

# Local Infrastructure Hub

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## RESOURCE

# Municipal Fiber Deployment Case Story (Waterloo, IA)

## Project at a Glance:

<b>Project Leadership</b>	Mayor Quentin Hart Andy Van Fleet, Chair of Waterloo's Municipal Communications Utility
<b>Location:</b>	City of Waterloo
<b>Timeline:</b>	August 2023 – Ongoing
<b>Focus:</b>	Broadband infrastructure deployment, economic mobility

## Project Description in Brief:

The Waterloo Municipal Communications Utility (MCU) was established by a citywide vote in 2005 with the vision of deploying a locally owned, controlled, and operated telecommunications utility. Following the increased need for reliable and affordable internet service during the COVID-19 pandemic, the City of Waterloo and Waterloo MCU decided to move forward with a city-wide [fiber network](#) buildout, supported by federal funding in addition to municipal government obligation bonds.

The project consists of two (2) components:

- 1 Construction of a fiber backbone to support municipal operations, and**
- 2 Build out and delivery of “next-generation fiber-to-the-premises (”FTTP”) services, enabling high-speed internet access to every home and business in Waterloo.**

Impacts of the project for the Waterloo community will be visible in a faster, more reliable, and accountable community-based internet service provider (ISP). The community-led ISP will ensure residents have access to remote work and learning opportunities, provide substantial monthly savings on internet service, and create over 170 jobs within the city.

**Funding Sources:** Waterloo is receiving funding from various sources, including the American Rescue Plan Act (ARPA), U.S. Economic Development Administration (EDA), a municipal government obligation bond approved in a [September 2022](#) referendum, and Telecommunications Revenue Bonds. Waterloo Water Works has committed \$2.75M in funding and the City will also have \$8.5M in financing available through Sewer Revenue Bonds, both earmarked for the fiber backbone component supporting smart city developments. . The current capital stack is detailed further in a later section.

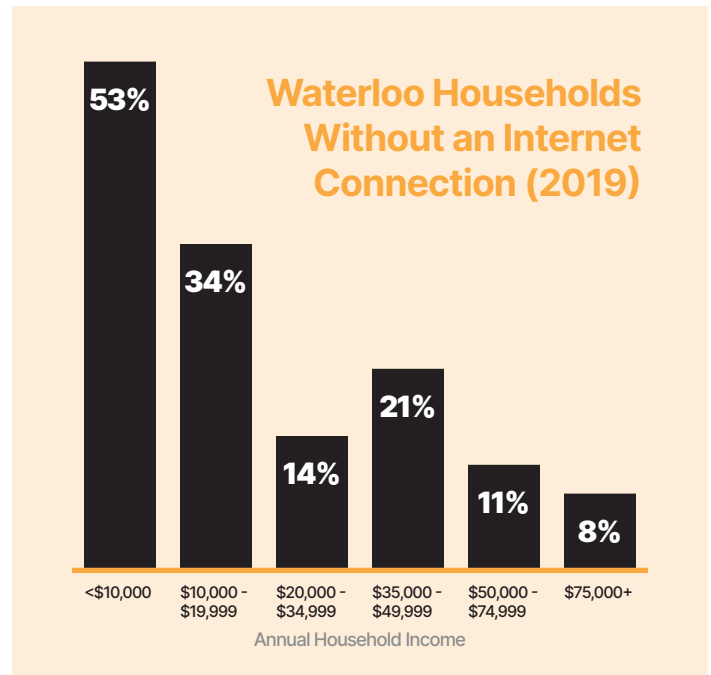
**Project Dates / Timeline:** In August 2023, the City [broke ground](#) for their fiber broadband project. The first fiber-to-the-premises (FTTP) customers are projected to be connected in the last quarter of 2023. The entire project is expected to take three (3) years.

## Problem to Solve

Residents of Waterloo have historically lacked access to affordable and reliable broadband connections. Per a 2019 [survey](#) and market analysis from the Waterloo Industrial Development Association (WIDA), of 340 respondents, 43% were “very dissatisfied or dissatisfied” with the current provider, and about 77% of respondents would be likely to switch providers if another offered superior service at a better price. In 2019, the City Council allocated funds to complete a feasibility study for developing a municipal broadband network throughout Waterloo; Magellan Advisors were hired to conduct this study starting in January 2020. Through the study and feedback from residents, the City recognized that gaps in broadband access and reliability issues were exacerbated by the onset of the COVID-19 pandemic in 2020. During this time, it became clear that latency and unstable connections were creating challenges for residents who could not access remote work and learning opportunities, utilize telehealth resources, or rely on hot spots.

Eventually as part of the feasibility study, a [March 2022 survey](#) of over 2,700 respondents would find that the top concerns for broadband were price, customer support, reliability, and speed. Disparities in broadband access in Waterloo are related to income; of all households with an annual income below \$49,999, as of 2019, 27% do not have an internet subscription, triple the rate of those with an income above \$50,000 (9%). Across all households in Waterloo, 17.5% do not have an internet subscription. The Waterloo Fiber project aims to ensure that all potential internet end-users in the city are connected to an affordable, reliable, and high-speed internet service. The chart below provides a more comprehensive breakdown of this data (this data has been retrieved from the U.S. Census Bureau, 2019 American Community Survey 1-year Estimates).

Waterloo MCU was established in 2005 by a municipal referendum, but lacked sufficient funds to pursue capital investment of the scale necessary for the broadband goals demanded by residents. “It’s always a good time for a good idea.” said Mayor Hart and by 2021, the confluence of digital equity disparities, COVID-19 impact, and available federal funding authorized by the American Rescue Plan Act and distributed by EDA, allowed Mayor Hart and the City of Waterloo to pursue the project through their municipal telecommunications utility.



**“It’s always a good time for a good idea.”**

— Mayor Quentin Hart, Waterloo

## Partner Engagement

Mayor Hart has engaged with the local and regional business community through the WIDA, [Waterloo Chamber of Commerce](#), and [Grow Cedar Valley](#). These organizations have participated in and supported the broadband feasibility studies and surveys for project planning. The business community has also backed the City's efforts to advocate for, apply for, and access various funding sources at the federal level. By partnering with other city services for the fiber backbone component in support of smart city innovations in Waterloo, the Waterloo MCU can access additional city funds and financial support. Waterloo MCU has already received a commitment of \$3M from Waterloo Water Works; other city departments such as waste management and traffic operations may provide further support.

Mayor Hart has also engaged with local and regional governmental entities such as the school district, the [Iowa Northland Regional Council Of Governments \(INRCOG\)](#), and a neighboring municipal broadband network, Cedar Falls Utilities (CFU). INRCOG is funded by the EDA to bring together the public and private sectors to create an economic development roadmap to strengthen the regional economy, support private capital investment, and create jobs; their leadership in regional planning efforts and grant writing support contributed significantly to the success of Waterloo's broadband project. Engagement with CFU is enabling an accelerated buildout of Waterloo's broadband network. CFU's existing fiber infrastructure near a southern Waterloo fire station is allowing the city to build inwards toward the city center using the station as a starting point. This strategy allows for a three (3) year project timeline, whereas, according to the Mayor, building out from the city center with brand new infrastructure would take closer to five (5) years.

## Funding Waterloo Fiber

The bid approved for this project was priced at approximately [\\$78M](#).

The City, following on advocacy efforts at the federal level, received \$25M for their broadband project from the ARPA, as well as a [\\$1.8M EDA grant](#) available through the ARPA's Economic Adjustment Assistance Program. The EDA grant requires a local [match of approximately \\$668K](#) in funds sourced from locally raised Waterloo Tax Increment Financing (TIF). Magellan Advisors [supported](#) the City's efforts to secure the EDA grant. Additionally, a September 2022 referendum, passed with 84% support (well above the 60% threshold for approval), has allowed the City to issue up to \$20M in government obligation bonds for the project. Per Andy Van Fleet, Chair of the Waterloo MCU, these municipal bonds will not go against property taxes, but rather are "looking at the future revenues from the utility and bonding against those." The City will also be financing remaining shortfalls through Telecommunications Revenue Bonds that are bonded explicitly against the MCU's revenue earnings. For comparison, Cedar Falls Utilities in the neighboring city of Cedar Falls, which includes broadband in its services, had an annual net income of \$4.88M; noting that Waterloo has twice as many homes as Cedar Falls, Van Fleet touts that not only does the Waterloo MCU have profit-making potential, but also those profits will stay in Waterloo.



The city will also use \$8.5M in Sewer Revenue Bonds and \$2.75M through a Water Revenue Contribution from Waterloo Water Works for the fiber backbone component that will support smart city innovations promoting interconnected city services.

While the City was successful in procuring federal funds to continue and expand the project, they were unsuccessful in competing for funding from the NTIA's [Middle Mile Program](#) given the number of applications for the program – only one project in Iowa received funding through this program. This program is designed to bridge network gaps by funding smaller, local networks with “robust, high-capacity national and regional networks.”

Waterloo has found it important to pursue and compete for any funding sources that can come to the City and have partnered with local banks to provide financing support for the project. Four (4) local banks submitted bids for working capital debt. The City will also be seeking bids on long term financing for construction costs. Waterloo MCU has set up initial bank accounts with local banks, following a procurement process that saw six (6) proposals; illustrating the high level of interest in supporting the utility from a banking perspective.

## Capital Stack

American Rescue Plan Act	<b>\$25M</b>
EDA grant ( <a href="#">Economic Adjustment Assistance Program</a> )	<b>\$1.8M</b> (with \$668K in local match)
Municipal bond (government obligation)	<b>\$20M</b>
Water revenue contributions from Waterloo Water Works (for fiber backbone)	<b>\$2.75M</b>
Municipal bond (Sewer Revenue) [ for fiber backbone]	<b>\$8.5M</b>
Total funds available (including local match)	<b>\$58.7</b>

*Note: Remaining amounts will be provided through Telecommunications Revenue Bonds*

## Community Impact

As of August 2023, Waterloo is actively laying fiber and the City expects the first Waterloo MCU customers to connect to the network's broadband services by the end of 2023. The full impact will be measurable over the next three (3) years as more households and businesses connect to the network and can better rely upon improved services with greater accountability.

Michael Young, an MCU board member, upon the [announcement of the rates](#) for the MCU said, “It’s reliable, it’s local but it’s much cheaper than what we’ve been paying.” Based on the approved rates, the Waterloo MCU will provide for substantial savings on monthly rates for all customers – providing four (4) [options](#) for internet service (100 Mbps, 300 Mbps, 1 Gbps, and 10 Gbps priced at \$29.95, \$49.95, \$69.95, and \$109.95 per month for residential services), all of which have no data caps, no hook-up fees, and allow customers to use locally based service. Waterloo MCU also [offers](#) bundled plans including internet, phone, and/or television as well. On the 300 Mbps plan, the MCU rate is almost \$80 less per month than market competitors, amounting to annual savings of \$950 per year. Waterloo Fiber is participating in the [FCC’s Affordable Connectivity Program](#) which provides monthly discounts of up to \$30 per month towards internet services for eligible households.

Andy Van Fleet, Chair of the Waterloo MCU, suggested that the new network will “help people work from home better, our [Waterloo’s] students learn better, and then to be an attractive draw for different businesses that are looking to come to a place like Waterloo that has a Gigabit service.” The recently launched [Waterloo Fiber](#) website [states](#) that revenue generated by the MCU will stay in the community, “paving the way for future technological and community enhancements that will strengthen Waterloo’s quality of life and its economic development potential.”

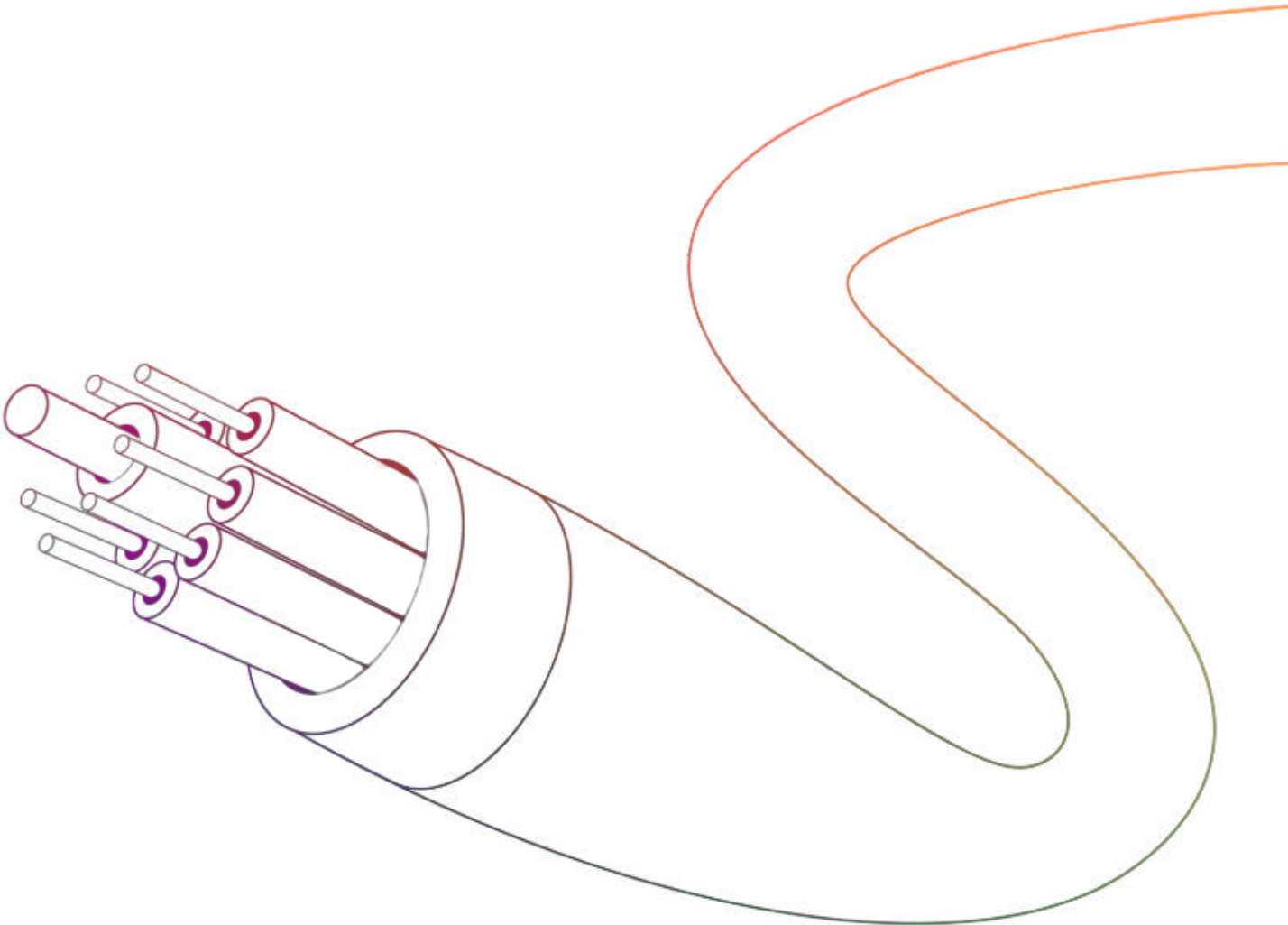
Per the Department of Commerce's announcement of the \$1.8M grant through EDA's Economic Adjustment Assistance Program,

"This project will construct a middle mile fiber network, supporting business growth, telemedicine connectivity, and virtual educational opportunities. The EDA investment will be matched with \$667,682 in local funds and is expected to create 177 jobs, according to grantee estimates."

Secretary Gina Raimondo said that "this award reaffirms the President's commitment to increasing internet accessibility throughout the United States and lays a strong foundation for the critical investments we will make to expand high-speed internet thanks to the Bipartisan Infrastructure Law."

In addition to upgrading broadband connections to residential and business establishments, the fiber network will enable the city to invest in smart city innovations to allow 24/7 access to e-government services, investments in connected parks, and utilization of advanced traffic management systems.

Now, Waterloo residents will be building out the fiber network, servicing the lines and systems, and working with resident subscribers. Through the Waterloo owned and operated network, residents will have confidence knowing that when they call a customer service operator, the individual on the phone is local and understands their community. As Mayor Hart said, the goal of this project is to "help who we have now, and build the infrastructure of tomorrow, today" through this community-driven and locally owned approach.



## Conclusion

At the onset of the COVID-19 pandemic, like everywhere else in the country, Waterloo saw a crisis of connection unfolding that adversely impacted their most vulnerable residents. From their workforce to their classrooms, Mayor Hart and his city and municipal utility colleagues were faced with identifying solutions that would ease the transition to remote work and learning and better prepare the city for a remote future. To do so, the Mayor and his team reignited efforts from fifteen years prior to establish Waterloo's very own municipal fiber network. Leveraged by an injection of funds from the American Rescue Plan Act, EDA, regional partnerships and the full support of his community through a widely passed bond referendum and the support of local banks, Mayor Quentin Hart and the City of Waterloo are now on track to offer faster, more affordable, and locally owned and operated broadband services to their residents with the first connections being made by the end of 2023.