

Background

As Director of Planning and Development for Oglethorpe County, Amy Stone led the County's designation as a Georgia Broadband Ready Community, [the first in the state. Oglethorpe earned this designation](#) by passing an ordinance requiring the county government to decide whether to approve or deny broadband network projects within 10 days after their applications are deemed complete by the county. The ordinance also limits internet application fees to no more than \$100. Georgia [designates](#) all communities as Broadband Ready if they satisfy [O.C.G.A. §50-40-41](#). The broadband certification means internet projects in Oglethorpe will [receive priority](#) for potential future state funding for internet expansion in unserved rural areas, according to a bill passed by the Georgia General Assembly last year.

In 2018, [Oglethorpe County Economic Development Authority](#) created a Broadband Committee. In 2019, Oglethorpe designated \$350,000 for a pilot program to bring 25/3 broadband to 1,000 Oglethorpe County homes. Oglethorpe issued a [Request for Qualification](#) document to identify eligible providers that recently closed. In this role, Amy coordinated the committee, development of the Strategic Action Plan, [Broadband Survey results](#), and a Broadband Action and Deployment Report.

Establish Strategic Leadership

When Amy Stone joined Oglethorpe County as Director of Planning and Development, broadband access was a major talking point for local business and community leaders. Citizens attending County-Commission meetings continually raised issues around spotty service, high prices, and a lack of provider-options. However, the County didn't have any sense as to whether the people discontent with broadband were a vocal minority, or representative of a more widespread issue across Oglethorpe.

As a rural exurb for neighboring Athens, where the largest employer has seventy-five workers and the primary business is agriculture, Oglethorpe's low number of homes per square mile disincentivized investment by private Internet Service Providers (ISP). With a county-average of 15 homes per square mile buoyed by the county's four 1,000 person towns, Oglethorpe's housing-density is just above the average for county's unserved by broadband, according to the FCC (13.8 homes/sq.mile).¹ Broadband providers failed to invest in the most-rural and least-densely populated census blocks of the county out of fear of a potentially unfavorable business model. Although Oglethorpe County is rural, its also well-connected to business communities in Athens and Atlanta. As a bedroom community, Oglethorpe has attracted numerous wealthy retirees from the neighboring cities, including major business executives who have gone on to populate Oglethorpe's elected positions.

In February 2018, the Oglethorpe Development Authority and County Commissioners decided to identify the state of, and begin to address, the lack of investment by private ISPs in the county. The County Commissioners decided to prioritize broadband development above every other issue, including company retention and attraction, thinking the benefits of expanded broadband access outweighed any opportunity cost. One Development Authority Board Member, a former VP of Waffle House, pushed the Commissioners to adopt a quantifiable objective to measure success: that 90% of Oglethorpe County would have access to broadband at speeds of 25/3 Mbps. This number served as a rallying point for Oglethorpe County's broadband development efforts.

¹ <https://transition.fcc.gov/national-broadband-plan/broadband-availability-gap-paper.pdf>

Shortly after, Oglethorpe County formed a Broadband Committee to draft a high-level strategic plan. All seven members of the Development Authority Board joined the Committee, with Amy serving as the coordinator. The Committee decided it would be a “squeaky wheel,” raising the issue of under-developed broadband infrastructure in Oglethorpe County to everyone they knew in industry or the legislature, hoping to increase awareness and encourage private ISPs operating in Oglethorpe County to address the issue. Shortly after the 2018 founding of the Committee, FCC data showed that at least fifty-two percent of Oglethorpe County lacked access to FCC-defined broadband (25/3 Mbps).² Even then, Development Authority officials heard from Oglethorpe residents in Census blocks defined by the FCC as served by broadband providers that any broadband service was unavailable in their area. Information on the massive-lack of available broadband in Oglethorpe made the Committee-goal of 90% increasingly important and urgent.

After some “squeaking,” Oglethorpe Development Authority Officials finally got in contact with Windstream, the primary phone and internet provider in the area. Windstream had previously been Oglethorpe’s incumbent local provider for phone-service, and leveraged its existing infrastructure to become the area’s internet provider as well. Besides Windstream, there is scattered access provided by AT&T, Charter, and satellite internet in the county. Oglethorpe Development Authority officials broached Windstream about expanding their broadband infrastructure in Oglethorpe and even talked to ISPs in neighboring counties about expanding into Oglethorpe. Despite their best efforts, providers rebuked the Development Authority’s proposal, with their key concern being the profitability of any investment into the most-rural portions of Oglethorpe County.

Evaluating the Current State of Broadband Development

Amy and the Broadband Committee had thought that by being “squeaky” enough, they could encourage the development of broadband infrastructure in Oglethorpe. However, after the disinterest shown by private ISPs, the Committee realized they needed more data on the pervasiveness of poor internet access in Oglethorpe, and residents’ willingness to pay for improved service.

Broadband consultancy firm Open Broadband³ freely provided Amy with a survey to gain a more nuanced insight into the quality and affordability of internet services available in Oglethorpe. Amy deployed this survey in October 2018, eight months after the formation of the Committee. The Development Authority knew that some residents of the county would not be able to respond to the survey electronically, so in addition to posting the survey on all of the county’s relevant social media channels, they also posted a copy in the newspaper so folks could mail in or drop off their completed survey. The Development Authority pursued a strategy of in-person outreach, dropping off copies of surveys at government buildings, libraries, healthcare facilities and other community buildings, in addition to distributing copies to and collecting them from waiting-parents in the carpool lines of elementary and middle schools. As a result of their outreach efforts, the Committee had 700 survey responses, after quality-controlling the 900 submitted surveys for duplicates and address data.

² A 2020 map from the Georgia Broadband Deployment Initiative shows that 48% of locations in Oglethorpe County lack access to broadband. <https://broadband.georgia.gov/maps/gbdi-unserved-county>

³ <https://openbb.net/>

Amy and the Development Authority Team leveraged free and low-cost tools to create actionable insights into the availability and quality of internet across the county. Amy⁴ used Canva (free for non-profits)⁵ to design a Strategic Action Plan, Survey Monkey to create and deploy-online a survey, Heat Mapper⁶ and Excel to analyze survey results, and Flipsnack⁷ to create the final Deployment of Broadband Report on the state of broadband development in Oglethorpe. Insights from the survey include finding that population density most correlated with internet service dissatisfaction, and that internet speed and reliability were the primary causes for dissatisfaction over cost. Some of the most satisfied internet customers received fixed wireless broadband service from Verizon Mobile Wireless Internet. In the survey's free-response section, residents lamented how poor internet access spurred the failure of their business or caused them to fail college courses.

A key item included in the Open Broadband-developed survey were questions about residents' willingness to pay for internet services and the sort of activities they do on the internet. Community surveys on broadband access can encourage investment by ISPs by demonstrating the existence of a market, and that market's willingness to pay prices for levels of broadband service that make a feasible business model for ISPs to expand access. In these terms, The Committee's findings were promising. 88% of residents were willing to pay \$50-\$75 or more for reliable 25/3 broadband service, which would enable residents to do stream video and send/receive large emails. This \$75 price-point served as the maximum price a broadband provider could charge for 25/3 internet for fifteen years according to the RFQ Oglethorpe later published to deploy broadband infrastructure.

Again, Oglethorpe's Broadband Committee thought they could encourage private ISPs to invest in developing the county's broadband infrastructure to no avail. The Committee's notion they could "shame" providers into expanding access, through a mix of leveraging connections and data on service and the market, proved unsuccessful.

Models to Deploy Broadband Infrastructure

After being twice rebuked by regional ISPs, and any potential state-funding appearing a distant prospect, the Oglethorpe Broadband Committee decided it would have to deploy broadband infrastructure itself. The Development Authority developed an RFQ that solicited providers to deploy a fixed wireless network that serves 1,000 homes, 1/6 of Oglethorpe, for \$350,000, with fiber to the home deemed unfeasible as a function of housing-density and costs.

When Oglethorpe formed its Broadband Committee, there was no idea they would need to invest in broadband infrastructure. The Committee thought that by mapping areas where broadband service was lacking, identifying vertical assets, dark fiber and 9-11 towers, and performing market research it could incentivize ISPs to invest in broadband infrastructure. County officials heard that ISPs did not think investing in Oglethorpe County was a profitable business model for the ISP.

⁴ <https://www.plansouth.com/past-projects>

⁵ https://about.canva.com/en_in/canva-for-nonprofits/

⁶ <http://www.heatmapper.ca/>

⁷ <https://www.flipsnack.com/>

The RFQ only received one response, from a start-up, to deploy broadband. Amy speculates that to receive interest from established ISPs, any solicitation would require a more generous award. The Oglethorpe Development Authority (eligible to enter multi-year partnerships) entered into a fifteen year public-private partnership (p3) with the provider on January 6th, 2021. Oglethorpe transferred \$350,000 from the County General Fund to the Development Authority to finance the award. Through the partnership, the Development Authority owns all network infrastructure – including towers, radios, fiber, and servers.

The p3 is operated under a Performance and Accountability Agreement (PAA), wherein in exchange for \$10 in annual rent for fifteen (15) years, the provider can lease the network to provide service. In turn, the provider is obligated for to upgrade and maintain the network, with any associated costs financed by the provider. Every subscriber on the Oglethorpe network pays a monthly subscriber-fee of \$5 to fund subsequent upgrades to the network. The provider is exempt from any local taxes on network equipment or upgrades and can either purchase the network infrastructure from the Development Authority for \$1 or sell the network with Oglethorpe’s approval. If the firm defaults or is unable to perform to the PAA, the Development Authority can solicit another provider and terminate the agreement.

Working with a start-up wireless provider has resulted in several challenges. With a go-live date for the two wireless towers set for September 2020, equipment delays, staffing shortages and COVID postponed inaugural service until November 2020. As of the interview (March 2020), only 20 customers had registered for service, with the take rate below expected levels. Throughout the service area, there is a ton of interest in the service, although the young company has faced issues expanding to homes due to issues related to cash flow, training staff, and equipment. The provider had a backlog of 200 site surveys, requiring two trucks, resulting in a capital shortage. Mutual-need has bonded Oglethorpe with the provider, with experienced members of the County Commission now providing management assistance to the firm. While current roll out has been slow, review of the service has been favorable. The provider has until November 2021 to meet its benchmark, and the County plans to continue its partnership if this effort is successful and funding available. With this current engagement targeting a higher-population density area of the county, future engagements will prove more challenging when targeting less-dense areas of Oglethorpe.

Oglethorpe County’s broadband infrastructure deployment program catalyzed private ISP interest in expanding regional service areas across the County. The “squeaky wheel” had made enough noise. The VP of Windstream contacted the Oglethorpe Development Authority less than a week after it awarded its broadband RFQ to identify opportunities to partner with the county to invest in broadband infrastructure. Windstream worked with county officials to apply for a Rural Utilities Service Community Connect Grant and received \$90 million in FCC funds from the RDOF to develop broadband infrastructure outside of the Oglethorpe fixed wireless network service area. Windstream is currently in the engineering stages of both projects, which would bring fiber to the premises. Completion of these projects would leave one area of the county unserved by affordable, and reliable broadband service. The Oglethorpe Development Authority team had proven it understood the business model for ISPs, and that they were easy to work with and a reliable, supporting partner in broadband development.

In 2019, the County attracted significant publicity by being named the first Georgia Broadband Ready Community by the Georgia Broadband Deployment Initiative. In combination with this Designation,

Oglethorpe hopes its investments in infrastructure will encourage multiple private ISPs to further invest in Oglethorpe County. The Development Authority is awaiting the results of its pilot fixed wireless network investment, potential state-grants undergoing legislative review, and the priorities of a newly-elected County Chairman before deciding on future investments in broadband infrastructure.

Navigate Legislative and Regulatory Barriers

Oglethorpe County faced a variety of regulatory challenges when working with the contracted provider to deploy the broadband network. While larger municipalities might face regulatory barriers relating to right-of-way access, the primary challenges faced by the Broadband Committee related to spectrum-access and tower ordinances for Oglethorpe's fixed wireless network solution.

First, by deploying a fixed wireless network solution, the County faced challenges assigning a spectrum to the network. Oglethorpe was able to assign a portion of the spectrum to fixed wireless service, but it required cooperation from neighboring Newton County. In the early 2000s, the FCC had asked communities if they wanted to keep an unused portion of the spectrum assigned for education purposes. Oglethorpe at the time had no use for this spectrum, and Newton County ended up with the rights to this portion of Oglethorpe's available spectrum. Newton could have leased this portion of the spectrum to private ISPs, but instead transferred the rights to Oglethorpe for the purposes of fixed wireless. The transferred rights to the spectrum did not cover the entire county, but it did enable the partnering ISP to utilize a variety of transmission technology-options when connecting customers in the pilot broadband deployment service area to the Oglethorpe network.

As a Broadband Ready Community, Oglethorpe adopted a series of streamlined regulations to facilitate the permitting of broadband deployment projects. Oglethorpe easily streamlined regulations, because it already lacked serious regulatory barriers to broadband deployment, such as right-of-way access. The regulatory streamlining necessary to become a Broadband Ready Community was more challenging for neighboring Athens.

The Broadband Committee did make one oversight when streamlining its broadband permitting regulations. Oglethorpe's Telecommunications Tower Ordinance proved especially onerous. After the Development Authority reviewed Ordinances for neighboring counties, it appeared that every county copied and pasted Ordinances from each other. Onerous regulations in the Ordinance include requiring Conditional Use Studies for every tower, regardless of small radio tower or massive cellular tower, which requires engineering evaluations to deem the tower compliant with FAA regulations. This requires a long series of community engagements and an environmental study. Amy recommends communities review their Ordinance and adopt Ordinances that differentiate regulations for building small towers used for fixed wireless service from regulations for 200-foot cellular towers.

Best Practices

Local officials need to be able to adapt to different municipal and legislative authorities throughout a broadband development effort. After awarding the RFQ and forming a public-private-partnership with a private ISP to bring fixed wireless service to Oglethorpe County, the County Commission has had major changes in leadership. The previous County Chairman's term ended this past year after having spent twelve years in office as a major champion for broadband development. Oglethorpe has a Chairman-strong government, where the elected Chairman is also the County Manager and has a lot of municipal

power. With the departure of the old Chairmen, the new Chairman has expressed disinterest in investments into broadband development and economic development as a whole.

In this case, the County and Development Authority (who is still committed to broadband development) may need to re-adjust their policy to reflect new municipal priorities. A key challenge for community officials is balancing broadband development policies with the desires of elected officials. This shift in municipal-policy creates opportunities for the Development Authority to leverage bond revenue from solar projects to finance additional broadband development projects. State-grants undergoing legislative review are also a potential funding source for any further broadband investments by the County.

Partnering with ISPs can require time and effort to prove that your organization is an able partner.

Broadband development requires cooperation from incumbent and robust providers to expand broadband infrastructure. At the time of Oglethorpe County's initial outreach to Windstream, the company was undergoing bankruptcy and faced a change in leadership. After sorting its internal issues, Oglethorpe had proven itself as committed to broadband development through its investment in a pilot fixed wireless network project and was acknowledged as a Broadband Ready Community, and the Development Authority hears from Windstream every week about developments or opportunities to apply for federal broadband funds. The leadership-change at Windstream opened up company-executives to partnering with Oglethorpe in broadband-development, and Oglethorpe's "squeaky wheel" made enough noise to attract their attention.