ATTENDANCE:

MEMBERS:
Clint Aurand, Armagh Township
Craig Bubb, MABL
Doug Cunningham, Mifflin County School District
Michael Hain, Nittany Media
John Rhone, Wayne Township
Kristen Ritchey, Comcast
Kay Semler, Mifflin County Planning Commission
Michael Tate, GME

OTHERS:
Lori Comp, Senator Corman's Office
Stephen Dunkle, Mifflin County Commissioner
Nick Felice, MCIDC
Chastity Fultz, Mifflin County Planning and Development Office
Bill Gomes, Mifflin County Planning and Development Office
Brad Kerstetter, Juniata County
Kevin Kodish, Mifflin County Commissioner
Mark Long, Representative Benninghoff's Office
Liz Lose, Centre County Planning via teleconference
Sascha Meinrath, Palmer Chair in Telecommunications at Penn State's Donald P. Bellisario College of
        Communications
Donald Schwartz, Bedford County Planning via teleconference
Eric Welty, Noovis via teleconference

Call to Order: Bill Gomes called the meeting to order at 3:35 p.m. and reminded everyone to sign the attendance sheet. Everyone introduced themselves.

Approval of Minutes: Kay Semler motioned to approve the April meeting minutes. Doug Cunningham seconded the motion. All members voted aye.

Center for Rural PA report, Broadband Accessibility and Access in Rural Pennsylvania: Sascha Meinrath provided an overview of the recently completed report from Center for Rural PA, Broadband Accessibility and Access in Rural Pennsylvania. Mr. Meinrath explained that a consortium of six partners all over the country were involved in this report. He has been working on broadband mapping since 2006 and explained that work up until 2010 was through private endeavors. In 2010, a national broadband plan was developed, which jump started broadband mapping efforts. A variety of people developed this plan and each wanted to map broadband in different ways. The telephone companies didn't want to collect actual data since they had other things they could use. They decided to go with the telephone companies'

methodology while knowing what was being designed would be ineffective and not good for mapping on the ground reality. It is great data for mapping what internet service providers claim is available.

In February 2018, the FCC stated that 92.3% of Americans have access to broadband connectivity. On the ground reality is quite different. The FCC spent $350 million to create inaccurate maps. Official data from FCC Form 477 is useful for advertised speeds. However, for the past 10 years, M-Lab (Mr. Meinrath's company) has been collecting data of actual speeds and availability based on customers actively running speed tests. This data has been used to develop maps to document areas of agreement and discrepancy between the two forms of data collection. M-Lab's initial goal was to obtain 1,000,000 tests. From 2009 – 2017, 5,645,084 tests were conducted testing upload speeds and 5,113,791 tests were conducted testing download speeds. Due to a huge upsurge in interest in broadband development, over 11 million speed tests have been run just in Pennsylvania in 2018. On a global scale, M-Lab receives 1-3 million tests per day.

M-Lab was able to gather this information by building their own website, http://broadbandtest.us/. Because Google is a partner, this website shows up at the top of Google searches for "broadband speed test" and can be run anywhere. M-Lab used completely open technology to collect the data, including open source tools, open methodology, open data, all scripts are open, and all source codes are open. M-Lab wants people to critique, provide feedback, improve things and identify where things are wrong so that they can fix it.

Pennsylvania data through the FCC, which is obtained as self-reported data from internet service providers, shows 100% availability of speeds at or greater than 25 Mbps. This is what is being claimed as available. M-Lab initial results show no speeds faster than 25 Mbps, and the further you zoom in on the map shows slower speeds.

Mifflin County FCC data demonstrates download speeds of equal to or greater than 25 Mbps throughout the county. M-Lab results demonstrated a median download speed of 5.5075 Mbps. The maps can zoom in closer by census tracts. One section northeast of Lewistown demonstrated increased speeds from June 2018 at 12 Mbps to December 2018 at 29 Mbps. This was further discussed and demonstrated to represent Atlantic Broadband offering new broadband service in this area in this timeframe at speeds up to 70 Mbps. Mr. Meinrath added that the Pennsylvanian median speed does not meet broadband connectivity. Very few places meet the definition of broadband throughout the state and most cluster around urban areas. The FCC maps also demonstrates faster speeds over time, especially in rural areas, but slower speeds in urban areas. The gap between what is being reported versus actual speed on the ground is growing. In rural communities, people are being told faster speeds are available, but people are not actually adopting those faster speeds. Similar results are also found across rural America. This same phenomenon is not seen in urban environments. Mr. Meinrath does not know what is driving the differences in rural and urban spaces, but thinks it may be partially due to price.

The implications of these results demonstrate that national measures are inaccurate and are worsening in their differential inaccuracy. Grant funding eligibility requirements should not be based on these official maps that are increasingly inaccurate. More documentation is needed. Mr. Meinrath is releasing all data collected both freely and publicly. Results can be viewed at https://pa.broadbandtest.us. This data is useful to show improvement and can viewed in a variety of ways. Raw data is available for future analysis as well.

Next steps include further automation of data collection and visualization and refining the mapping portal to create additional layers and eligibility maps. They would like to include more partners to work on this. Pricing must also be looked at since this could be partially driving this divide as price drives adoption of faster speeds. The next layers of the map need to look at costs. Further exploration of the data to develop eligibility maps for grant programs is also needed.

Next steps for decision makers include not just looking at this data, but continuing the process of informed data collection for informed data driven decision making. Broadband pricing is a huge unknown at this time and is the logical place to put the next foot forward in terms of understanding what is happening on the ground. Mr. Meinrath hopes to dive into this in the next few years. ISPs can play a huge role in this. He also acknowledged that M-Lab collects a variety of information to provide proper network diagnostics, speed is only one of those variables. This also necessitates lots of resources to investigate the data. He also does not see a reason why there is a difference between rural and urban communities. Further investigation is desperately needed to determine the root cause.

Mr. Meinrath's presentation to the committee can be viewed at tiny.cc\2019mifflin. He also encouraged everyone to go out and view the full report and provide feedback. He also encouraged anyone to contact him at sascha@psu.edu.

Mifflin County Rural Broadband Initiative Report: Eric Welty of Noovis presented his final report to the committee. This report is a more in-depth evaluation of the pricing structures he presented at last month's meeting. Mr. Welty worked with Bill Gomes to refine the report to include references from the previous survey the committee conducted along with the study Comcast conducted in Armagh Township. He noted a hefty cost per mile associated with broadband expansion, including engineering fees and make ready work. House densities always determine whether or not it is worth it to expand service. The major takeaways included that despite housing densities varying, the cost per mile did not differ much at $20,000 - $25,000 to place new infrastructure. Engineering and make ready work can easily increase costs to $30,000 or more, making it even more difficult to justify cost of expansion. He added that there are no easy answers. The final outcome will likely involve some kind of cooperation between public and private sectors.

Kristen Ritchey noted that costs are initially reviewed at a higher level and when details are reviewed at a closer level, costs can sometimes double. Michael Hain added that the cost of the last mile keeps increasing. He added that a tax incentive would help to extending service into these areas that are more difficult to reach.

Bill Gomes shared the Rural Broadband Cooperative, which has been previously discussed, is working to expand service to parts of Menno and Union Townships. Mr. Hain mentioned that there could be a bandwidth limitation for future growth. Bill is concerned the organization is currently all volunteer-based and is not certain how this can be sustained.

SEDA-COG recently developed another option for broadband expansion with financial support via a low-interest loan program in Mifflin, Juniata and Perry Counties. It appears to be tied mainly to wireless at this point. Michael Hain added that wireless is a good option for the last mile where you can't afford the poles. Bill asked Michael what would be involved to extend service to parts of Decatur Township from their service in Snyder County. Nittany Media has cable towards Bannerville and will look at the area again.

Bill gave the committee two weeks to review the Noovis report and provide any corrections.

Other Business: Kay Semler recently visited Bucks County where 5G was available, but it was not available in the entire house. The homeowners opted to not get this service. She was also recently in Europe and saw a front page article of US billionaires investing in broadband projects in Europe.

Next Meeting: September 18, 2019

Adjournment: The meeting adjourned at 4:51 p.m.