

**Broadband Florida Q2 2013 PPR Report Details  
Project Attachment – Broadband Mapping**

**Question 2: Describe any additional project milestones that have been accomplished over this reporting period (Ex. Updates to state broadband maps and websites, map outreach activities)**

During the second quarter of 2013 the mapping project manager focused on analysis of the April submission data, provider participation, and obtaining further details on the Community Anchor Institutions broadband coverage and speeds. The Department also continued work on identifying additional broadband service providers, outreach and update of provider contact information, refinement and design of the Broadband Florida map viewer, and data verification.

Provider Participation

Provider participation analysis occurred during the second quarter of 2013. The Department and BroadMap prepared the Florida Provider Participation Plan, a working document to implement steps to increase provider participation for each data submission. The plan's goal is to find new providers, increase interaction with existing providers, and maintain solid working relationships with all providers. Outreach plans identified for responsive, non-responsive, and new providers are:

Outreach plan for existing responsive providers:

- Send thank you cards for providing data during the last submission.
- Call the providers on the process of the data submission to determine what they liked about it and if there is room for improvement. Determine if they would like further training on the Provider Portal. Also, personally thank them for their participation.
- If Provider Portal training is requested, set up WebEx's and one-on-ones with the provider(s).
- Promote provider validation through the Provider Portal.
- Public broadcast (commercial) promoting State Site, which in turn, would draw attention of the providers.

Outreach plan for existing non-responsive providers:

- Outreach to the non-responsive providers and determine how we can help them respond to the data submittals (i.e. what are the issues they have).
- Determine how we can overcome the issues the providers have.
- Work with the providers on NDAs with the State.
- Work with the providers on saving them time for data submittals; provide various options for data submittal such as Excel, pdf, kml, shapefiles, etc.
- Promote provider validation through the Provider Portal and responses to images sent by email. If Provider Portal training is requested, set up WebEx's and one-on-ones with the provider(s).

Outreach plan for new providers:

- Obtain contact information.
- Once contact information is obtained call the provider and discuss the SBI and the Florida Broadband Mapping Program and their participation. Discuss why their participation is

important. Discuss advertising and use of the mapping and printing capabilities of the Provider Portal.

- Determine how we can overcome any issues the providers have.
- Work with the providers on NDAs with the State.
- Work with the providers on saving them time for data submittals; provide various options for data submittal such as Excel, pdf, kml, shapefiles, etc.
- Promote provider validation through the Provider Portal. If Provider Portal training is requested, set up Webexes and one on ones with the provider(s).
- FCC will be using this data to identify un-served areas that require funding for broadband infrastructure build out; we want to make sure all providers are represented for the upcoming data submission so their areas aren't within that un-served classification.

#### Data Verification

Per the new contract agreement with BroadMap LLC., Florida requires new verification elements that it implemented and will be implementing going forward. These elements include:

- Sourcing Quality Control (QC)
- Internal Data Consistency Check - Internal Model QC
- Carrier Confirmation - Provider Validation
- NTIA Model Consistency
- Public Review - Crowd Sourcing
- Anchor Institution Review
- Expert Review - Subject Matter Expert Review
- Submission Receipt
- Purchasing Datasets - 3rd Party Dataset Comparison
- Web Surveys - Web Scraping
- Confidence Value

Consumer feedback in the form of broadband inquiries via the online mapping tool will also be collected. These inquiries will represent any type of communications received from the public regarding broadband service. The online mapping site also includes a speed test application that will collect data from consumers. The application will collect provider identification data which will aid in the identification of new and previously unknown providers as well as verification of known provider broadband availability.

#### Other Activities during this Quarter

- The Department obtained data sets last quarter on broadband infrastructure including fiber optic routes, fiber lit buildings, cell tower locations, wireline and wireless coverage, submarine cables, and wire centers from GeoTel Communications, LLC. It analyzed the data received and worked with BroadMap to identify the process of Third Party verification utilizing GeoTel data to compare Central Offices, Fiber Lit Buildings, Tower locations, and Telecom Providers to Florida's provider supplied data.
- Last quarter it worked with the Department of Education on a school survey obtaining broadband information including subscribed bandwidth and speed tests by school location for over 3,000

schools in Florida. This quarter continued its working relationship with the Department of Education to assist in specific information requests during their yearly school surveys.

- To continue building on the broadband assessment of Florida's public schools, the Department worked with the Department of Education and the state legislature regarding broadband service coverage, speed availability, and an assessment of E-rate funding for broadband coverage and infrastructure. It identified tools for tracking E-rate funding and mapping layers which would visually display the information to provide an informative picture by school, school district, and library.
- The Department assisted the Miami-Dade County Information Technology Department in their request of county specific data to determine broadband fiber optics coverage and broadband speeds. The Miami-Dade County Commissioner's Office will utilize this information to determine areas without broadband service.

#### Upcoming Mapping Activities

The Department is currently exploring ways in which to improve the accuracy and usability of the data collected through the program. Possible ideas include:

- Purchase of Wi-Fi hotspots to display on the Florida map.
- A state technology innovation challenge that would identify ways to utilize the data for different purposes and produce an application for mobile devices.
- Coordinate with the Florida Local Government Information Systems Association to collect connectivity data from community anchor institutions.
- Obtaining data using a screen scraper utility which directly obtains information from the USAC database and will also be providing a CAI survey to collect additional information.
- An iOS Integration Project is to enable the Florida Broadband Map to be accessible to Apple Mobile devices.
- Provide E-rate layers and analysis for visually tracking the progress made by schools and libraries.
- Provide Census layers to aid in the analysis of areas which contain inadequate broadband coverage and the possible causes, such as, remote rural areas, education information, and poverty percentage.

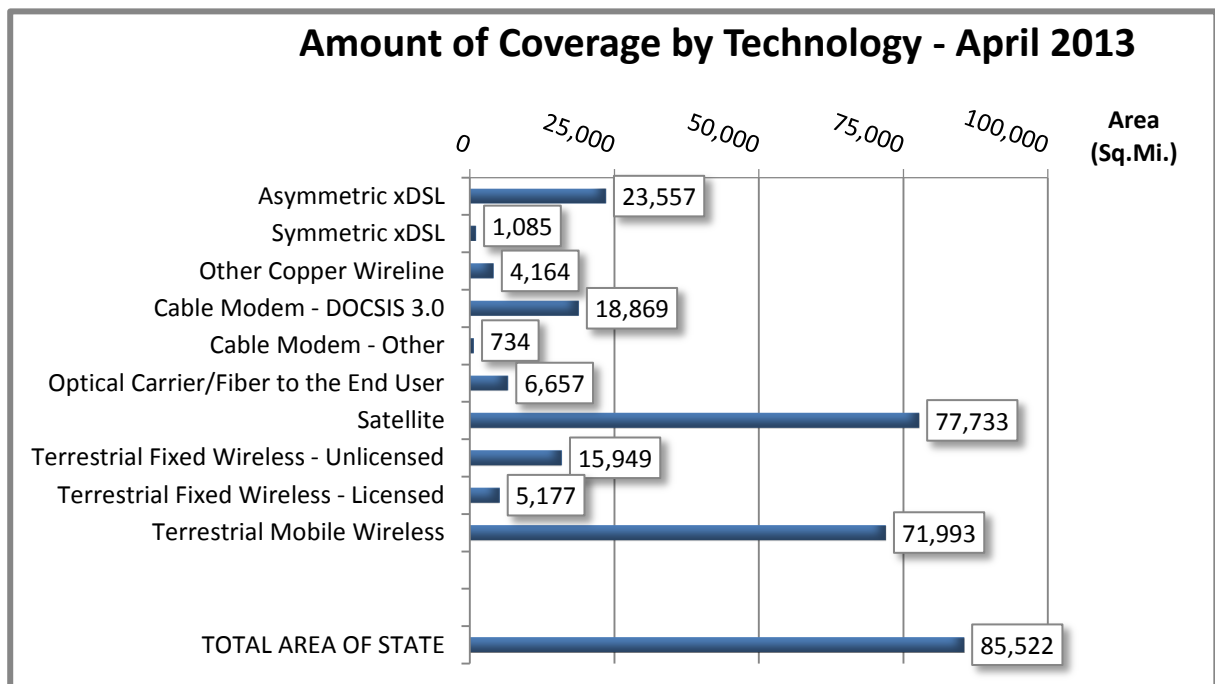
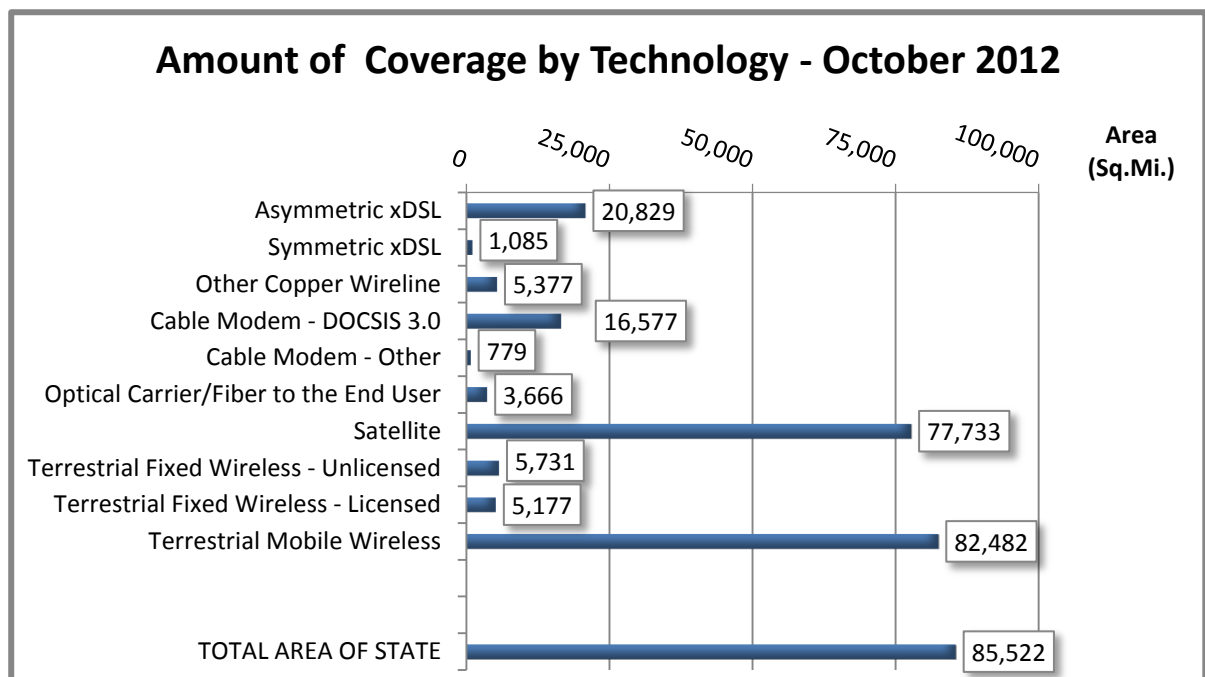
#### Data Analysis

New data is collected and analyzed every 6 months, to determine the needs and availability of both transmission technology and broadband speed in the state. The Department and BroadMap compiled graphs and charts to compare the data between the last two submissions to NTIA: April 2013 and October 2012.

Also, during the April submission new layers were identified such as unserved by technology type. As this is a new classification of the data, October 2012 graphs for those layers are not included, but comparisons will be available between April 2013 and October 2013 for the October 2013 submission.

### Coverage Area by Transmission Technology

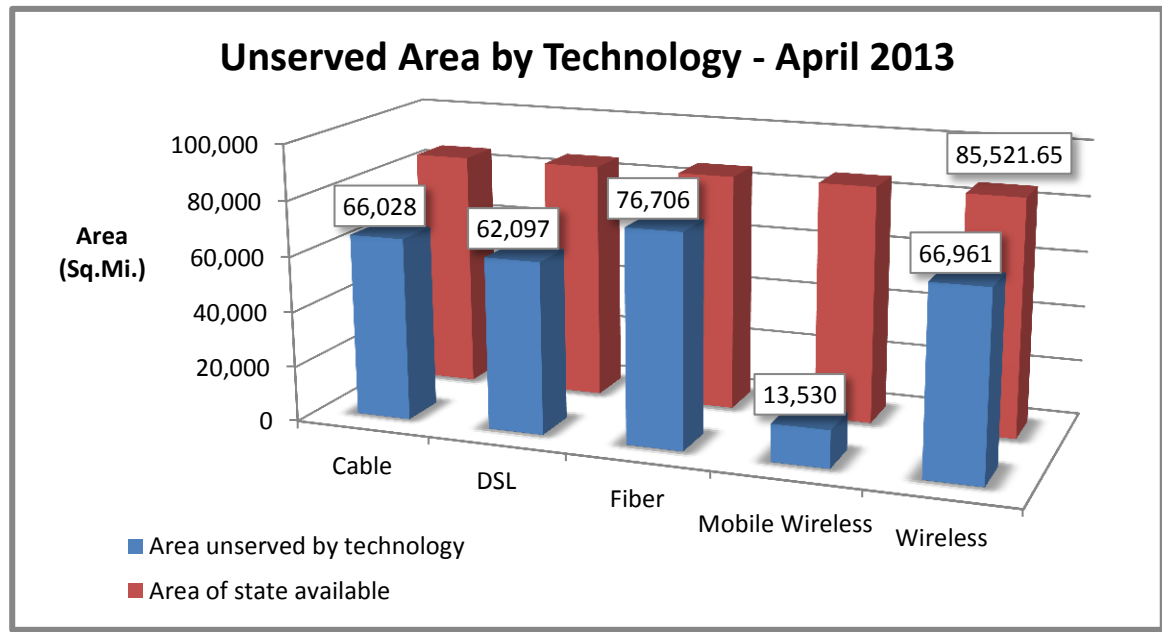
The graphs below represent the area in square miles that broadband coverage is available for by transmission technology.



From our data, we can see that mobile coverage was refined between the submissions, while unlicensed terrestrial fixed wireless broadband service increased three-fold. As for wireline transmissions, fiber almost doubled in availability, with increases in asymmetrical DSL and DOCSIS cable modem as well.

### Coverage Area Unserved by Technology Type

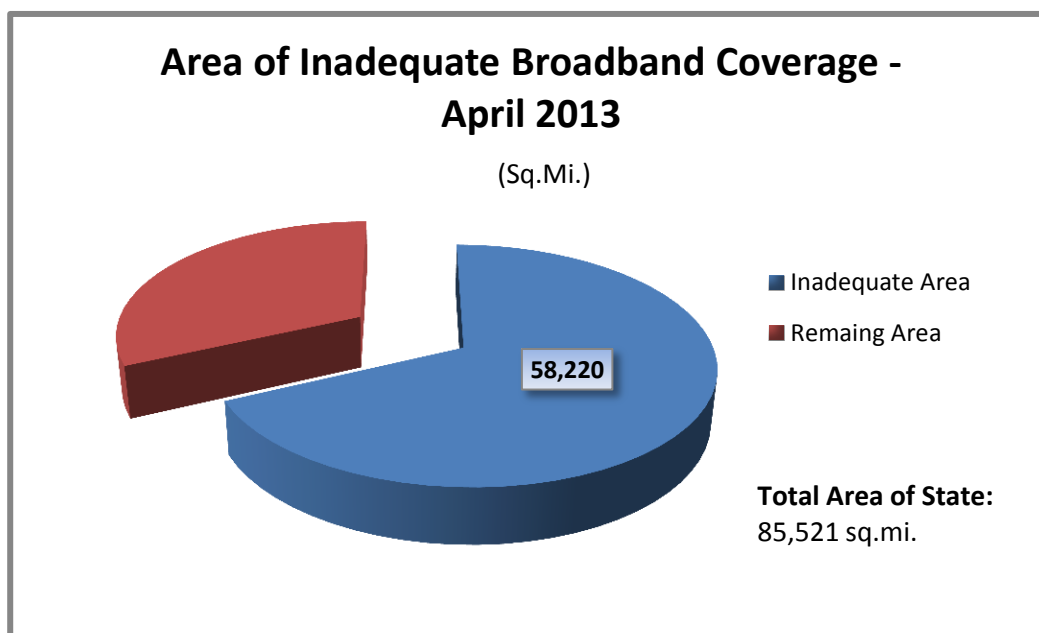
The graph below depicts unserved area in square miles by each technology type in the state. This data is from the April 2013 submission, and can be compared to the overall area of the state. From this data, new markets of growth can be determined for different broadband providers by Technology.



While mobile wireless is highly available across the state, all other types of broadband technology have plenty of room for growth and new providers into the market.

### Area of Inadequate Broadband Coverage

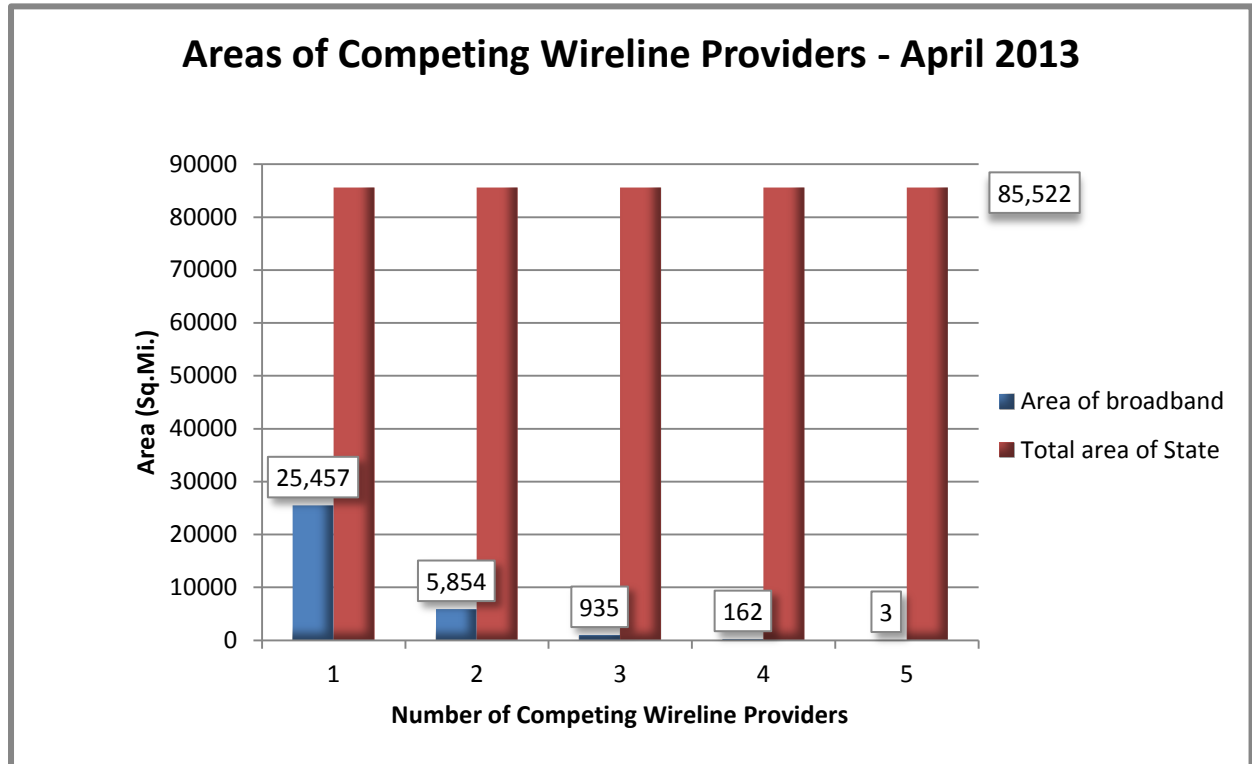
The chart below depicts the area in square miles of inadequate wireline broadband coverage in the state. This data is from the April 2013 data submission. The Department defined Inadequate Broadband Coverage as areas with less than 3Mbps maximum average download speeds available for wireline broadband coverage. This area can be compared to future submissions to determine growth in speed availability.



From the results, over half of the state has speeds less than 3Mbps available. With higher speed capabilities available for wireline, this could be a market for new providers, or give existing providers the initiative to compete with increasing speeds.

### Coverage Area by Number of Wireline Providers

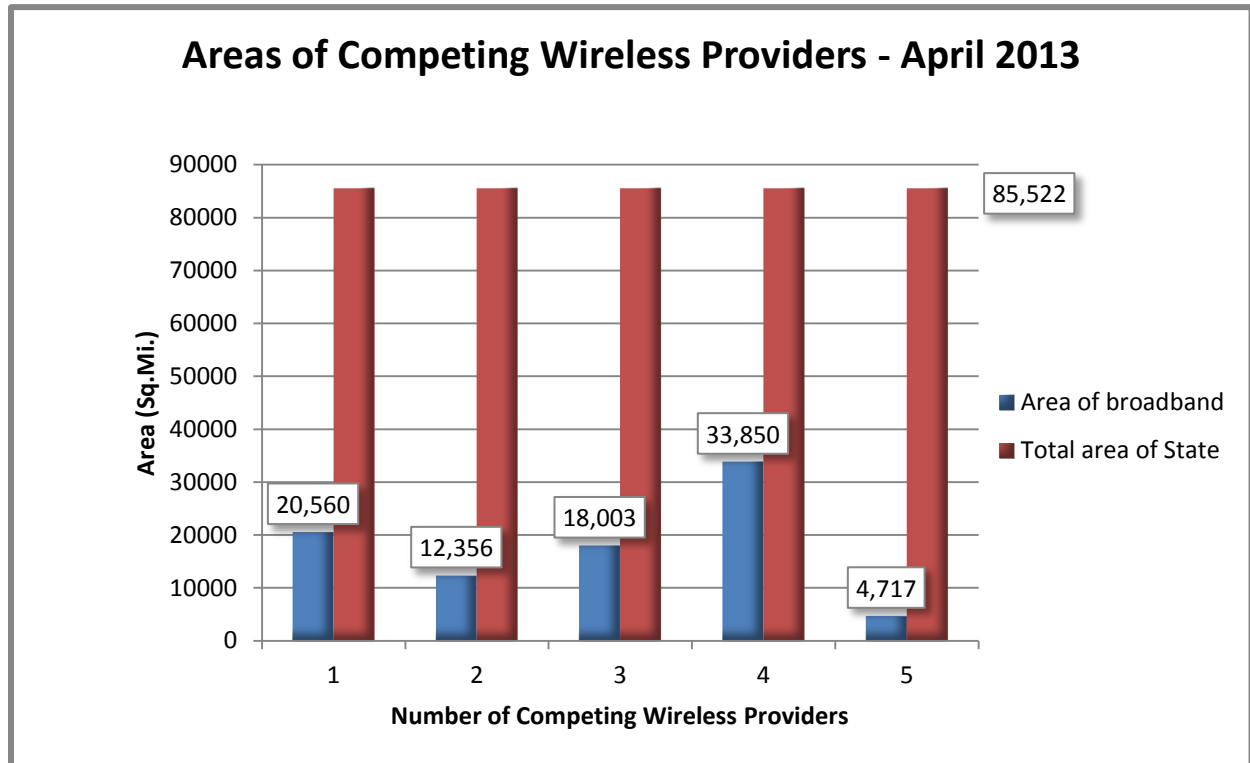
Below is a chart of the different areas of broadband coverage by number of competing wireline providers in the state. This data is from April 2013 and areas are in square miles. Each competing area is compared to the total area of the state. From this information, one can decipher the level of competition in this market.



From this data, it appears there is very little competition occurring for wireline broadband providers overall. New providers offering cable, DSL, or fiber have room to step in and drive market prices down or offer competing speeds.

### Coverage Area by Number of Wireless Providers

Below is a chart of the different areas of broadband coverage by number of competing wireless providers in the state. This data is from April 2013 and areas are in square miles. Each competing area is compared to the total area of the state. From this information, one can decipher the level of competition in this market.



From this data it is apparent that competition takes a large part in the wireless market. This allows consumers more choice in the wireless products they choose, as well as competitive pricing. This data can be compared to future submissions to see which direction competition is moving and whether or not new providers have an advantage to step in.

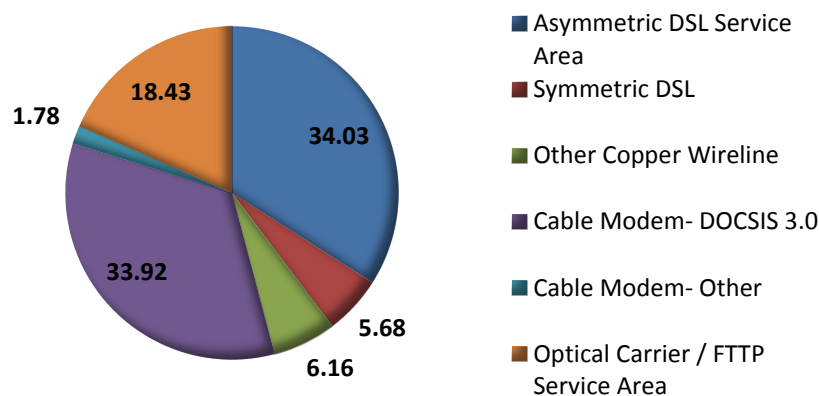


### Percent of Broadband Availability by Transmission Technology

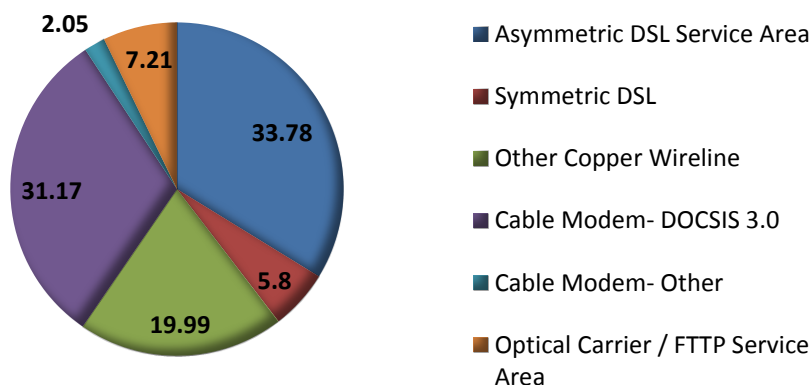
The graphs below represent the percent of the overall wireline broadband availability by transmission technology in each block area of the state. The percentage areas are determined by the level of technology infrastructure and possible speed capacity potential by the hierarchy of technology as follows:

1. Optical Carrier/FTTP Service Area
2. Cable Modem – DOCSIS 3.0
3. Cable Modem – Other
4. Asymmetric DSL
5. Symmetric DSL
6. Other Copper Wireline

**Percent of Wireline Broadband Availability  
by Transmission Technology- April 2013**



**Percent of Wireline Broadband Availability  
by Transmission Technology- October 2012**

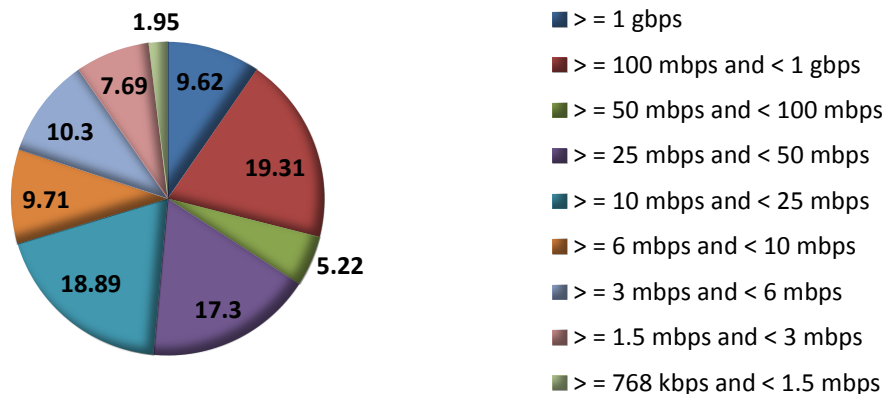


### Percent of Broadband Availability by Highest Speed Available

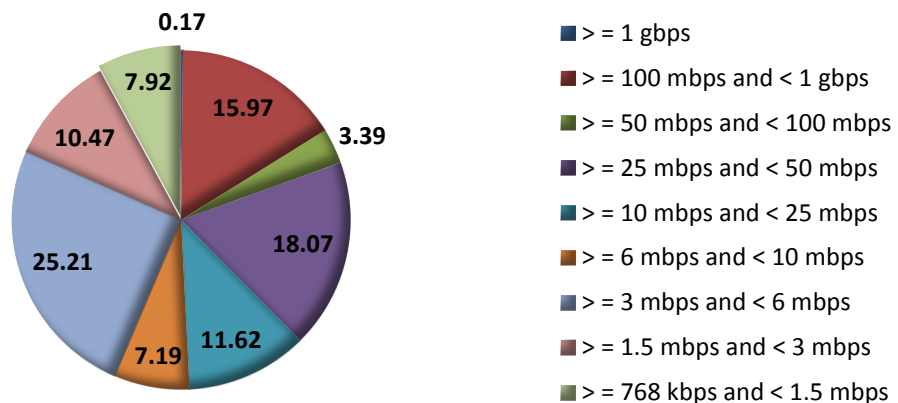
The graphs below represent the percent of the overall wireline broadband availability by greatest available broadband speeds in each block area of the state. This data is being compared between the October 2012 and April 2013 data submissions.

Without taking into account which technology customers are using, there is a great variation in speeds available for use. While speeds of 768 kbps and above have been available to almost all areas in the state, these speeds do not cover the necessities by most customers to be able to send and receive emails, as well as businesses that require the highest available speeds to perform teleconferencing and other broadband capabilities. For this reason, it is important to gain an understanding of the availability for these greater speeds across the state.

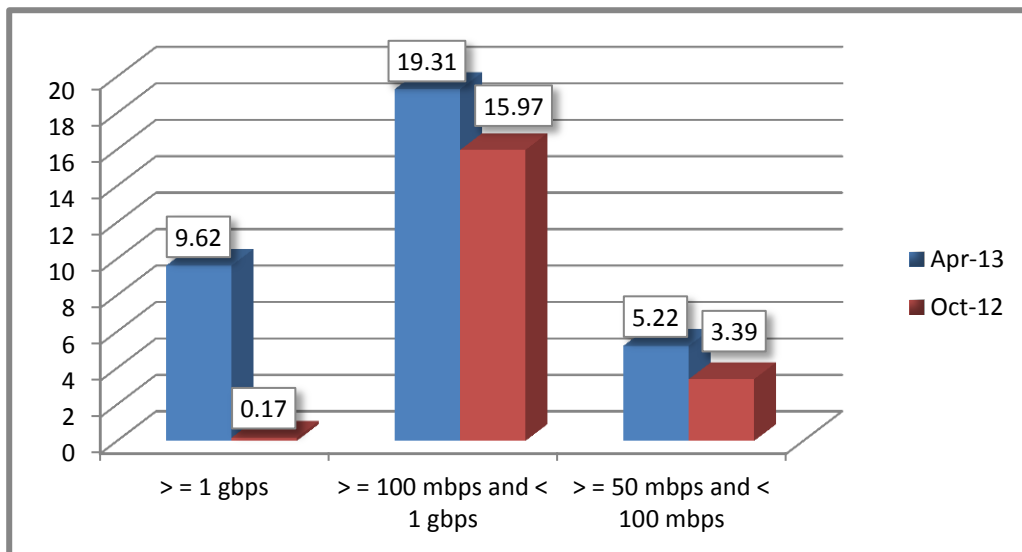
#### Percent of Wireline Broadband Availability by Highest Speed Available - April 2013



#### Percent of Wireline Broadband Availability by Highest Speed Available - October 2012



Between October of 2012 and April of 2013, there has been a decrease in the areas with lower speeds available, while the highest speeds of  $\geq 1$  gbps has gone from less than a quarter of a percent to almost 10 percent area of the state wireline broadband. In the following chart, you can see how much the highest speeds have increased in availability over a 6 month period.



From this analysis, we can see that the state of Florida is making great advances in speeds and technologies across the board. However, with the highest speed at an availability of 9.62% of all wireline, there is ample room for growth, inadequate wireline speed availability, and largely unserved area in many of the technology types, there is ample room for growth and more providers to compete in this market.