



Impact of the Fiber to the Library Communications Grant Program

As of July 31, 2018, the State Library Board has approved a total of \$1,282,699.10 in fiber grants, and new high-speed fiber internet connections have been completed to 54 libraries. Directors must submit a grant report form to document how the funds were used and describe the impact of the new fiber on their library and the municipality. As of July 31, 2018, 43 libraries have replied. These are their responses.

Beardsley & Memorial Library, Winsted

Fiber grant funds received: \$9,826.96

The Beardsley Library has 10 staff computers and 10 public access computers available for use. It also has a wireless network for patrons to access the web through their personal devices. Prior to the installation of the fiber connection, upload and download times were extremely slow and sporadic, and it interfered with people's ability to access information they needed in a timely fashion. Sometimes they were completely unable to accomplish whatever they were attempting to do on our computers or their devices. The day the fiber was turned on, the technician reported the post speed test showed data transfer rates at 500 times faster than before he made the connection.

It's made a difference in particular for people using our network for job searches and applications, students using our computers for online courses, and for our staff to access our library's ILS, which is hosted remotely. It's also made a difference to patrons using our computers for more recreational activities, such as watching videos or listening to music. It's allowed both staff and patrons to access needed information and to work more efficiently.

Bethel Public Library

Fiber grant funds received: \$25,100

The change in internet speed was instantaneous once the connection was made and quickly noticed by both staff and patrons. From the staff perspective, patron assistance response time improved since we are able to quickly move through online resources and Bibliomation's Evergreen software.

Since switching to the fiber connection, the library has been able to upgrade the telephone system to a VOIP that the municipality has been using for several years. This has solved many of the issues the library faced using an outdated telephone system that was no longer being maintained.

Bill Library, Ledyard

Fiber grant funds received: \$18,700

Replacing the DSL network with fiber has had a positive impact on our library. It has greatly improved the speed of access for staff and patrons using the internet. Library staff no longer have to deal with slowdowns at the circulation desk because patrons using computers in the

library have taken up most of the bandwidth with their downloads. We can easily accommodate fast internet access from all 16 library computers and additional laptops or tablets that patrons bring in.

Booth & Dimock Memorial Library, Coventry

Fiber grant funds received: \$40,800

The Fiber Consortium with CEN and grant funds from the Connecticut State Library came at a very beneficial time for the Booth & Dimock Memorial Library, helping us out of a very cost prohibitive internet contract. We were able to seamlessly transition from our previous provider to the Connecticut Education Network without a break in services or any impact at all on our patrons and users. Additional help navigating the process provided by the Connecticut State Library made the entire experience simple. Providing fast and reliable internet to our patrons and the Coventry community is an important service.

Brainerd Library, Haddam

Fiber grant funds received: \$19,880

The library was formerly served by DSL, and with this improvement we can offer greatly increased connectivity. Downloading media and use by multiple patrons simultaneously no longer drain our service, and we can now explore cost-saving options such as VOIP thanks to the excellent bandwidth. The community has few, if any, other places to access free internet and WiFi; the improvement in service has been noted by patrons and staff.

Burlington Public Library

Fiber grant funds received: \$31,649.25

The timing was perfect for installing fiber optics at the Burlington Public Library because we were under construction, and a new IT closet was being built for us. Originally, our server and all of our IT equipment shared a closet with our library supplies and our copier paper. Lack of air conditioning was not an ideal situation for the equipment. We are now fortunate to have a great functioning IT closet. We are fortunate to have fiber optics in our building. The internet speed is great.

Case Memorial Library, Orange

Fiber grant funds received: \$24,800

As the Case Memorial Library is a central point in the community for Internet and computer access, it is imperative that our residents have the most up-to-date resources available to keep pace with changes in technology, and their growing digital needs. The new fiber optics connection enables the Library to introduce new services and applications we previously would not be able to provide due to limited bandwidth.

Cragin Memorial Library, Colchester

Fiber grant funds received: \$19,550

The Library's download and upload speeds increased over the previous DSL connection. As we continue to utilize new software and stream a wider range of media in our programs and training, the increased speed will support our programming and service to the community. We

are expecting to see even better performance when the Library completes an upgrade project of the building's PCs.

Cyrenius H. Booth Library, Newtown

Fiber grant funds received: \$19,686

The library's internet connection is noticeably faster and more reliable, allowing us to provide services with fewer disruptions and offering the kind of online access our patrons require for their work, recreation, and learning. More and more of our services and programs require a fast internet connection, and our community enjoys the ease of access to the web.

Derby Public Library

Fiber grant funds received: \$16,360

The Derby Public Library was one of the first public library grants appropriated in the state. Many families and seniors living in Derby and surrounding communities cannot afford home computers and/or internet connection. This grant enabled the Library to once again act in the role of the "equalizer" in the community, ensuring digital access for all residents.

Douglas Library, North Canaan

Fiber grant funds received: \$20,840

The impact from this project is a much improved connection to the internet with high speed connectivity and faster upload and download speeds. The library patrons are pleased to have this new feature available to them.

Durham Public Library

Fiber grant funds received: \$23,000

The broadband connectivity went from less than 10 mbps to 100 mbps or faster. The library can now provide a faster connection to the internet for our public and staff computers. It also provides the ability to stream programs such as live performances from Lincoln Center and World Cup Soccer.

The library can now offer better connectivity for the many municipal boards and committees that meet monthly at the library as well as the community groups that use the meeting rooms.

Last year, we offered a class on downloading eBooks. We encouraged the participants to bring their devices so that after the PowerPoint portion of the instruction, we would offer individual help downloading an eBook. We did not anticipate that everyone wanted to connect to the Internet so that they could follow the PowerPoint presentation. We just did not have the bandwidth for that. Now we can offer such instruction.

We have noticed an increase in the number of patrons using laptops in the library. We are assuming this is due to the increased speed and bandwidth of the fiber connection.

E.C. Scranton Memorial Library, Madison

Fiber grant funds received: \$14,740

Patrons and staff are experiencing much faster connection times and more reliable internet service.

Easton Public Library

Fiber grant funds received: \$24,250

The fiber network will provide a faster and more reliable network for the Library and the community.

Guilford Free Library

Fiber grant funds received: \$17,440

The impact on the library and municipality has been to improve an already forward thinking and dynamic library. We average over 300 computer and wireless users every day that we are open, and in recent years with the proliferation of wireless devices we were often having difficulty keeping up with the demand. Also, programming ideas that were previously impossible, such as live streaming our events so that our patrons can view our programs from home, can now be a regular part of our services.

Hall Memorial Library, Ellington

Fiber grant funds received: \$42,320

The installation of this high-speed connection has greatly improved our telecommunication network, providing for increased speed and reliability and allowing public and staff to be more efficient.

Hotchkiss Library, Sharon

Fiber grant funds received: \$22,915.51

Patrons are realizing higher download speed, especially using Hoopla, a new service, as well as streaming capability. A video artist, for example, appreciates the increased speed that allows him to download materials for his work. Staff members find completing Bibliomation functions quicker and more efficient. Town officials are pleased the library has invested in fiber since it is consistent with the fiber capability of other town departments.

James Blackstone Memorial Library, Branford

Fiber grant funds received: \$28,700

This grant allowed our library to upgrade from a DSL connection to a high speed, broadband connection which will allow us to continue to provide and expand access to critical internet based services, which is vital to our mission to provide essential access to information, resources and unique shared experiences to help ensure Branford is an educated and enriched community.

Kent Memorial Library, Kent

Fiber grant funds received: \$17,800

The library's public and staff computers have much faster download and upload speeds and a much more reliable connection with fiber than with a local cable connection. We are able to

provide our community with a technology hub free of charge to them, with fast, reliable Internet connections for the 43.5 hours per week that the library is open to the community.

Killingly Public Library

Fiber grant funds received: \$9,280

Having a fiber connection at Killingly Public Library as opposed to DSL will allow us to move forward with various projects dealing with access to the Internet. The significant increase in response time will allow for more usage by our patrons as we add more services here. The town is always content when its departments move forward with cutting edge technology. We are hopeful this project will allow for that.

Levi E. Coe Library, Middlefield

Fiber grant funds received: \$18,450

The project allowed the library and its patrons much faster internet service than we previously had.

Library Association of Warehouse Point, East Windsor

Fiber grant funds received: \$22,520

The East Windsor community is able to access digital information and resources with faster download speeds than previously available. Library ILS response time has improved.

Mansfield Public Library

Fiber grant funds received: \$65,360

The Mansfield Public Library is one of the key service providers in our community to meet the need for free and public access for students, researchers, and citizens of all ages to access materials and resources. Given today's increasingly information and technology rich global society, it is essential that the Library connects to the Internet through a robust, scalable, and reliable Internet connection. This project position the Library to readily meet that access requirement for multiple decades into the future. Our community can readily come to the facility and either use Internet connected equipment provided by the Library, or bring their own portable equipment to connect to the free public Wi-Fi. Additionally, the Library uses this new connection to make resources available online that the community can access from home or any Internet connected location. This project is a key component of our Town's commitment to digital access for all.

Milford Public Library

Fiber grant funds received: \$18,850

At the time we applied for USAC E-rate funds, the internet speed at our Library was 10Mbps (uploads and downloads); this dropped drastically depending on how many users were accessing the wifi. We received complaints daily about the slow speed, and how it impacted our users' work. Recent tests showed upload speeds over 75Mbps and downloads at 60Mbps! The installation of the fiber connection has made a huge difference for people accessing our wifi for job searches and interviews, remotely connecting with coworkers, students taking online courses, and those accessing streaming media sites. This connection helped us provide better

service to our community and greatly assisted those who might not have wifi available elsewhere.

Minor Memorial Library, Roxbury

Fiber grant funds received: \$22,100

The Minor Memorial Library is located in Roxbury, CT, a small, rural town of approximately 2200 people. Prior to this grant, fiber internet was only available at the local elementary school and the town hall. Having fiber installed at the library allows the public to access a faster and more reliable network that they (currently) cannot access from their homes. Our previous cable internet connection was unreliable and subject to incredibly slow speeds or a complete disconnect if the weather was slightly windy. We haven't had any issues since connecting to fiber which means that the library is able to serve the community fully.

New Milford Public Library

Fiber grant funds received: \$24,000

With fiber connectivity our patrons have experienced more than a doubling of their previous internet speed for both download and upload. This has led to greater productivity for patrons and less frustration. Access to our informational networks is more streamlined within the building which affords comparable access to what people are used to in their homes and at internet cafes.

Norfolk Library

Fiber grant funds received: \$17,650

Increased connection speed has benefited the staff and the many patrons who use the Norfolk Library computers.

Atwater Memorial Library, North Branford

Fiber grant funds received: \$30,350

CEN brought a fiber-optic line to the Edward Smith Library a couple of years ago, at no cost to the town. However, before this state grant, Atwater was still on the DSL network. There was a huge difference in bandwidth between our libraries. Smith's download speed was over 100 times as fast as Atwater, and its upload speed was over 700 times as fast. Atwater's connection was barely adequate at the time, with frequent pauses that we didn't see at Smith. When we downloaded a major upgrade on an Atwater computer, we had to bring it to Smith for the job. Clearly, Atwater needed the CEN project or something like it, for future growth and tech improvement. Atwater had no future in technology with only DSL service.

Oliver Wolcott Library, Litchfield

Fiber grant funds received: \$31,850

The impact is significant. Fiber allows for the fastest and most reliable service available to connect to the Internet. The difference in speed is noticeable, allowing patrons and staff to work better, faster and more efficiently. IT has improved the ability for patrons and staff to access information online and the ability for multiple users to access the Internet without any loss in speed/connectivity.

McMahon Wintonbury Library, Bloomfield

Fiber grant funds received: \$8,580

This project has already had a very positive impact on the P. Faith McMahon Wintonbury Library. The prospect of acquiring better internet service for the branch library had long been discussed, but the cost had been seen as prohibitive. Thanks to the grant money provided, this longtime desire became a reality. Before the new fiber connection was installed, the library received its internet service from Comcast Business. The Comcast network in the Blue Hills area was subject to intermittent problems, resulting in traffic slowdowns and drops. These problems not only affected patrons using the public PCs and wireless service, but also impacted performance of the library's ILS system (Sierra). These problems have essentially disappeared since the cut-over to the CEN fiber network.

The McMahon Wintonbury Library has increasingly become a digital literacy center, serving a population that depends on the library's public computers for job applications, school work, digital literacy lessons, and other essential business. The computers also provide this community with recreational opportunities, such as video streaming, gaming, etc. The results of this project not only strengthen this essential need, but also provide the infrastructure to expand services. For example, the building's wireless service was expanded to coincide with the fiber project, resulting in much faster speeds and reliability for patrons using their own devices, and there are now plans to upgrade the library's phone system.

One last benefit of this project is that it allows the branch library to become part of the larger town network. Staff can now access shared drives and take advantage of the town's backup systems, and IT staff can now monitor and manage Wintonbury's network from offsite. As new web-based/cloud services are introduced, the branch manager will now be able to take part in whatever new initiatives the Prosser Public Library, Town of Bloomfield, and CEN embark upon.

Richmond Memorial Library, Marlborough

Fiber grant funds received: \$24,359.49

Richmond Memorial Library now has faster access to the internet. We see improved speeds both on downloading and uploading data. The public seems to be quite impressed that we are now running fiber in the library, and we are on a par for speed with both our town hall and local elementary school.

A small library like Richmond would never have had the funding to pursue such a project as this. As we are part of a consortium, the speed of fiber allows us to send network data back and forth and provide better customer service to our users.

Scotland Public Library

Fiber grant funds received: \$15,720

The new fiber optics internet connection provides a high-speed option for the library. At the time of applying for the USAC E-rate funds, the internet speed at the library using a DSL connection was under 10 Mbps for uploads and downloads. A current test with the new fiber optics connection shows a speed of 92+ Mbps for uploads and downloads.

Scoville Memorial Library, Salisbury

Fiber grant funds received: \$20,600

Our fiber internet speeds were significantly increased. This enabled co-working, speedier downloads, and the ability to stream media.

Seymour Public Library

Fiber grant funds received: \$14,600

The Library has 10 public computers for adults and 3 public computers for juvenile use. Since being connected to Fiber, these computers are much faster downloading websites and accomplishing tasks. Live streaming is seamless. For patrons that are taking online tests or filling in online forms, the move to fiber has greatly improved their experience. There are not the glitches and stalls that they experienced through cable or DSL.

Fiber, to this date, has been more reliable for patrons use. On DSL and occasionally on cable, our internet service has been down. At this point, we have not experienced that issue since switching to Fiber.

Our circulation computers are connected to Fiber. We have been allowed through the Fiber switch to wait on patrons more efficiently with less time wasted because of slow connections and screens that don't want to download fully.

When it comes to staff time, we have all been more efficient as we use the computer and internet, whether that is in answering patrons' reference questions, cataloging items, or in completing all tasks that demand the use of a computer.

We are very grateful for the grants and the ability to move to Fiber.

Sherman Library

Fiber grant funds received: \$16,366.08

The project provided a fiber optic connection in the Sherman Library. An installation of this sort would not have been financially feasible for our small town library. It provides important increased connectivity for the people of our community and provides greater access and capacity and allows our library to stay current with changes and advances in technology and provide state of the art Internet service to our patrons.

Southbury Public Library

Fiber grant funds received: \$26,120

Connection of the Southbury Library to the CEN network using high speed fiber optics provides significantly improved experiences using Library computers and Wifi connections to access Bibliomation services and general internet. The higher bandwidth allows more users to access these services at the same time and provides faster access to the material. In addition the fiber network is considerably more reliable than prior connections so that interruptions to service have greatly diminished.

Sterling Public Library

Fiber grant funds received: \$25,010

In speaking with many individuals who visit the Sterling Public Library and use the public computers, one resident had this comment, "The switch over to a dedicated Optical Fiber Line has dramatically improved my computer experience at the library. The internet download and upload speeds are remarkably better than they were in the past, allowing me to get my work done with greater efficiency. The improvement has definitely been a benefit to me." Another resident had this to say, "The recent upgrade by the Town of Sterling to Fiber internet has made a great improvement that I'm sure all users will notice. The internet speeds have greatly improved by the upgrade which was very noticeable right away. Another positive aspect of the fiber internet over using a traditional ISP is that the reliability should be greatly improved as well."

Terryville Public Library

Fiber grant funds received: \$22,350

The fiber allows for a consistent, dedicated provider of internet access for the library, versus having to utilize a public provider for internet access, such as Comcast Business access. This results in a dependable, reliable connection for the library patrons as well as for the library's phone system. The phones have been much more reliable since the changeover.

Thomaston Public Library

Fiber grant funds received: \$22,350

The library now has a high-speed and much more stable internet connection.

West Haven Public Library, main branch

Fiber grant funds received: \$16,360

The library's internet connection is one of the most used tools on a daily basis from the 150 computer users daily to the constant stream of people utilizing their wireless devices and staff assisting those patrons. Having a faster internet connection will allow patrons and staff alike to use their and our devices in the most efficient way possible. In a community where 1 in 4 households do not have internet access at home, this is especially significant.

Willington Public Library

Fiber grant funds received: \$31,900

This project would not have been possible without the help of this grant funding. Even in just a few weeks, we can already see the improvement and positive impact the project has had on the Library; we are better able to conduct our own work, and our patrons are able to complete their internet tasks in a much timelier manner. Where in the past, we had patrons who would sometimes be waiting upwards of 15 minutes just to get a page to load in the web browser, they are now given almost instantaneous results. We have many patrons in our town who do not have their own internet service in their homes, and so they come to the library to utilize our computers. Now our patrons are much more able to achieve their tasks and are so much happier with the new internet services. This grant has provided a significant improvement to all the services that the Library can give our community, and we are incredibly thankful for all the opportunity that it has opened up for us.

Windsor Locks Public Library

Fiber grant funds received: \$17,800

When we had DSL, the patrons were constantly interrupted in their different computer-based tasks due to connectivity problems as often sites that patrons would like to visit would not load properly or at all. The connectivity speed was a major problem as accessing sites would take an inordinate amount of time to load. There were days when the library would experience complete loss of bandwidth making computer access unavailable to patrons and staff. Signs would be put onto the front doors to alert patrons that the computers were not working. The library would receive calls on a day-to-day basis asking if internet access was available. Patrons also complained of the slow speed citing that their tasks took longer to complete. At times patrons would just "give up" on finishing their work and leave the library.

The bandwidth also affected how library staff were able to effectively serve patrons with the many days of extremely low DSL bandwidth or zero bandwidth. Without sufficient bandwidth the ILS would be unusable for the circulation desk and also for library staff to work online. These interruptions related to the circulation desk as the clerks would have to explain to patrons why items couldn't be checked in or out at times due to the lack of internet connection. A work-around would have to be used to check out materials by using Microsoft Word and later spend time to enter the data into the system.

The Cataloger often found it impossible to process items when the ILS wouldn't connect to the server due to our slow DSL connection.

Since fiber has been introduced we have had virtually no downtime due to low bandwidth. The computers are now available to patrons on a daily basis. Problems of sites not loading and other connectivity problems have essentially disappeared. Sites load more quickly and completely, and patrons no longer have to leave the library due to their frustration. Having the new fiber connection has allowed patrons an overall positive experience which in turn translates into a positive staff experience. The new fiber connection has allowed both patrons and staff the internet access necessary to complete their day-to-day business without the interruption of hiccups or problems.

Given that our library does not have dedicated staff to help with computer problems, all staff were called upon from time to time to assist patrons with computer issues. Since the installation, patrons no longer approach staff to complain about the speed or connectivity of our public computers. The upgraded connection has, in turn, allowed staff to focus on other library duties which they were often unable to fulfill when they were attending to constant patron computer issues due to the slow or no DSL.

The library staff continues to appreciate witnessing the positive changes the fiber connection has brought and the impact of high speed connectivity.

Woodbury Public Library

Fiber grant funds received: \$30,950

This project will allow the library to meet the growing demand for data. Either through Wi-Fi connection or wired connections, data needs are only continuing to grow. With the ease of access to streaming media and other data dependent resources, the need to increase our bandwidth and connection speed will only ever increase. This fiber connection provides us with that ability.