

NEBRASKA

A yellow swoosh underline that starts under the 'N', goes under the 'E', 'B', 'R', 'A', 'S', 'K', and ends under the 'A'.

Rural Broadband Task Force Executive Summary October 2019





Rural Broadband Task Force Members



Ed Toner, Task Force Chair
Chief Information Officer
State of Nebraska
Chair, Nebraska Information
Technology Commission



Senator Curt Friesen
Chair, Transportation and
Telecommunications
Committee
Nebraska Legislature



Senator Bruce Bostelman
Nebraska Legislature



Mary Ridder
Commissioner and Chair
Nebraska Public Service
Commission



Tony Goins
Director
Nebraska Department of
Economic Development



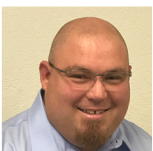
Steve Wellman
Director
Nebraska Department of
Agriculture



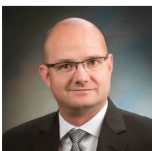
Zachary Hunnicutt
Farmer
Hunnicutt Farms



Isaiah Graham
Vice-President
Homestead Bank



Tom Shoemaker
President
Pinpoint Communications



Daniel Spray
Owner
Precision Technology, Inc.



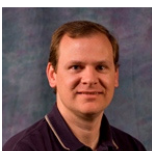
Timothy Lindahl
CEO/General Manager
Wheat Belt Public Power
District



Anna Turman
Division CIO
Catholic Health Initiative



Andrew Buker
Executive Director of
Infrastructure Services
University of Nebraska



Ron Cone
Director of Network
Information Services
ESU 10

Staff

Anne Byers, Tom Rolfes & Lori Lopez Urdiales
Nebraska Information Technology Commission
Office of the CIO

Cullen Robbins
Nebraska Public Service Commission

Executive Summary

The Rural Broadband Task Force was created to “review issues relating to availability, adoption, and affordability of broadband services in rural areas of Nebraska” by LB 994, which was passed by the Legislature and signed by Governor Ricketts on April 17, 2018.¹ The bill was introduced by Senator Curt Friesen, Chair of the Transportation and Telecommunications Committee. The task force is chaired by Ed Toner, CIO for the State of Nebraska and Chair of the Nebraska Information Technology Commission. This report presents the findings and recommendations of the task force as required by LB 994.



Findings and Recommendations

Broadband Availability

Eighty-nine percent of Nebraskans—but only 63% of rural Nebraskans—have fixed broadband of at least 25 Mbps down/3 Mbps up available, according to the latest data available from the FCC (June 2018).

Broadband Data and Mapping

Current state and federal broadband mapping efforts likely overstate broadband coverage and need to be improved. Nebraska’s broadband map currently utilizes Form 477 data released by the FCC. Using Form 477, fixed broadband providers report the type of technology and maximum advertised speeds in Mbps up and down by census block to the FCC. The use of census block reporting can overstate broadband availability in large census blocks. Mobile wireless providers provide polygons of their service area and the minimum speeds that are publicly available. The FCC is currently investigating at least one national mobile wireless provider for overstating coverage.

The FCC’s Digital Opportunity Data Collection² program which was approved on August 1, 2019 and federal legislation being considered would largely address the shortcomings of the current fixed broadband data collection method.

Key Recommendations

- Leverage the FCC’s Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska’s broadband map.
- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.
- Encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

¹ See [Appendix 1](#) for the text of the statutes pertaining to the Rural Broadband Task Force.

² The Report and Order and Second Further Notice of Proposed Rulemaking on establishing the Digital Opportunity Data Collection is available at <https://docs.fcc.gov/public/attachments/FCC-19-79A1.pdf>

Alternative Technologies and Providers

Several emerging technologies may be well-suited for rural areas, including fixed wireless using mid-band spectrums, TV white space, and low Earth orbit satellites. However, higher speed technologies like 5G will likely be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.

Nebraska Universal Service Fund and Reverse Auction

The Nebraska Universal Service Fund (NUSF) provides support to price cap (Windstream, CenturyLink, and Frontier), rate of return (rural carriers), and mobile wireless carriers in Nebraska. In 2019, the Nebraska Public Service Commission allocated \$12,049,546 in high cost support to price cap carriers and \$14,100,058 in high cost support to rate of return carriers. In 2018, \$3,200,000 was allocated for support for mobile wireless carriers. The Nebraska Public Service Commission has taken steps to move the fund toward a grant-like method of distribution whereby carriers must build first before receiving reimbursement.

The total remittances to the NUSF have decreased from \$52 million in 2013 to about \$33 million in 2018. However, the Nebraska Public Service Commission has taken steps to stabilize the fund by modernizing the contribution methodology.

Broadband availability varies by incumbent carrier. Approximately 79% of those rural households which do not have broadband available reside in Windstream, CenturyLink, Great Plains or Frontier (Citizens) exchanges.³ Addressing the rural broadband divide in Nebraska will require strategies which address areas without broadband access served by both price cap and rate of return carriers.

Key Recommendations

- Support the Nebraska Public Service Commission's efforts to modernize the NUSF contribution system and to improve provider accountability by moving to a grant-like system of distribution.
- Encourage the Nebraska Public Service Commission to continue to investigate a state-run reverse auction as a mechanism to spur broadband build out in rural areas.

Key Definitions

Broadband— High-speed internet access at 25 Mbps down and 3 Mbps up or greater.

Connect America Fund (CAF)— The FCC's universal service high cost program which provides support to carriers for broadband.

Competitive Local Exchange Carrier (CLEC)— A telecommunications provider competing with the incumbent local exchange carrier (ILEC).

Fixed Broadband— Any broadband transmission method to a home or business including Digital Subscriber Line (DSL), cable modem, fiber, fixed wireless, and satellite. Fixed broadband does not include mobile (cellular) broadband.

Fixed Terrestrial Broadband— Any broadband transmission method to a home or business including Digital Subscriber Line (DSL), cable modem, fiber, and fixed wireless. Fixed broadband does not include mobile (cellular) broadband and satellite.

Incumbent Local Exchange Carrier (ILEC)— A local telephone company which provided landline service before the market was opened to competitive local exchange carriers.

Price Cap Carriers— Include the three largest incumbent exchange carriers in the state: CenturyLink, Windstream, and Frontier (also known as Citizens Telecommunications of Nebraska).

Rate of Return Carriers— Smaller, rural incumbent local exchange carriers.

Rural Area— Open countryside with population densities less than 500 people per square mile or places with fewer than 2,500 people.

Terrestrial Broadband— Land-based methods of broadband transmission (DSL, cable modem, fiber, fixed wireless and mobile wireless). Terrestrial broadband does not include satellite.exchange carrier (ILEC).

Unserved Areas— Areas with internet service at less than 10 Mbps down/1 Mbps up.

Underserved Areas— Areas which have internet service at 10 Mbps down/1 Mbps up or greater but less than 25 Mbps down/3 Mbps up.

³See Appendix 7 Broadband Coverage by ILEC Including Fixed Wireless Coverage by Rural Households Not Covered

Public-Private Partnerships and Broadband Planning

Public-private broadband partnerships have primarily been utilized in communities, but not rural areas outside of city or town limits. Some models, however, could be adapted for use in rural areas.

Public power districts and cooperatives could play a role in advancing the deployment of broadband services in rural Nebraska through public-private partnerships. Public power districts and cooperatives may own fiber rings to connect necessary electric controls and data points. The communications network enables public power districts to safely operate and manage the electric grid. The communications network could be leveraged to facilitate the deployment of broadband in rural areas.

Key Recommendations

- Encourage local and regional broadband planning, including communications planning between telecommunications providers and public power districts and cooperatives.
- Explore the creation of broadband cooperatives in unserved and underserved localities.
- Retain the existing prohibition on retail provision of broadband service by public entities.
- Explore ways to make it easier for public entities to lease dark fiber.
- Explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.
- Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.

Digital Inclusion, Homework Gap and Leveraging E-Rate Funding

As more services move online, internet access is becoming a necessity. Students who need to use the internet to complete homework are especially impacted. The term “homework gap” is used to describe the challenge that students who lack home internet access face in completing online assignments.

Libraries are key community partners in providing internet and computer access to students and the

general public—especially in rural areas. However, 84% of Nebraska public libraries serving populations less than 2,500 reported internet speeds of less than 24 Mbps down.⁴ The E-Rate program, which provides support for telecommunications services by schools and libraries, is underutilized by Nebraska libraries with only 25% of public libraries in Nebraska applying for E-Rate funding in 2019-20.

Key Recommendations

- Increase the number of public libraries applying for E-Rate support;
- Fund four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing;
- Implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools.
- Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.
- Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.

Broadband Infrastructure Funds

Key Recommendation

- Funding opportunities should be monitored and communicated to interested stakeholders, including communities.

⁴Information on library broadband availability is from the Nebraska Library Commission. See [Appendix 9](#) for more information on Broadband Adoption Data and Broadband in Nebraska Libraries or the map at <https://www.zemaps.com/view?group=3499369&x=-100.053561&y=43.439597&z=11>