0.03	2,817	3.20
Warren	36,130	94.34	36,464	95.89	(1.56)	15	0.04	2,154	5.62
Washington	26,525	91.32	26,954	93.15	(1.83)	64	0.22	2,457	8.46
Wayne	35,722	91.68	36,544	93.79	(2.11)	72	0.18	3,169	8.13
Westchester	233,621	99.34	229,767	99.25	0.09	53	0.02	1,498	0.64
Wyoming	15,554	87.90	14,852	86.41	1.49	45	0.25	2,096	11.85
Yates	11,960	87.06	11,411	83.06	4.00	23	0.17	1,755	12.77

Regional Survey of Internet Service Pricing vs. County Median Income

As part of the Act's requirements,[44] the Department collected pricing and service level data for the 62 New York counties, as shown in detail in the attached Appendix. Non-

[44] PSL §224-c(3)(b).

promotional pricing and service level results can be grouped by county median income, as shown in the table below, which separates them into three categories, those with median income levels from $47,036 to $62,892 (the lowest 25th percentile), those with incomes between $62,893 and $76,215 (the 25th to 75th percentile), and those counties with incomes between $76,216 to $137,709 (the highest 25 percent). In general, the 16 counties in the lowest 25th income percentile, on average, face the highest prices but have available speeds that are comparable to the counties in the 25th to 75th percentile and higher than that of the counties with the highest median incomes. The 30 counties with incomes in the middle percentiles pay prices in between that of the lowest 25th income percentile and counties in the highest percentile and have the greatest speeds, while the 16 counties with the highest incomes, those in the top 25th percentile, experience the lowest average speeds at the lowest pricing.

Median Income	Weighted Average Price in Counties	Weighted Average Speed in Counties	Average Number of ISPs in Counties	Number of Counties in Category
$47,036 - $62,892	$72.89	265.91	7.00	16[45]
$62,893 - $76,215	$72.05	283.88	6.80	30[46]
$76,216 - $137,709	$69.89	240.61	7.06	16[47]

Census Blocks Served by a Sole Provider

The Act requires a determination of what census blocks are served by a sole provider.[48] The Department performed an analysis to determine that 12,955 census blocks out of a total 288,819 census blocks are currently served by only one ISP. Including a list of those census blocks here would be voluminous.

As in previous years, the Department conducted an analysis to determine, on a county-level basis, the number of address points served by a sole high-speed broadband provider. The

[45] Allegany, Bronx, Broome, Cattaraugus, Chautauqua, Chemung, Chenango, Delaware, Franklin, Fulton, Jefferson, Montgomery, Orleans, Schuyler, St. Lawrence and Steuben counties.

[46] Cayuga, Clinton, Cortland, Erie, Essex, Genesee, Greene, Hamilton, Herkimer, Kings, Lewis, Livingston, Madison, Monroe, Niagara, Oneida, Onondaga, Oswego, Otsego, Schenectady, Schoharie, Seneca, Steuben, Sullivan, Tioga, Tompkins, Warren, Washington, Wayne, Wyoming and Yates counties.

[47] Albany, Columbia, Dutchess, Nassau, New York, Ontario, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Suffolk, Ulster and Westchester counties.

[48] PSL §224-c(2)(a).

following chart provides, by county, the total number of address points, the number of address points served, the number of address points served by one high-speed wired or fixed wireless provider, and the number of address points served by more than one high-speed wired or fixed wireless provider. Statewide, approximately 33% of address points are served by only one wired or fixed wireless high-speed provider while approximately 64% of address points are served by more than one provider.

NAME	Total Address Points	Total Served Address Points	%	Providers Per County	Served Address Points - More than One Provider	%	Served Address Points - One Provider	%
Albany	117,922	115,125	97.63	9	81,347	68.98	33,778	28.64
Allegany	27,517	24,872	90.39	6	7,414	26.94	17,458	63.44
Bronx	105,610	105,408	99.81	9	98,401	93.17	7,007	6.63
Broome	88,508	84,478	95.45	11	31,526	35.62	52,952	59.83
Cattaraugus	40,573	38,617	95.18	9	22,060	54.37	16,557	40.81
Cayuga	40,863	38,949	95.32	9	23,618	57.80	15,331	37.52
Chautauqua	63,727	59,123	92.78	7	37,883	59.45	21,240	33.33
Chemung	38,801	37,908	97.70	7	17,867	46.05	20,041	51.65
Chenango	26,651	23,339	87.57	10	9,717	36.46	13,622	51.11
Clinton	36,968	35,381	95.71	7	20,359	55.07	15,022	40.64
Columbia	31,223	30,399	97.36	9	13,682	43.82	16,717	53.54
Cortland	18,961	18,377	96.92	7	6,907	36.43	11,470	60.49
Delaware	29,019	27,498	94.76	10	7,752	26.71	19,746	68.05
Dutchess	111,374	107,387	96.42	10	55,726	50.04	51,661	46.39
Erie	356,800	352,764	98.87	7	244,504	68.53	108,260	30.34
Essex	26,727	23,532	88.05	4	6,966	26.06	16,566	61.98
Franklin	24,838	21,343	85.93	4	3,514	14.15	17,829	71.78
Fulton	25,493	24,117	94.60	3	9,290	36.44	14,827	58.16
Genesee	23,984	22,872	95.36	4	10,883	45.38	11,989	49.99
Greene	30,027	28,523	94.99	4	5,687	18.94	22,836	76.05
Hamilton	8,066	6,436	79.79	5	1,191	14.77	5,245	65.03
Herkimer	33,726	30,239	89.66	6	7,753	22.99	22,486	66.67
Jefferson	53,595	51,050	95.25	5	8,963	16.72	42,087	78.53
Kings	308,710	308,575	99.96	11	288,760	93.54	19,815	6.42
Lewis	17,811	14,200	79.73	5	3,528	19.81	10,672	59.92
Livingston	26,638	23,773	89.24	6	8,679	32.58	15,094	56.66
Madison	31,274	29,759	95.16	8	8,936	28.57	20,823	66.58
Monroe	304,131	301,041	98.98	6	218,757	71.93	82,284	27.06
Montgomery	20,595	18,778	91.18	5	6,398	31.07	12,380	60.11
Nassau	420,083	419,536	99.87	5	411,462	97.95	8,074	1.92
New York	62,860	62,378	99.23	11	55,882	88.90	6,496	10.33
Niagara	94,738	93,289	98.47	5	27,136	28.64	66,153	69.83
Oneida	88,925	84,613	95.15	8	30,104	33.85	54,509	61.30
Onondaga	189,048	186,494	98.65	8	141,654	74.93	44,840	23.72
Ontario	49,845	47,432	95.16	10	32,555	65.31	14,877	29.85

NAME	Total Address Points	Total Served Address Points	%	Providers Per County	Served Address Points - More than One Provider	%	Served Address Points - One Provider	%
Orange	134,115	130,160	97.05	7	55,799	41.61	74,361	55.45
Orleans	18,316	17,119	93.46	3	1,987	10.85	15,132	82.62
Oswego	54,071	52,451	97.00	6	20,101	37.18	32,350	59.83
Otsego	32,918	28,752	87.34	7	6,472	19.66	22,280	67.68
Putnam	40,847	40,356	98.80	5	27,758	67.96	12,598	30.84
Queens	360,684	360,391	99.92	8	349,516	96.90	10,875	3.02
Rensselaer	64,058	63,211	98.68	8	26,398	41.21	36,813	57.47
Richmond	129,797	129,748	99.96	2	128,127	98.71	1,621	1.25
Rockland	95,882	93,996	98.03	4	85,959	89.65	8,037	8.38
Saratoga	100,806	98,265	97.48	6	30,245	30.00	68,020	67.48
Schenectady	55,219	54,916	99.45	6	39,991	72.42	14,925	27.03
Schoharie	17,729	16,690	94.14	6	6,055	34.15	10,635	59.99
Schuyler	10,603	9,577	90.32	7	5,623	53.03	3,954	37.29
Seneca	14,704	14,132	96.11	8	9,337	63.50	4,795	32.61
St Lawrence	54,063	48,055	88.89	9	14,632	27.06	33,423	61.82
Steuben	53,083	47,005	88.55	7	23,506	44.28	23,499	44.27
Suffolk	537,566	533,195	99.19	3	326,032	60.65	207,163	38.54
Sullivan	52,903	50,221	94.93	5	5,824	11.01	44,397	83.92
Tioga	21,489	20,364	94.76	9	5,551	25.83	14,813	68.93
Tompkins	35,210	33,607	95.45	12	9,510	27.01	24,097	68.44
Ulster	87,897	85,051	96.76	8	13,661	15.54	71,390	81.22
Warren	38,299	36,130	94.34	6	7,274	18.99	28,856	75.34
Washington	29,046	26,525	91.32	6	8,999	30.98	17,526	60.34
Wayne	38,963	35,722	91.68	10	13,206	33.89	22,516	57.79
Westchester	235,172	233,621	99.34	8	210,253	89.40	23,368	9.94
Wyoming	17,695	15,554	87.90	6	4,001	22.61	11,553	65.29
Yates	13,738	11,960	87.06	7	4,380	31.88	7,580	55.18
Total	5,320,504	5,184,379	97.44		3,407,058	64.04	1,777,321	33.41

Assessment of Negative Social or Economic Impact on Communities Caused by Insufficient Access to Broadband Service

Areas identified as unserved, or underserved, are presumptively considered to be at an economic and social disadvantage. Availability of high-speed broadband is a critical component of economic development and a community's ability to attract and retain industry. Rural areas without broadband infrastructure - and households and businesses that cannot afford broadband - simply cannot thrive in the modern economy.

Overcoming Potential Barriers to Broadband Deployment

The Act further directs the Commission to "assess any state regulatory and statutory barriers related to the delivery of comprehensive statewide access to high-speed internet."[49] Although there were no additional State regulatory or statutory barriers identified this year, there was progress made on barriers identified in last year's report, as discussed previously in Part Two.

Allegations of Franchise Violations

The Department did not receive any allegations of noncompliance with cable franchise agreements that have impacted internet access, and thus neither the Commission nor the Department have taken any related enforcement action during the study year.

Part Four – Future Policy Considerations

The Department will continue to seek out opportunities to implement broadband affordability programs to the extent the law provides, particularly given the recent expiration of the FCC's ACP broadband discounts. In the interim, the Department will continue to serve as a resource to consumers who are seeking to learn more about current broadband affordability options. As discussed above, several ISPs throughout the State presently have low-income options available, and some ISPs are temporarily continuing some form of service discount for previous ACP-enrolled subscribers.

The Department will also continue to seek opportunities to facilitate broadband deployment in remote areas as demonstrated by the work of the Commission, ConnectALL, and NYSDOT.

The Department will work to refine its data to produce pertinent and meaningful results that will help shape future policies surrounding broadband availability, cost, and reliability. In addition, the Department will consider adding a fourth statistical category entitled, "Competitively Served" to illustrate the existence of more than one high-speed broadband ISP at an address level.

The Department will also consider requiring all ISPs to provide details regarding the differences in their reported passings year-over-year. Specifically, delineating whether changes in their data submissions are due to new broadband infrastructure investment or refinement of their previous year's data.

Finally, through the ongoing field inspection program for new broadband deployment, discussed above, the Department will continue its efforts to correct inaccuracies on the Map throughout the coming year.

[49] PSL §244-c(2)(a).

Appendix A – Regional Survey of Internet Service Pricing vs. County Median Income

The table below shows the average price and average speed offered by the ISPs in each county for the stand-alone internet service with download speed closest to 100 Mbps. These county averages are shown in comparison to the median income level for each county as reported in the Census Bureau's 2020 American Community Survey.

NAME	Weighted Average Price Per County	Weighted Average Speed (Mbps)	Providers Per County	Median Household Income (2022 dollars)
Albany	$69.62	252.70	9	78,829
Allegany	$79.16	192.59	6	58,725
Bronx	$79.83	198.02	9	47,036
Broome	$72.23	295.39	11	58,317
Cattaraugus	$71.87	182.11	9	56,889
Cayuga	$63.70	270.26	9	63,227
Chautauqua	$70.64	319.04	7	54,625
Chemung	$66.89	234.82	7	61,358
Chenango	$65.48	316.61	10	61,741
Clinton	$72.67	265.02	7	67,097
Columbia	$74.01	381.72	9	81,741
Cortland	$67.01	301.65	7	65,029
Delaware	$78.09	311.94	10	58,317
Dutchess	$71.50	174.93	10	94,578
Erie	$69.05	265.45	7	68,014
Essex	$88.17	272.42	4	68,090
Franklin	$84.93	237.76	4	60,270
Fulton	$69.95	310.89	3	60,557
Genesee	$66.64	242.55	4	68,178
Greene	$81.45	333.77	4	70,294
Hamilton	$58.49	378.72	5	66,891
Herkimer	$75.20	307.81	6	68,104
Jefferson	$81.38	283.52	5	62,782
Kings	$69.76	171.32	11	74,692
Lewis	$70.86	329.53	5	64,401
Livingston	$72.87	299.49	6	70,443
Madison	$75.80	295.09	8	68,869
Monroe	$63.71	336.96	6	71,450
Montgomery	$71.78	304.93	5	58,033
Nassau	$73.05	154.28	5	137,709
New York	$56.00	239.80	11	99,880
Niagara	$76.14	275.11	5	65,882

NAME	Weighted Average Price Per County	Weighted Average Speed (Mbps)	Providers Per County	Median Household Income (2022 dollars)
Oneida	$71.25	274.42	8	66,402
Onondaga	$67.36	260.52	8	71,479
Ontario	$64.12	289.27	10	76,603
Orange	$75.37	278.32	7	91,806
Orleans	$76.79	289.32	3	61,069
Oswego	$75.05	319.50	6	65,054
Otsego	$74.10	255.81	7	65,778
Putnam	$47.68	155.29	5	120,970
Queens	$62.89	248.48	8	82,431
Rensselaer	$73.17	260.13	8	83,734
Richmond	$66.68	247.67	2	96,185
Rockland	$74.21	199.54	4	106,173
Saratoga	$75.08	286.83	6	97,038
Schenectady	$68.56	252.41	6	75,056
Schoharie	$73.90	374.99	6	71,479
Schuyler	$51.90	353.99	7	61,316
Seneca	$69.58	255.17	8	64,050
St Lawrence	$79.87	227.14	9	58,339
Steuben	$65.48	196.45	7	62,506
Suffolk	$79.45	200.00	3	122,498
Sullivan	$80.55	295.74	5	67,841
Tioga	$67.20	258.92	9	70,427
Tompkins	$71.69	299.41	12	69,995
Ulster	$81.03	279.02	8	77,197
Warren	$78.37	278.73	6	74,531
Washington	$76.61	232.74	6	68,703
Wayne	$74.68	272.76	10	71,007
Westchester	$74.35	201.84	8	114,651
Wyoming	$74.45	268.37	6	65,066
Yates	$66.65	271.76	7	63,974