



## MEMO

**To:** Montana State Library Commission; Jennie Stapp, State Librarian  
**From:** Tracy Cook, Lead Consulting and Learning Librarian  
**Subject:** ARPA Internal Wiring Project  
**Date:** April 12, 2023

### Project summary:

- Funding paid for site assessments, new networking equipment, and/or new Internet cabling.
- 31 libraries participated. We asked libraries to complete an application and used criteria such as helping those with the slowest speeds, the lowest per capita budgets, and those willing to upgrade their Internet. 28 of those libraries received either new equipment or new cabling.
  - One library did not need any new equipment or cabling
  - One library had to drop out due to a remodel
  - One library had to drop out due to a flood that caused mold and asbestos damage
- 25 of the 28 libraries received new cabling and new equipment.
- 2 libraries did not need new cabling. 1 library did not need new equipment.
- Note: we completed a pilot project to test our assumption about library needs, costs, and the procurement/installation process. This pilot project involved the Wedsworth Memorial Library in Cascade and the Lewistown Public Library. We used remaining LSTA funds for that project. Both libraries received cabling and equipment upgrades. We used a combination of LSTA and ARPA funds to make sure both libraries have 10 years' worth of licensing on their equipment.

### Current status of the project:

- Several libraries need outdoor access points (APs) installed to expand their wireless reach beyond the building. This work will occur the week of April 3.
- Project will be completed by April 30, 2023.



#### Cost of the project:

- \$632,546
- Costs varied depending on the size and needs of the library.

#### Outcomes of the project:

- Desired outcomes of the project
  - Increase Internet speeds at the library. 70% of the libraries that have been completed reported higher Internet speeds. Bitterroot Public, Darby Community, and Great Falls Public saw huge increases. The average download speed for the 3 libraries wired connections before the project was 26.03 Mbps. After the project the average download speed for the 3 libraries was 387.22 Mbps. In the case of the Bitterroot and Darby libraries, they are receiving the speeds they have been paying for while Great Falls Public invested in faster speeds.
  - Increase reliability of the network connection. 52% of the libraries completed reported an improvement in reliability of the network. Reliability wasn't as much of a concern for libraries as speed.
  - Increase access to library internet. 9 libraries received outdoor access points that expanded wireless access to the internet.
- Unexpected outcomes of the project
  - 6 libraries who have been unable to report their wireless sessions now have the capability.
  - Libraries have expanded reporting features which allows them to make better decisions about their internet services.
  - The chance to work with a trained Systems Engineer from CompuNet helped improve the understanding of library directors and helped expand services and address problems.

#### Estimated number of people who have/are benefitting from this project:

253,235 people live in the service area population of the libraries that received new equipment or cabling. That's about 23% of Montana's population.

Library internet connections are used by local community members and tourists.

Library size varies dramatically. Population served ranges from 1,177 people to 78,322.

Libraries that participated in this project reported the following statistics for FY21.



Total computer users for these libraries: 77,921.

Total wireless sessions for these libraries: 160,994.

Median use of library computers is 1,857 while median wireless sessions is 1,250.

Computer and wireless users of 70% of the libraries saw increases in internet speed which helps with accessing and using online resources.

52% of computer and wireless users enjoy more reliable connections which means no interruptions while submitting online paperwork, researching, studying, or connecting with others.

Future needs:

There are 82 main public libraries and 34 branch libraries for a total of 116 institutions. Not all these libraries need or want an upgrade of their equipment and cabling. Between the ARPA project and a pilot project, the State Library has helped pay for upgrades or site assessments at 33 locations. There are potentially 83 public libraries that could benefit from an upgrade.

65 public library directors responded to a recent survey about what support they would like to see from the state library. 34% of the respondents were interested in funding to upgrade their equipment and cabling.

MSL staff recommend asking libraries if they want upgrades. We have a good sense of what it costs for a small (\$10K), medium (\$25K), and large (\$65K) library to have both cabling and equipment upgrades completed.

With this information staff can determine how much funding is needed to complete the remaining interested libraries. Potential funding sources may exist in Digital Equity Act dollars that could be received by Montana.