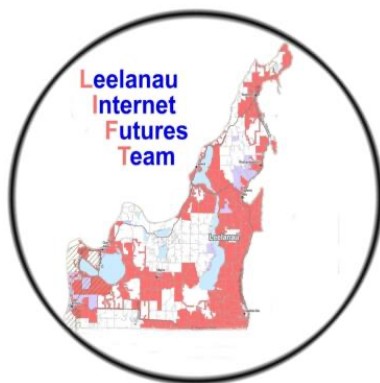# Leelanau Internet Futures Team Rural Broadband Planning Overview and Recommendations

Background

The Leelanau Peninsula Economic Foundation (LPEF), a 501c3 non-profit corporation founded in 2014, is comprised of representatives from local and county chambers of commerce, business and agri-business. Through a survey of Leelanau businesses conducted in 2016, LPEF found that one of the most critical barriers to business success and growth was lack of available high speed internet service.

To address this issue later that year LPEF created the Leelanau Internet Futures Team (LIFT) drafting key stakeholders from public and private sector to serve on LIFT and tasked the committee with developing an action plan to provide high-speed internet access throughout the county. (LIFT membership attached in appendix.)

LIFT partnered with the Public Service Commission's Connect Michigan and conducted multiple surveys of Leelanau County residents, businesses and stakeholders in 2016 to identify broadband needs and priorities. Surveys focused on libraries, agriculture, economic prosperity, government, healthcare, K-12 Education, public safety, talent/workforce development, tourism and community organizations. The 2020 pandemic magnified both the need and the impact inadequate broadband had on our county and reinforced the necessity for high speed broadband services for all Leelanau businesses, agri-business, schools and residents as evidenced in the 2016 survey.
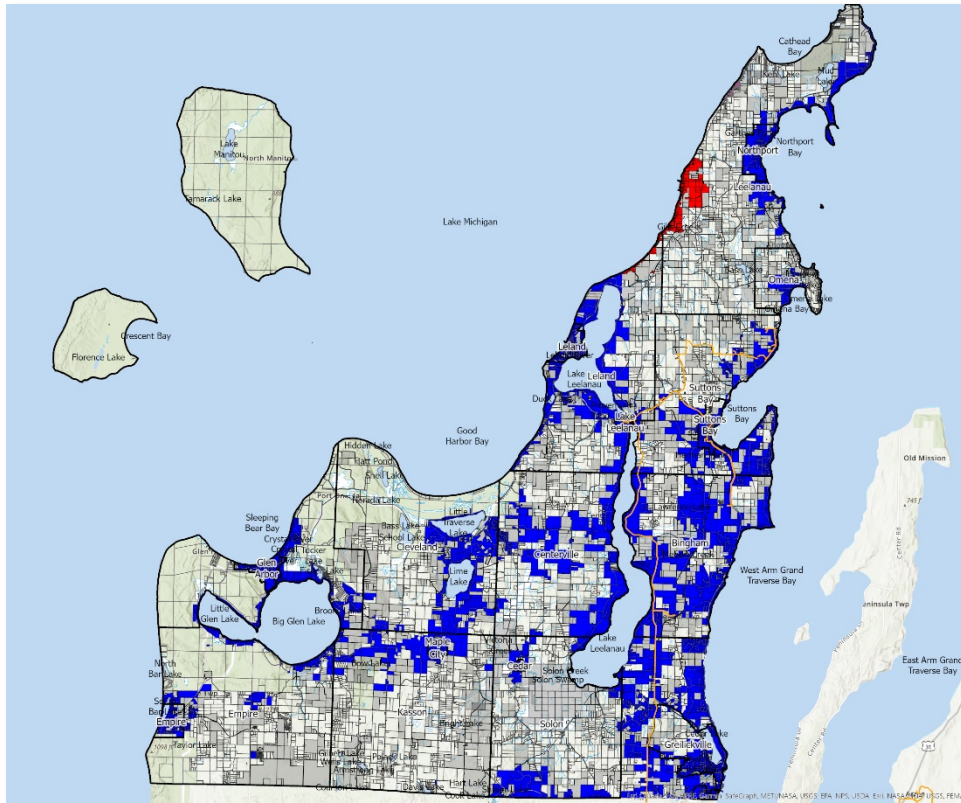
Board of Commissioner Action

In May of 2021 at the recommendation of LIFT, the Leelanau County Board of Commissioners (BOC) engaged DCS Technology Design to conduct a county-wide Asset Survey and Study of all Broadband services, cabled and wireless. DCS Technology Design is a telecommunications engineering firm based in Michigan, that is focused specifically on Rural Broadband issues, looking at the problem purely from an Infrastructure viewpoint. (See appendix for additional information on DSC Technology Design.)

Survey findings were presented to the BOC on September 23rd, 2021 and in November the DCS Technology Design began working with the LIFT to develop a high level broadband plan. ***The mission, to develop a county-wide plan for expansion and implementation of high-speed broadband services to all residents, farms and businesses currently not served by broadband access.***

Challenges

1. Leelanau County has ~22,700 occupied parcels with 5045, or about 22% of the county, without access to cable or fiber (white parcels) and little to no access to other high speed broadband services. Charter existing coaxial service shown in blue and recent Cherry
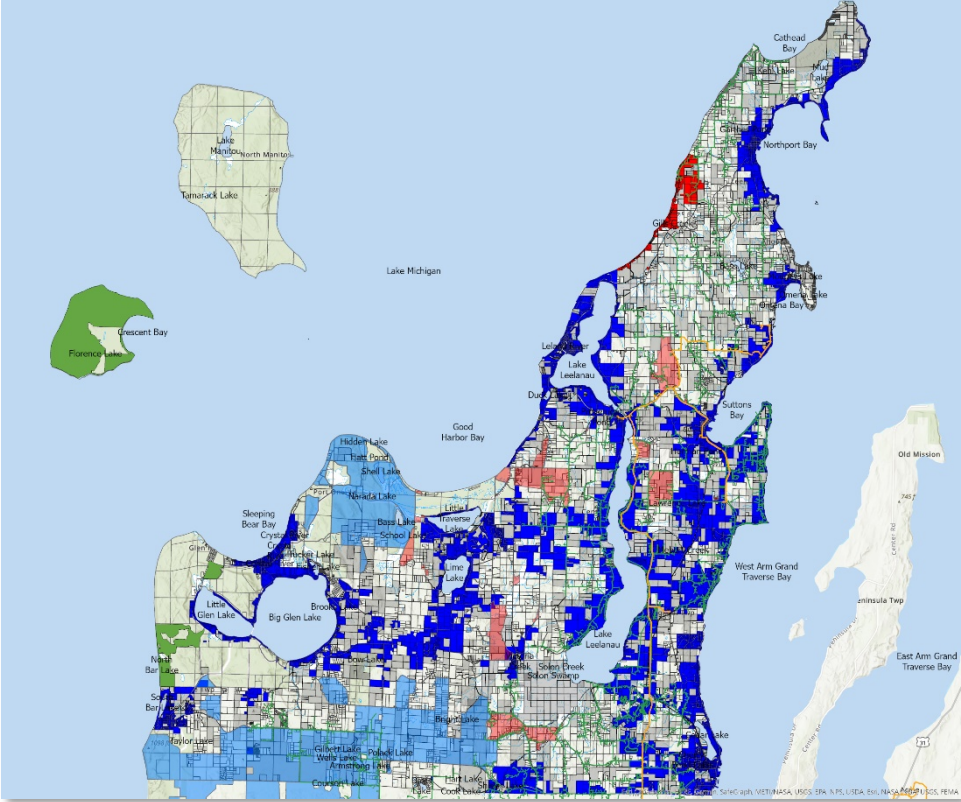

   Capital Connection fiber service in red.
2. High speed internet technologies that can evolve with the growing requirements of households and businesses are time consuming and costly to implement, but critical to the future of the county's continued development
3. Short term solutions are needed from multiple internet sources to ensure all homes, farms and businesses can get online within the next 12 months.
4. There is an urgent need to provide usable Broadband services to all residents and businesses within the county.
5. The definition of 'high speed' broadband is changing from 25 Mbps down/3 Mbps up to 100/100 Mbps. Future funding opportunities will be based on new speed definitions.
6. New towers are needed to enhance 911 function in parts of the County, improve cellular service and encourage new fixed-wireless providers to offer internet coverage.
7. The public generally is unaware of who providers are, where to find information, what State and Federal programs provide, and the type of service they need.

The broadband expansion team agreed that development of both short term and long term solutions were needed to address the challenges, and priorities established within the goals to address the full scope of the problem. The team began by evaluating each individual township's

unserved and underserved parcels. They explored available options with existing and planned technologies (RDOF in pink, light blue and green below) and determined how to leverage those technologies for both short-term (2022) and long-term (2026) goals.   Based on that evaluation, the following recommendations were offered to the County Board of Commissioners with a blueprint on how to proceed to eliminate the county's broadband deficiencies in the most efficient and financially viable manner.
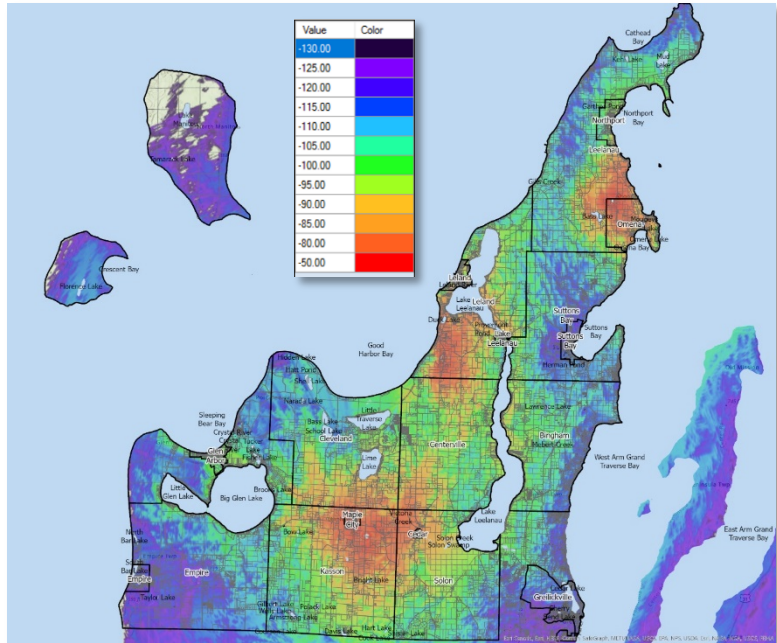

Priorities Established within Goals

- Focus on the importance of today's virtual classroom requirements for K-12 and higher education;
- Recognize affordability concerns within the communities, identify programs and requirements addressing affordability, and include those discussions with current and future internet providers;
- Educate the public; and
- Target the most unserved:
  60% of the County's total unserved homes and businesses are in:
   Leelanau (1028), Kasson (776), Empire (659) and Solon (575) townships.
  Next highest unserved areas, 30% of the total unserved, are in:
  Suttons Bay (545), Centerville (391), Leland (318) and Cleveland (260) townships.
  The remaining townships have 10% of the unserved homes & businesses:
  Bingham (196), Elmwood (167), and Glen Arbor (126).

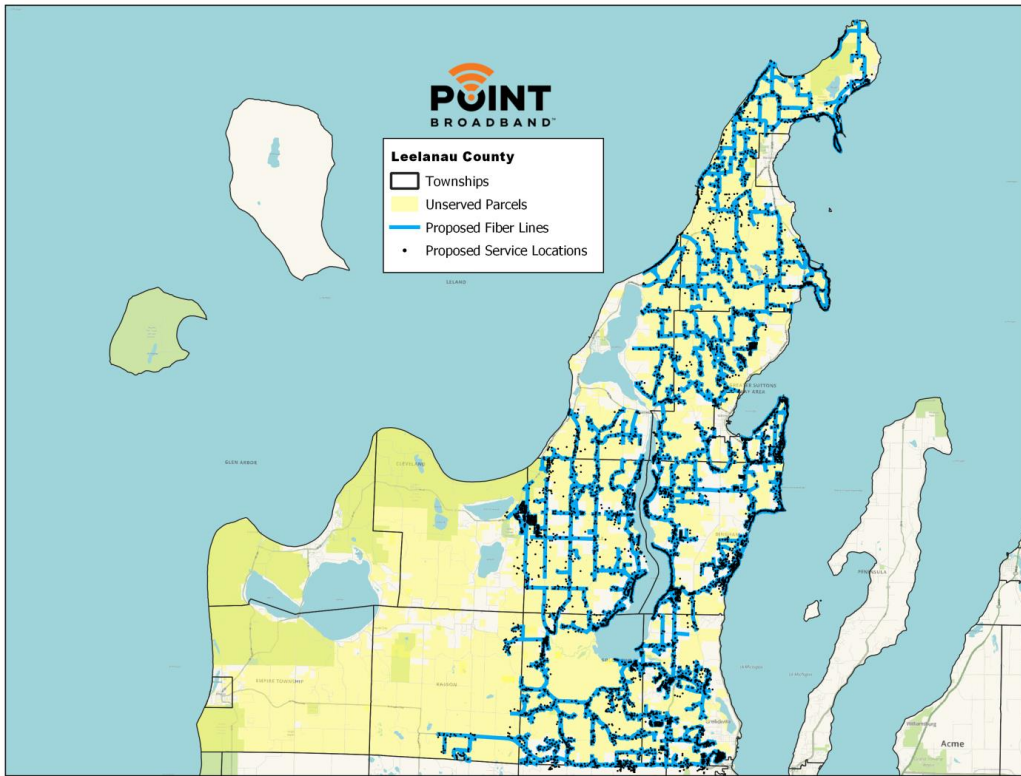**Short Term Goal Recommendations Based on Data Findings**

- Achieve a minimum of 35 Mb/s download and 5 Mb/s upload data rates (35/5) to all unserved parcels by December 31, 2022, employing the following strategies:
  - Leverage new generation wireless technologies that can be deployed quickly to larger geographic areas (see Agri-Valley 2022 deployment plan, depicted in map below);
  - Identify planned fiber (RDOF) areas that may be accelerated to fill gaps not serviceable other ways
  - Leverage existing and planned fiber and cable coverage areas to fill in the small gaps. Identify small gaps that may be serviceable through extensions of existing Broadband Hybrid Fiber/Coax networks (HFC)

- Explore new tower locations and incent existing and new wireless providers to improve internet coverage while improving enhanced 911 Emergency service coverage.
- Develop public service announcement methods to keep the community informed.
- Provide layered maps online to allow the public to examine unserved areas and overlay existing and new broadband services that is or will be available in their area.

Short Term and Long Term FTTH Goal
- Contract with Point Broadband, working with Cherryland Electric Cooperative, to expand FTTH to 3100 unserved homes and businesses, 60% of the total unserved in the County. This proposal is a $17.4 million dollar investment, $12.4 million by Point Broadband, $5 million commitment by the County. The map below shows the Point Broadband proposed fiber lines in blue. Part of the fiber will be ariel on Cherryland's poles, the balance underground. Discussions have begun with other internet service providers to expand FTTH to those portions of Cleveland, Glen Arbor, Kasson and Empire townships not covered by the Point proposal.

- Explore collaboration opportunities with the Grand Traverse Band of Chippewa and Ottawa Indians to utilize their backbone fiber.
- Work with Charter (Spectrum) and Cherry Capital Connection to incent FTTH expansion beyond their ARDOF boundaries in remaining unserved areas in Empire, Kasson, Glen Arbor and Cleveland Townships.
- Achieve FTTH or HFC connectivity capable of 1 Gigabit by 1 Gigabit Symmetrical data rates by 2026. All new FTTH design shall be capable to scale to future 10 Gig and 40 Gig standards (and beyond).
- Acknowledge emerging Broadband speed goals (100/100) for future funding and strive to position the county to achieve 100% of those goals by 2026
- Allocate 3.2 million of ARPA funds awarded to the County and raise additional 2 million to complete broadband recommendations.

Partnership Costs to Leelanau County:
Point Broadband – $5 million
Other ISP Incentives – $500,000 to 1 million

With County America Recovery Plan Act (ARPA) allocation of 3.2 million, seeking an additional $2.3 to 2.8 million.

Appendix

DCS Technology Design
DCS Technology Design was founded in 2008 with the goal to offer a level of telecommunications engineering and technical expertise that sets industry standards; we are driven to achieve a level of accuracy and excellence that others follow. Because of the 2020 pandemic, DCS's heritage of over four decades in designing and building cable and fiber networks, across municipalities of all sizes, has been re-focused on the challenge of getting Broadband access to all Rural America.   Our Mission is to help municipalities develop clear-cut technical programs that are innovative, yet practical, to bring reliable high-speed Broadband to 100% of its homes and communities through existing and new technologies, that are sustainable well into the future.

LIFT
LIFT's members come from across the county and from both the private and public sectors.
- Matt Ansorge • County - Director of Emergency Management/911 Services
- Jim Bardenhagen • Agriculture - Bardenhagen Farms, LPEF Board Member, Suttons Bay
- Mary Ann Borton • Retired Business, Centerville Township
- Field Carden • Business - Economics consultant, Bingham Township
- David Edelstein • Organization –TART Trails Board Member, Leland Township
- Robert Carson • Regional - Planner Director, Community Development, Networks Northwest
- Tommy Hills • Schools - IT Director, Leland School
- George McClellan • Grand Traverse Band of Chippewa & Ottawa Indians - IT Director
- Greg McMorrow • Healthcare – Health Care Consultant, Omena
- Brian Mitchell • Agriculture – Cherry Home Orchards, Northport
- Mark Morton • Libraries – Director, Leland Township Public Library
- Ron Plamondon • County - Director Information Technology
- Gary Roll • Business - Retired business executive
- Chuck Schaeffer • Kasson Township Telecommunication Committee
- Patricia Soutas-Little, Chair • LPEF Board Member, Leland
- Tom Stephenson • State – Broadband Solutions Manager, Connect Nation, State Public Service Commission
- Mary Tonneberger • Business Marketing Management - Former Board of Commissioner, Omena
- Peter Van Nort • Township – Former Glen Arbor Township Supervisor
- Ty Wessell • County - Leelanau County Board of Commissioner District #4
- Doug Whitley • Business - Retired Business and Chamber Executive
- Paul Winston • Business – Owner, Digital Winston technology consultant, Lake Leelanau
- Tom Wolf • Business – Retired Compliance Manager, Team Elmer's