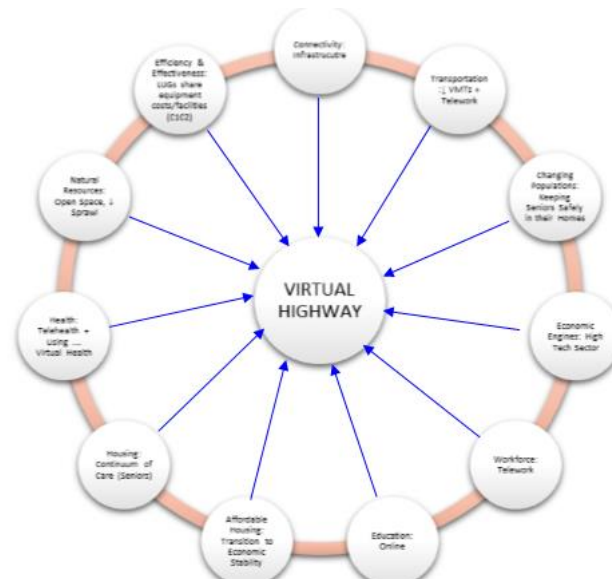


Building a Resilient Region

Virtual Highway Project

Five-county Anchor Tenant Assessment

By Dr. Stacey Stockdill & Sonya Hills



Acknowledgements:

The following synthesis was prepared by Dr. Stacey Stockdill (CEO) and Sonya Hills (analyst).

We are also indebted to the following individuals who assisted in the development of the survey and/or in the distribution of the survey link to their respective constituents:

Dr. Chad Coquette, Executive Director, and Jeremy Schneider, IT Support Specialist, National Joint Powers Alliance (NJPA)
Cheryl Lee Hills, Executive Director, and Tad Erickson, Community and Economic Development Planner, Region Five
Development Commission (R5DC)
Don Hickman, Vice President, and Dan Frank, Community Specialist, Initiative Foundation
Tony Mans, Executive Director, and Pam Mahling, Corporate Resource Specialist, West Central Telephone Association
Kevin Larson, Executive Director, and Kristi Westbrock, Director of Operations and HR, Consolidated Telephone Company (CTC)
Janelle Riley, Chief Executive Officer, Syvantis Technologies
Merritt Bussiere, Extension, University of Minnesota
Dr. Larry Lundblad, President, and Michael Amick, Dean, Central Lakes College
Kimberle Nagel, Director, Leech Lake Band of Ojibwe Economic Development and Sally Fineday, Wireless Telecommunications
Business Manager, Leech Lake Band of Ojibwe

Virtual Highway Task Force: Tri-county Hospital; Brainerd Lakes Area Economic Development Corporation; Community Development of Morrison County; City of Staples Community Development; Wadena Economic Development Corporation; the Brainerd Lakes Chamber; Good Samaritan Society; Minnesota State Community and Technical College (M-State); Resilient Living Council, and Leech Lake Band of Ojibwe. We also coordinate our work with the BLAEDC and Brainerd Lakes Area Chamber of Commerce High-Tech Sector Task Force and the CLC/MNSCU High Tech IT Task Force. We have letters of support from: Commissioner Mary Tingerthal (Minnesota Housing Fund), Warren Hansen, (CEO, Greater Minnesota Housing Fund - GMHF), and Bernadine Joselyn (Blandin Foundation) with the loan of their broadband expert, Bill Coleman.

NOTE: Many of the questions came from the Minnesota Community Connect Anchor Tenant survey and were used verbatim to ensure cross-survey comparability in extended analysis.



Resilient Region Theme Champions

CHAMPION CHAIR:

Tim Houle, Administrator, Crow Wing County

EDUCATION AND WORKFORCE DEVELOPMENT

Dr. Larry Lundblad (President) Central Lake College (CLC)

Craig Nathan (Regional Director) Rural MN CEP

Dr. Chad Coquette (ED) National Joint Powers Alliance (NJPA)

Cheryal Lee Hills (ED) Region Five Development Commission (R5DC)

EFFICIENCY AND EFFECTIVENESS

Don Hickman (Vice President) Initiative Foundation

Andrea Lauer, Mayor of Royalton

Mel Radermacher (Controller of External Affairs and Members Services) R5DC

TRANSPORTATION

Tim Houle (Engineer) Widseth, Smith, Nolting

Jarrett Leas (Engineer) Kadrmaz, Lee & Jackson

Tad Erickson (Community & Economic Development Planner) R5DC

ECONOMIC ENGINES

Greg Bergman (Director) Small Business Development Center (SBDC)

Rick Utech (ED) Todd County Economic Development Corporation

Joe Schulte (Bus/Loan Developer) R5DC

Vicki Chepulis (Grants Coordinator) Five Wings Arts Council

Arlene Jones (Owner/Operator) The Farm at St. Mathias & (Manager) SPROUT Food Hub

ENERGY

Bob Schaefer (Instructor) CLC

Jason Edens (President) Rural Renewable Energy Alliance (RREAL)

Molly Zins (ED) University of Minnesota Sustainable Development Partnership

HEALTHCARE

Jani Wiebolt (retired COO) Essentia SJMC

Tim Rice (CEO) Lakewood Health System

John Solheim (CEO) Cuyuna Regional Medical Center

Bob McLean (COO/GM) Hunt Utilities Group

Adam Rees (CEO) Essentia Health

Mike Larson (COO) Essentia Health

AFFORDABLE HOUSING/HOUSING

Lynn Hunt (Board Chair) Resilient Living Council

Jennifer Bergman (ED) Brainerd HRA

Colleen Faacks (ED) Mid-MN Builders Association

Janie Weston (ED) Greater Lakes Association of Realtors

Deanna Hemmesch (ED) Central Minnesota Housing Partnership (CMHP)

Amy Hunt McLain (Board) Resilient Living Council

CHANGING POPULATIONS

Mary Sam (Director of Intercultural Services/Diversity/Tribal Relations) CLC

DeAnn Barry (ED) Brainerd Lakes Area Senior Center

Dan Frank (Community Specialist) Initiative Foundation

Dean Loidolt (Community Service Director) Central MN Council on Aging (CMCOA)

NATURAL RESOURCES AND DEVELOPMENT PATTERNS

Todd Holman (Program Director) The Nature Conservancy

John Sumption (President) Sumption Environmental

Phil Hunsicker (Author) Conservation Design Score Card

CONNECTIVITY

Pam Mahling (Corporate Resource Specialist) West Central Telephone Association (WCTA)

Kevin Larson (CEO) Consolidated Telephone Company (CTC)

Janelle Riley (CEO) Syvantis Technologies

Stacey Stockdill, (CEO) EnSearch, Inc.

Sally Fineday (Business Manager) Leech Lake Telecommunications

Monty Johnson (Senior Dean) M-State

We represent 40,500 (seasonal and year-round) residents, 24,877 K-12 students (49% eligible for free or reduced school lunches), more than 401,605 northbound cars loaded with visitors (continuous traffic monitors August 2009), and 11,252 home-based businesses who generate \$407,786,000 in revenue for the five-county region (Crow Wing and Cass Counties: Census 2010 and Morrison, Todd and Wadena Counties: ACS 2007). Advocates for improved broadband access come from ALL local units of government within the region (65 Cities & 5 Counties); hundreds of private sector companies; 27 school districts', 2 community colleges (CLC and Minnesota STATE Community Technical College) and the 600 residents who worked on the creation of the regions "Resilient Region Plan".

Total of 35 Survey Respondents

School	18 51.4%
Aitkin Schools	
Bertha Hewitt Schools	
Brainerd Schools	
Cass Lake Bena Schools	
Central Lakes College	
Crosby-Ironton Schools	
Eagle Valley Schools	
Freshwater	
Little Falls Schools	
Long Prairie Schools	
Menahga Schools	
Mid-State Schools	
Pequot Lakes Schools	
Pierz Schools	
Pine River Schools	
Swanville Schools	
Upsala Schools	
Verndale Schools	

Medical Center	3 8.6%
Cuyuna Regional Medical Center	
Essentia Health	
Lakewood Health System	
City	8 22.8%
City of Brainerd	
City of East Gull Lake	
City of Harding	
City of Hewitt	
City of Pequot Lakes	
City of Remer	
City of Royalton	
City of Walker	
County	6 17.1%
Cass County Courthouse	
Cass County Courthouse and Campus	
Crow Wing County	
Morrison County	
Todd County	
Wadena County	

What platform is currently being used?

Every Medical Center (3), City (8), and County (6) use the PC Platform.

For Schools 11.1% (2 of 18) use only the Mac Platform, 33.3% (6 of 18) use only the PC Platform, and 55.6% (10 of 18) use Both.

School	Mac Platform	PC Platform	Both
	2	6	10
Aitkin Schools			1
Bertha Hewitt Schools		1	
Brainerd Schools		1	
Cass Lake Bena Schools		1	
Central Lakes College		1	
Crosby-Ironton Schools			1
Eagle Valley Schools			1
Freshwater		1	
Little Falls Schools			1
Long Prairie Schools	1		
Menahga Schools			1
Mid-State Schools			1
Pequot Lakes Schools			1
Pierz Schools			1
Pine River Schools			1
Swanville Schools			1
Upsala Schools	1		
Verndale Schools		1	

Medical Center	Mac Platform	PC Platform	Both
		3	
Cuyuna Regional Medical Center		1	
Essentia Health		1	
Lakewood Health System		1	
City		8	
City of Brainerd		1	
City of East Gull Lake		1	
City of Harding		1	
City of Hewitt		1	
City of Pequot Lakes		1	
City of Remer		1	
City of Royalton		1	
City of Walker		1	
County		6	
Cass County Courthouse		1	
Cass County Courthouse and Campus		1	
Crow Wing County		1	
Morrison County		1	
Todd County		1	
Wadena County		1	

How old is your newest computer?

82.9% (29 of 35) have computers as new as a year old or less.

	<1	1	2	3
Grand Total	17	12	3	3
	48.6%	34.3%	8.6%	8.6%

School	<1	1	2	3
School	8	8	2	3
Aitkin Schools	1			
Bertha Hewitt Schools		1		
Brainerd Schools		1		
Cass Lake Bena Schools	1			
Central Lakes College		1		
Crosby-Ironton Schools		1		
Eagle Valley Schools		1		
Freshwater		1		
Little Falls Schools			1	
Long Prairie Schools	1			
Menahga Schools		1		
Mid-State Schools	1			
Pequot Lakes Schools	1			
Pierz Schools	1			
Pine River Schools	1			
Swanville Schools	1			
Upsala Schools			1	
Verndale Schools		1		

	<1	1	2	3
Medical Center	2	1		
Cuyuna Regional Medical Center		1		
Essentia Health	1			
Lakewood Health System	1			
City	3	1	1	3
City of Brainerd		1		
City of East Gull Lake				1
City of Harding				1
City of Hewitt				1
City of Pequot Lakes	1			
City of Remer	1			
City of Royalton			1	
City of Walker	1			
County	4	2		
Cass County Courthouse	1			
Cass County Courthouse and Campus	1			
Crow Wing County	1			
Morrison County		1		
Todd County		1		
Wadena County	1			

How old is your oldest computer?

Average oldest computer:

School: 7.7 years old

Medical Center: 6.3 years old

City: 4.7 years old

County: 6.8 years old

School	1.5	3	<5	5	>5	6	<7	7	8	>8	9	10	13
Aitkin Schools												1	
Bertha Hewitt Schools								1					
Brainerd Schools							1						
Cass Lake Bena Schools									1				
Central Lakes College			1										
Crosby-Ironton Schools			1										
Eagle Valley Schools								1					
Freshwater						1							
Little Falls Schools												1	
Long Prairie Schools				1									
Menahga Schools								1					
Mid-State Schools					1								
Pequot Lakes Schools											1		
Pierz Schools								1					
Pine River Schools								1					
Swanville Schools								1					
Upsala Schools												1	
Verndale Schools											1		

	1.5	3	<5	5	>5	6	<7	7	8	>8	9	10	13
Medical Center						2	1						
Cuyuna Regional Medical Center						1							
Essentia Health							1						
Lakewood Health System						1							
City	1	2		2		2			1				
City of Brainerd		1											
City of East Gull Lake		1											
City of Harding				1									
City of Hewitt						1							
City of Pequot Lakes									1				
City of Remer	1												
City of Royalton						1							
City of Walker				1									
County			1			3			1			1	
Cass County Courthouse						1							
Cass County Courthouse and Campus													1
Crow Wing County						1							
Morrison County									1				
Todd County						1							
Wadena County			1										

What is the replacement cycle of your computers?

Average replacement cycle:

School: 5.3 years or as needed

Medical Center: 4.7 years

City: 4.5 years or as needed

County: 4.5 years

	3	3-4	3-8	3-10	4-5	5	5-7	6	6-7	7	As needed
School	1	1	1	1	1	5	2	2	1	1	2
Aitkin Schools									1		
Bertha Hewitt Schools		1									
Brainerd Schools							1				
Cass Lake Bena Schools											1
Central Lakes College	1										
Crosby-Ironton Schools											1
Eagle Valley Schools						1					
Freshwater								1			
Little Falls Schools				1							
Long Prairie Schools			1								
Menahga Schools							1				
Mid-State Schools						1					
Pequot Lakes Schools										1	
Pierz Schools						1					
Pine River Schools								1			
Swanville Schools					1						
Upsala Schools						1					
Verndale Schools						1					

	None	3-5	4	4-5	4-6	5	As needed
Medical Center			1			2	
Cuyuna Regional Medical Center							1
Essentia Health							1
Lakewood Health System			1				
City	1	1	1	1			4
City of Brainerd				1			
City of East Gull Lake			1				
City of Harding							1
City of Hewitt							1
City of Pequot Lakes						1	
City of Remer							1
City of Royalton	1						
City of Walker							1
County		1	1	2	1	1	
Cass County Courthouse						1	
Cass County Courthouse and Campus				1			
Crow Wing County		1					
Morrison County				1			
Todd County					1		
Wadena County		1					

Non-School: How many computers do you have?

Average number of non-school computers:

City: about 20 computers

County: about 324 computers

Medical Centers have hundreds of computers.

16 Schools did not respond to this question.

	2	20
School	1	1
Pequot Lakes Schools	1	
Upsala Schools		1

	3	4	6	11	14	26	90
City	1	2	1	1	1	1	1
City of Brainerd							1
City of East Gull Lake		1					
City of Harding			1				
City of Hewitt	1						
City of Pequot Lakes						1	
City of Remer		1					
City of Royalton					1		
City of Walker				1			

	575	750	1,637*
Medical Center	1	1	1
Cuyuna Regional Medical Center		1	
Essentia Health			1
Lakewood Health System	1		

*Essentia Health: 627 PC's and 1,010 Thin Clients

	175	270	300	350	500
County	1	1	1	2	1
Cass County Courthouse			1		
Cass County Courthouse and Campus				1	
Crow Wing County					1
Morrison County				1	
Todd County		1			
Wadena County	1				

School: How many computers do you have for administrative use?

Average number of school computers for administrative use:

School: 24 computers (Duplicated count with Freshwater)

16 computers (Unduplicated without Freshwater)

School	4	5	10	12	14	20	25	30	40	150
School	1	1	4	2	1	4	1	1	1	1
Aitkin Schools						1				
Bertha Hewitt Schools				1						
Cass Lake Bena Schools							1			
Central Lakes College								1		
Crosby-Ironton Schools						1				
Eagle Valley Schools			1							
Freshwater										1
Little Falls Schools									1	
Long Prairie Schools				1						
Menahga Schools			1							
Mid-State Schools			1							
Pequot Lakes Schools						1				
Pierz Schools					1					
Pine River Schools						1				
Swanville Schools		1								
Upsala Schools			1							
Verndale Schools	1									

Brainerd Schools did not respond to this question.

Medical Centers, Cities, and Counties also did not respond.

* The Freshwater school districts includes: [Bertha-Hewitt](#), [Browerville](#), [Eagle Valley](#), [Henning](#), [Long Prairie-Grey Eagle](#), [Menahga](#), [Sebeka](#), [Staples-Motley](#), [Verndale](#) and [Wadena-Deer Creek](#). Associate membership districts: [New York Mills](#), [Perham-Dent](#), [Pillager](#).

** The Mid-State education district includes: [Holdingford](#) public schools, [Isle](#) public schools, [Little Falls](#) community schools, [Long Prairie/Grey Eagle](#) public schools, [Onamia](#) public schools, [Pierz](#) public schools, [Royalton](#) public schools, [Swanville](#) public schools, [Upsala](#) public schools

School: How many computers do you have for teacher or employee use?

Average number of school computers for teacher or employee use:

School: 271 computers (inflated because of outlier Brainerd Schools)

Average without Brainerd Schools: 100 computers

School	30	40	50	56	70	80	90	100	120	200	240	250	>3,000
School	1	1	3	1	1	2	1	2	1	1	1	1	1
Aitkin Schools								1					
Bertha Hewitt Schools			1										
Brainerd Schools													1
Cass Lake Bena Schools										1			
Central Lakes College					1								
Crosby-Ironton Schools												1	
Eagle Valley Schools		1											
Freshwater								1					
Little Falls Schools											1		
Menahga Schools							1						
Mid-State Schools	1												
Pequot Lakes Schools									1				
Pierz Schools						1							
Pine River Schools						1							
Swanville Schools			1										
Upsala Schools			1										
Verndale Schools				1									

Long Prairie Schools did not respond to this question.

Medical Centers, Cities, and Counties also did not respond.

School: How many computers do you have for student use? We have a computer lab(s) with x# of stations

Average number of stations in computer labs:

School: 416 computers (inflated because of outlier Brainerd Schools)

Average without Brainerd Schools: 201 computers

	30	75	100	172	180	220	225	230	420	700	>3,000
School	3	1	1	1	1	1	1	1	1	1	1
Aitkin Schools							1				
Bertha Hewitt Schools						1					
Brainerd Schools											1
Central Lakes College										1	
Crosby-Ironton Schools			1								
Eagle Valley Schools	1										
Little Falls Schools									1		
Menahga Schools				1							
Pequot Lakes Schools	1										
Pierz Schools					1						
Pine River Schools								1			
Upsala Schools		1									
Verndale Schools	1										

Cass Lake Bena Schools, Mid-State Schools, Long Prairie Schools, Freshwater, and Swanville Schools did not respond to this question. Medical Centers, Cities, and Counties also did not respond.

School: How many computers do you have for student use? We have a computers in every classroom

For most schools computer access depends on the grade/classroom/subject.

Some schools have a few computers in classrooms that students can share. See comments on the next slide.

72.2% (13 of 18) of schools reported having a computer in each classroom for the teacher to use.

38.9% (7 of 18) of schools also have an Ipad or mobile device for every student in the classroom.

School	Teacher Station	Ipads/Mobile Devices for Every Child
	13	7
Aitkin Schools	1	
Brainerd Schools	1	
Central Lakes College	1	
Crosby-Ironton Schools	1	1
Eagle Valley Schools	1	
Freshwater	1	
Little Falls Schools	1	1
Long Prairie Schools	1	1
Menahga Schools	1	1
Mid-State Schools		1
Pierz Schools	1	
Pine River Schools	1	1
Swanville Schools	1	
Verndale Schools	1	1

Bertha Hewitt Schools, Cass Lake Bena Schools, Pequot Lakes Schools, Upsala Schools did not respond to this question.

Medical Centers, Cities, and Counties also did not respond.

**School: How many computers do you have for student use?
We have a computers in every classroom - Other**

School

Aitkin Schools

Depends on the classroom...

Bertha Hewitt Schools

We have 2 desk top computers in the K-6 classrooms and 6 Ipads per the K-2 classroom. We have a 30 station mobile lab that is available for check out to the elementary.

Brainerd Schools

Labs and sets of tablets, ipods, Chromebooks all available.

Cass Lake Bena Schools

800

Central Lakes College

labs

Freshwater

Groups of 5 or 6 desktops in each room.

Mid-State Schools

One program has 1 to 1 iPads for the 20 students in that program

Pierz Schools

Access for students in every classroom to several computers that are not the teachers.

Pine River Schools

Elementary 1-4 student computers per classroom, 1 to 1 iPads in grades 5-12, 4 iPads in each K-4 classroom.

Swanville Schools

2-3 computers in every classroom, iPads for teachers, elementary and high school labs, iPads for all SpEd students.

Verndale Schools

Ipads for all 9th and 10th grade students.

What software are you using?

Most schools are familiar with Microsoft Office Suite.

Crosby-Ironton Schools, and Long Prairie Schools did not respond to this question.

	QuickBooks	SharePoint
School	2	1
Central Lakes College	1	1
Verndale Schools	1	

	Microsoft Office Suite	Microsoft Word	Microsoft Excel	Microsoft Access	Microsoft PowerPoint	Microsoft Publisher
School	15	8	8	4	8	6
Aitkin Schools	1	1	1		1	1
Bertha Hewitt Schools	1	1	1		1	
Brainerd Schools	1	1	1		1	
Cass Lake Bena Schools		1	1	1	1	1
Central Lakes College	1	1	1	1	1	1
Eagle Valley Schools	1					
Freshwater	1					
Little Falls Schools	1					
Menahga Schools	1	1	1	1	1	1
Mid-State Schools	1	1	1		1	1
Pequot Lakes Schools	1					
Pierz Schools	1	1	1	1	1	1
Pine River Schools	1					
Swanville Schools	1					
Upsala Schools	1					
Verndale Schools	1					

What software are you using?

Most medical centers, cities, and counties are using Microsoft Office Suite.

	Microsoft Office Suite	Microsoft Word	Microsoft Excel	Microsoft Access	Microsoft PowerPoint	Microsoft Publisher
Medical Center	2	1	1	1	1	1
Essentia Health	1					
Lakewood Health System	1	1	1	1	1	1
City	6	8	8	6	7	6
City of Brainerd	1	1	1	1	1	1
City of East Gull Lake	1	1	1	1	1	1
City of Harding	1	1	1	1	1	1
City of Hewitt		1	1			
City of Pequot Lakes		1	1	1	1	
City of Remer	1	1	1	1	1	1
City of Royalton	1	1	1	1	1	1
City of Walker	1	1	1		1	1
County	6	5	5	5	5	5
Cass County Courthouse	1	1	1	1	1	1
Cass County Courthouse and Campus	1	1	1	1	1	1
Crow Wing County	1	1	1	1	1	1
Morrison County	1	1	1	1	1	1
Todd County	1	1	1	1	1	1
Wadena County	1					

	Quick Books	Share Point
Medical Center		1
Lakewood Health System		1
City	2	1
City of Brainerd		1
City of Harding	1	
City of Remer	1	
County	1	3
Cass County Courthouse		1
Crow Wing County		1
Todd County	1	1

Cuyuna Regional Medical Center did not respond to this question.

If using a PC, what operating system do you have?

	Windows XP	Windows 7	Windows 8
Total	17 53.1%	32 100%	11 34.4%

School	Windows XP	Windows 7	Windows 8
School	6	16	4
Aitkin Schools	1	1	
Bertha Hewitt Schools		1	1
Brainerd Schools		1	
Cass Lake Bena Schools	1	1	
Central Lakes College		1	1
Crosby-Ironton Schools		1	
Eagle Valley Schools	1	1	
Freshwater	1	1	1
Little Falls Schools	1	1	
Menahga Schools	1	1	
Mid-State Schools		1	1
Pequot Lakes Schools		1	
Pierz Schools		1	
Pine River Schools		1	
Swanville Schools		1	
Verndale Schools		1	

Long Prairie Schools, Upsala Schools, and Cuyuna Regional Medical Center did not respond to this question.

Other	
School	
Brainerd Schools	Google platform becoming powerful for admin, staff, and students
Little Falls Schools	Mac OS X, Linux Ubuntu
Mid-State Schools	New purchases are on 8
Pine River Schools	Mac OSX 10.6.8 and 10.8
Swanville Schools	Mac OS 10.7
City	
City of Harding	Unsure
County	
Cass County Courthouse	Linux

If using a PC, what operating system do you have?

94.3% (33 of 35) use PC's (slide 2). Cuyuna Regional Medical Center (a PC user) did not answer this question.

53.1% (17 of 32) of PC users have Windows XP. (Windows XP was released in 2001)

100% (32 of 32) of PC users have Windows 7. (Windows 7 was released in 2009)

34.4% (11 of 32) of PC users have Windows 8. (Windows 8 was released in 2012)

	Windows XP	Windows 7	Windows 8
Medical Center	2	2	1
Essentia Health	1	1	
Lakewood Health System	1	1	1
City	4	8	1
City of Brainerd	1	1	
City of East Gull Lake		1	
City of Harding		1	
City of Hewitt		1	
City of Pequot Lakes	1	1	
City of Remer	1	1	1
City of Royalton	1	1	
City of Walker		1	
County	5	6	5
Cass County Courthouse	1	1	1
Cass County Courthouse and Campus	1	1	1
Crow Wing County	1	1	1
Morrison County		1	
Todd County	1	1	1
Wadena County	1	1	1

Which of the following describes the type(s) of internet service that your facility receives?

School	DSL-Asymmetric	Ethernet Over Copper	T-1 Dedicated Line	Cable Modem-Other	Optical Carrier or Fiber to the End Users	Licensed Terrestrial Fixed Wireless	Terrestrial Mobile Wireless
School	1	2	4	1	12	2	1
Aitkin Schools					1		
Bertha Hewitt Schools		1					
Brainerd Schools			1		1	1	1
Cass Lake Bena Schools					1		
Central Lakes College					1		
Crosby-Ironton Schools					1		
Eagle Valley Schools					1		
Little Falls Schools		1	1	1	1		
Long Prairie Schools			1				
Mid-State Schools					1		
Pequot Lakes Schools			1				
Pierz Schools					1	1	
Pine River Schools	1				1		
Upsala Schools					1		
Verndale Schools					1		

Freshwater, Menahga Schools, and Swanville Schools did not respond to this question.

Which of the following describes the type(s) of internet service that your facility receives?

	DSL-Symmetric	Ethernet Over Copper	T-1 Dedicated Line	Cable Modem-DOS/CIS 3.0	Optical Carrier or Fiber to the End Users	Don't Know
Medical Center		2	1		1	
Cuyuna Regional Medical Center					1	
Essentia Health		1				
Lakewood Health System		1	1			
City	3	2	2	2	1	1
City of Brainerd		1				
City of East Gull Lake			1	1		
City of Harding	1				1	
City of Hewitt		1				
City of Pequot Lakes			1			
City of Remer	1					
City of Royalton				1		1
City of Walker	1					
County		1	1		1	
Crow Wing County		1			1	
Wadena County			1			

Cass County Courthouse, Cass County Courthouse and Campus, Morrison County, and Todd County did not respond to this question.

Which of the following describes the type(s) of internet service that your facility receives? - Other

School
Brainerd Schools
Full wireless infrastructure at all sites in 2012-13
Eagle Valley Schools
We participate in the Freshwater Coop WAN to share 250MBps internet with 10 other schools.
Freshwater
250mg fiber connection shared between 10 school districts
Little Falls Schools
50 mbps TLS connection
Menahga Schools
Gigabit WAN with 200MG shared internet access (shared with 10 other schools)
Swanville Schools
Shared Fiber within coop

Medical Center
Essentia Health
We have a 20MB fiber DIA at SJMC in Brainerd. All clinical sites use this too for internet traffic
Lakewood Health System
Internet service from CTC, but not sure what they classify it
City
City of Harding
Consolidated Telephone
City of Royalton
Wi-Fi in the building
County
Cass County Courthouse
State of MN MNet
Cass County Courthouse and Campus
MPLS via State of MN MNet
Crow Wing County
use MN.IT
Morrison County
100 MB provided by MN.IT
Todd County
100Mbps fiber through State of MN Collab

What is the advertised data transfer throughput rate (upstream and downstream) associated with your broadband service?

	≥25 Mbps but <50 Mbps	≥50 Mbps but <100 Mbps	≥100 Mbps but <1 Gbps	≥1 Gbps	Don't Know
School	1	5	8	3	1
Aitkin Schools		1			
Bertha Hewitt Schools			1		
Brainerd Schools					1
Eagle Valley Schools			1		
Freshwater			1		
Little Falls Schools		1			
Long Prairie Schools			1		
Pequot Lakes Schools				1	
Pierz Schools				1	
Pine River Schools		1			
Swanville Schools				1	
Verndale Schools			1		
Crosby-Ironton Schools	1				
Upsala Schools		1			
Menahga Schools			1		
Central Lakes College		1			
Mid-State Schools			1		
Cass Lake Bena Schools			1		

What is the advertised data transfer throughput rate (upstream and downstream) associated with your broadband service?

	>200 kbps but <968 kbps	≥1.5 Mbps but <3 Mbps	≥6 Mbps but <10 Mbps	≥10 Mbps but <25 Mbps	≥25 Mbps but <50 Mbps	≥50 Mbps but <100 Mbps	≥100 Mbps but <1 Gbps	Don't Know
Medical Center				1	1	1		
Essentia Health				1				
Cuyuna Regional Medical Center						1		
Lakewood Health System					1			
City	1	1	2	2				2
City of Brainerd			1					
City of East Gull Lake	1							
City of Harding			1					
City of Hewitt				1				
City of Pequot Lakes		1						
City of Remer				1				
City of Royalton								1
City of Walker								1
County						5	1	
Todd County						1		
Morrison County						1		
Crow Wing County						1		
Cass County Courthouse							1	
Cass County Courthouse and Campus						1		
Wadena County						1		

Current Upstream data transfer throughput rate

	20 Mbps	40 Mbps	54 Mbps	60 Mbps	78 Mbps	90 Mbps	75 to 100 Mbps	250 Mbps
School	1	1	1	1	1	1	1	1
Aitkin Schools			1					
Eagle Valley Schools								1
Freshwater							1	
Pine River Schools		1						
Verndale Schools						1		
Upsala Schools				1				
Menahga Schools					1			
Central Lakes College	1							

	2 to 3 Mbps	2.79 Mbps	8.9 Mbps	12 Mbps	15 Mbps	17 Mbps	40 Mbps	50 Mbps	65 Mbps	100 Mbps
Medical Center						1		1	1	
Essentia Health						1				
Cuyuna Regional Medical Center								1		
Lakewood Health System									1	
City	1	1	1	1	1					
City of Brainerd			1							
City of Harding	1									
City of Hewitt					1					
City of Pequot Lakes		1								
City of Remer				1						
County							1			2
Todd County							1			
Cass County Courthouse										1
Cass County Courthouse and Campus										1

Current Downstream data transfer throughput rate

	50 Mbps	60 Mbps	70 Mbps	74 Mbps	75 to 100 Mbps	80 Mbps	100 Mbps	250 Mbps
School	1	1	1	1	1	1	1	1
Aitkin Schools							1	
Eagle Valley Schools								1
Freshwater					1			
Pine River Schools						1		
Verndale Schools			1					
Upsala Schools		1						
Menahga Schools				1				
Central Lakes College	1							

	2.79 Mbps	8.6 Mbps	6 to 9 Mbps	9 Mbps	15 Mbps	20 Mbps	50 Mbps	88 Mbps	100 Mbps
Medical Center						1	1	1	
Essentia Health						1			
Cuyuna Regional Medical Center							1		
Lakewood Health System								1	
City	1	1	1	1	1				
City of Brainerd		1							
City of Harding			1						
City of Hewitt					1				
City of Pequot Lakes	1								
City of Remer				1					
County							1		2
Todd County							1		
Cass County Courthouse									1
Cass County Courthouse and Campus									1

If answering for an entire system – Please comment on the variance across buildings and locations

School

Bertha Hewitt Schools

We currently are receiving our ISP support through FED.

Eagle Valley Schools

All schools in the Freshwater coop have a 1Gps fiber backbone and have equal access to the shared 250Mbps internet link provided by Arvig.

Freshwater

Fed purchases the 250mg of bandwidth that is then shared with 10 of the Freshwater Schools unrestricted access.

Little Falls Schools

We have 7 sites of which 5 are currently connected via fiber with one more to come online with fiber in the next couple of months. The two currently not connected via fiber are using a 50 mbps TLS connection and the other is using two bonded T-1 lines.

Pequot Lakes Schools

No variance as fiber is run to each site.

Upsala Schools

all located in one building

If answering for an entire system – Please comment on the variance across buildings and locations

Medical Center

Essentia Health

Most of our rural clinical locations use tradition TDM type connections with bonded T1's and then handed the carrier hands the connection off to us as an ethernet connection port. This simplifies our hardware at these locations and the needs to monitor all the seperate T1's.

Cuyuna Regional Medical Center

CRMC is main location. Connection to Heartwood Connection to Longville Clinic Connection to Baxter Clinic Connection to SISU in Duluth - IT Support Internet access. Handles Web Filtering & Anti-Virus.

Lakewood Health System

Our monthly cost does include 66 RF TV endpoints also, so the Internet cost would most likely be more like \$1000 or so from CTC. We also do pay for T-1's and 10mb Ethernet lines to satellite clinics, however this is strictly Ethernet not Internet service. I would be glad to provide those cost figures if needed.

If answering for an entire system – Please comment on the variance across buildings and locations

City

City of Brainerd

Speeds are consistent within fiber loop - city hall, police, fire.

City of Harding

Each Council member has a computer at their home which they pay for the service they receive

City of Hewitt

The City of Hewitt recently installed an outdoor transmitter to provide free Wi-Fi service to the downtown area. In the evenings it has been noticed that this "hot spot" service slows down due to a high amount of internet traffic. Since this free Wi-Fi has only been installed for a few weeks in our community, it is likely that the service speed will continue to slow as more people learn about and utilize the "Hewitt Hot Spot".

City of Walker

None

County

Todd County

Fiber brought in to demarc location within building; fiber backbone to core switches; cat6 copper to desktop with 1Gb at some locations.

Morrison County

\$1700 is cost of participation in Minnesota State & County Collaborative

Cass County Courthouse

Courthouse campus is on MNet @ 100Mbps service.

Cass County Courthouse and Campus

Only difference is where building node may be on a point to point connection at 10Mbps to connect to rest of County network.

If you are a multi-location network, please briefly describe your network.

School

Aitkin Schools

Two schools connected by fiber owned by the school district. running 10 gig Ethernet over a fiber pair. 100 meg Ethernet over another pair dedicated to phone system traffic.

Bertha Hewitt Schools

We currently are receiving our ISP support through FED.

Eagle Valley Schools

See above - 10 school districts share internet on a single WAN. Contact Rich Murdock at Freshwater for more info on the FED network. He manages it. rmurdock@fed.k12.mn.us

Freshwater

Freshwater districts are connected by a 1 gig fiber backbone installed with the RUS grants in 2003 and 2005 awarded to the Freshwater Districts.

Little Falls Schools

The majority of our WAN is connected via 10 GB single mode fiber.

Pequot Lakes Schools

One fiber line connecting sites

Mid-State Schools

Mid-State has fiber linking MSED and technology member districts on our network configuration. This year that involves: Pierz, Swanville, Upsala, Royalton, Onamia, Long Prairie, Isle, Holdingford, and Little Falls Public School Buildings.

If you are a multi-location network, please briefly describe your network.

Medical Center

Essentia Health

We have a large MPLS network. There is a central "hub" in SJMC in Brainerd. This has 1GB connectivity to our MPLS cloud for traffic heading to Duluth or Fargo. The regional clinical sites that are supported by SJMC have MPLS connections too. Below are the details of each site. Hackensack - 6MB @ \$1664 per month Crosslake - 5MB @ \$995 per month Pequot Lakes - 6MB @ \$1664 per month Pierz - 6MB @ \$1900 per month Pillager - 5MB @ \$964 per month Pine River - 6MB @ \$1664 per month Although these are not large connections, they work well for our general EMR traffic because we are using Citrix. As these sites continue to use more sophisticated imaging solutions, we will need to increase these speeds because they would not be sufficient for a large volume of imaging transfers for example.

Lakewood Health System

We have the main line from CTC to our main campus just outside of Staples. We share this Internet connection to all of our locations. We have fiber to our senior campus in staples. WE also have fiber to our satellite clinics in Eagle Bend, Browerville, Motley and Pillager as part of the freshwater network. We are responsible for the T-1's from the schools to our clinics in those towns however. We have a 10mb Ethernet to our Sartell clinic. We have wireless between our Manor and Pines locations in Staples to our Senior Campus.

If you are a multi-location network, please briefly describe your network.

City

City of Brainerd

Single internet connection at city hall with fiber loop to police and fire. VPN connection to parks dept using a 10mbps connection there.

City of Harding

None of the City's computers are linked or networked, we have service through the local telephone company by fiber-optic phone cable. We individually pay for our monthly service. CTC is the only functional provider in our area, so we are limited to their fees and charges.

City of Walker

N/A

County

Todd County

off campus offices have wireless and private networks back to main courthouse complex

Crow Wing County

8 building downtown campus connect via fiber, Public Works 4 miles away connected via fiber

Cass County Courthouse

Outlying facilities are on local provider connections, generally DSL 1-5Mbps Async. One facility is on PRI 6Mbps synchronous circuit. All connect back to Courthouse via VPN.

Cass County Courthouse and Campus

Routed and switched network at campus with site-to-site VPN to one remote office, VPN Vpan access for other locations.

Monthly Cost

School	\$77	\$300	\$1,000	\$1,100	\$2,400*	\$6,000
Eagle Valley Schools	1	1	1	1	1	1
Freshwater		1				
Little Falls Schools			1			1
Pequot Lakes Schools				1		
Verndale Schools	1					
Menahga Schools					1	

City	\$50	\$60	\$65	\$70	\$122	\$135	\$149
City of Brainerd	1						
City of East Gull Lake							1
City of Harding			1				
City of Hewitt					1		
City of Pequot Lakes						1	
City of Remer		1					
City of Walker				1			

Medical Center	\$1,050	\$1,392	\$1,822**
Essentia Health	1	1	1
Cuyuna Regional Medical Center			1
Lakewood Health System		1	

County	\$1,200	\$1,300	\$1,700
Todd County	1	1	3
Morrison County		1	
Crow Wing County	1		
Cass County Courthouse			1
Cass County Courthouse and Campus			1

*\$2400 per month (E-Rate and TARP greatly reduces those costs)

**\$774 a month for 50 meg line \$298.35 a month connection to Heartwood \$750 a month Connect Baxter to CRMC

How would you rate your satisfaction with your current internet service? - Bandwidth

School	Dissatisfied	No Opinion	Satisfied	Very Satisfied
	1	7	10	
Aitkin Schools				1
Bertha Hewitt Schools				1
Brainerd Schools				1
Cass Lake Bena Schools				1
Central Lakes College				1
Crosby-Ironton Schools			1	
Eagle Valley Schools			1	
Freshwater			1	
Little Falls Schools			1	
Long Prairie Schools				1
Menahga Schools	1			
Mid-State Schools			1	
Pequot Lakes Schools			1	
Pierz Schools				1
Pine River Schools				1
Swanville Schools				1
Upsala Schools				1
Verndale Schools			1	

How would you rate your satisfaction with your current internet service? - Bandwidth

	Dissatisfied	No Opinion	Satisfied	Very Satisfied
Medical Center			2	1
Cuyuna Regional Medical Center				1
Essentia Health			1	
Lakewood Health System			1	
City	2	1	5	
City of Brainerd			1	
City of East Gull Lake			1	
City of Harding	1			
City of Hewitt			1	
City of Pequot Lakes	1			
City of Remer			1	
City of Royalton			1	
City of Walker		1		
County			2	4
Cass County Courthouse				1
Cass County Courthouse and Campus				1
Crow Wing County				1
Morrison County			1	
Todd County			1	
Wadena County				1

How would you rate your satisfaction with your current internet service? - Price

School	Dissatisfied	No Opinion	Satisfied	Very Satisfied
	1	6	6	5
Aitkin Schools		1		
Bertha Hewitt Schools				1
Brainerd Schools				1
Eagle Valley Schools			1	
Freshwater			1	
Little Falls Schools	1			
Long Prairie Schools			1	
Pequot Lakes Schools			1	
Pierz Schools				1
Pine River Schools			1	
Swanville Schools				1
Verndale Schools			1	
Crosby-Ironton Schools		1		
Upsala Schools		1		
Menahga Schools		1		
Central Lakes College		1		
Mid-State Schools		1		
Cass Lake Bena Schools				1

How would you rate your satisfaction with your current internet service? - Price

	Dissatisfied	No Opinion	Satisfied	Very Satisfied
Medical Center		1	2	
Essentia Health			1	
Cuyuna Regional Medical Center			1	
Lakewood Health System		1		
City	2	1	3	2
City of Brainerd				1
City of East Gull Lake			1	
City of Harding	1			
City of Hewitt	1			
City of Pequot Lakes		1		
City of Remer				1
City of Royalton			1	
City of Walker			1	
County		3	1	2
Todd County		1		
Morrison County		1		
Crow Wing County				1
Cass County Courthouse				1
Cass County Courthouse and Campus			1	
Wadena County		1		

How would you rate your satisfaction with your current internet service? - Reliability

School	Very Dissatisfied	Dissatisfied	No Opinion	Satisfied	Very Satisfied
	1	1	1	6	9
Aitkin Schools					1
Bertha Hewitt Schools					1
Brainerd Schools					1
Eagle Valley Schools				1	
Freshwater				1	
Little Falls Schools				1	
Long Prairie Schools				1	
Pequot Lakes Schools		1			
Pierz Schools					1
Pine River Schools					1
Swanville Schools					1
Verndale Schools				1	
Crosby-Ironton Schools					1
Upsala Schools	1				
Menahga Schools			1		
Central Lakes College					1
Mid-State Schools				1	
Cass Lake Bena Schools					1

How would you rate your satisfaction with your current internet service? - Reliability

	Very Dissatisfied	Dissatisfied	No Opinion	Satisfied	Very Satisfied
Medical Center				1	2
Essentia Health				1	
Cuyuna Regional Medical Center					1
Lakewood Health System					1
City				5	3
City of Brainerd					1
City of East Gull Lake				1	
City of Harding				1	
City of Hewitt				1	
City of Pequot Lakes					1
City of Remer					1
City of Royalton				1	
City of Walker				1	
County				2	4
Todd County				1	
Morrison County				1	
Crow Wing County					1
Cass County Courthouse					1
Cass County Courthouse and Campus					1
Wadena County					1

How many simultaneous users or device does your network support? (staff, students or patrons)

School	1-49	50-99	100-499	500-999	1,000+	Unknown
Aitkin Schools		1	3	2	10	2
Bertha Hewitt Schools		1				
Brainerd Schools					1	
Eagle Valley Schools					1	
Freshwater					1	
Little Falls Schools					1	
Long Prairie Schools					1	
Pequot Lakes Schools					1	
Pierz Schools						1
Pine River Schools				1		
Swanville Schools			1			
Verndale Schools			1			
Crosby-Ironton Schools				1		
Upsala Schools			1			
Menahga Schools					1	
Central Lakes College					1	
Mid-State Schools						1
Cass Lake Bena Schools					1	

How many simultaneous users or device does your network support? (staff, students or patrons)

	1-49	50-99	100-499	500-999	1,000+	Unknown
Medical Center				1	2	
Essentia Health					1	
Cuyuna Regional Medical Center					1	
Lakewood Health System				1		
City	5	2				1
City of Brainerd		1				
City of East Gull Lake	1					
City of Harding						1
City of Hewitt		1				
City of Pequot Lakes	1					
City of Remer	1					
City of Royalton	1					
City of Walker	1					
County			6			
Todd County			1			
Morrison County			1			
Crow Wing County			1			
Cass County Courthouse			1			
Cass County Courthouse and Campus			1			
Wadena County			1			

How well does your current bandwidth meet your needs?

School	You have more bandwidth than you need already	Your current bandwidth is about right for your current needs	You could use more bandwidth	You will need more bandwidth in the future
School	4	9	4	3
Aitkin Schools	1			
Bertha Hewitt Schools			1	
Brainerd Schools	1			
Eagle Valley Schools		1		
Freshwater				1
Little Falls Schools			1	
Long Prairie Schools		1		
Pequot Lakes Schools		1		
Pierz Schools		1		
Pine River Schools		1		1
Swanville Schools			1	
Verndale Schools		1		1
Crosby-Ironton Schools	1			
Upsala Schools	1			
Menahga Schools			1	
Central Lakes College		1		
Mid-State Schools		1		
Cass Lake Bena Schools		1		

How well does your current bandwidth meet your needs?

	You have more bandwidth than you need already	Your current bandwidth is about right for your current needs	You could use more bandwidth	You will need more bandwidth in the future
Medical Center		2	2	
Essentia Health		1	1	
Cuyuna Regional Medical Center		1		
Lakewood Health System			1	
City		4	3	1
City of Brainerd			1	
City of East Gull Lake		1		
City of Harding			1	
City of Hewitt			1	
City of Pequot Lakes				1
City of Remer		1		
City of Royalton		1		
City of Walker		1		
County		6		
Todd County		1		
Morrison County		1		
Crow Wing County		1		
Cass County Courthouse		1		
Cass County Courthouse and Campus		1		
Wadena County		1		

Which of the following best describes your organizations current bandwidth situation?

	You can obtain additional bandwidth, but have decided not to invest in it	You have a contract (either with the provider or with state/local/federal government) that does not allow you to seek additional bandwidth right now	You are satisfied with existing bandwidth	Would like more bandwidth but cannot afford it due to high prices
School	9	4	6	3
Aitkin Schools	1		1	
Bertha Hewitt Schools			1	
Brainerd Schools	1			
Eagle Valley Schools	1			1
Freshwater	1			
Little Falls Schools	1	1		1
Long Prairie Schools	1			
Pequot Lakes Schools				1
Pierz Schools			1	
Pine River Schools			1	
Swanville Schools		1		
Verndale Schools	1	1		
Crosby-Ironton Schools	1			
Upsala Schools				
Menahga Schools		1		
Central Lakes College				
Mid-State Schools			1	
Cass Lake Bena Schools	1		1	

Which of the following best describes your organizations current bandwidth situation?

	You can obtain additional bandwidth, but have decided not to invest in it	You have a contract (either with the provider or with state/local/federal government) that does not allow you to seek additional bandwidth right now	You are satisfied with existing bandwidth	Would like more bandwidth but cannot afford it due to high prices
Medical Center	2			1
Essentia Health	1			
Cuyuna Regional Medical Center	1			
Lakewood Health System				1
City	2	3	2	1
City of Brainerd			1	
City of East Gull Lake	1			
City of Harding				1
City of Hewitt		1		
City of Pequot Lakes	1	1		
City of Remer			1	
City of Royalton		1		
City of Walker				
County	1	1	3	
Todd County	1			
Morrison County		1		
Crow Wing County			1	
Cass County Courthouse			1	
Cass County Courthouse and Campus			1	
Wadena County				

Describe the issues you are having with access and bandwidth, if any?

School

Bertha Hewitt Schools

Our needs are being constantly accessed. The use increases due to the added number of devices.

Freshwater

We are peaking our bandwidth on some days but mostly we are only using around 60-75% of our bandwidth.

Little Falls Schools

A population of our students live in areas where there is no high speed internet available. Many others live in areas where only one provider is available and that provider knows the situation and jacks up the price.

Pequot Lakes Schools

Current issues with network reliability - investigating with help of CTCIT

Pierz Schools

Our biggest constraint is bandwidth access in our rural homes so students could access all the time.

Verndale Schools

We are currently with the FED RUS schools internet service provider (Arvig). We currently have 250 MB of bandwidth. There are times when this is not enough because of the volume of use and schools are all making the transition to a 1:1 student learning initiative.

Upsala Schools

We have only one carrier in the area that we can purchase bandwidth through, unless we go through a separate one with Mid State. Our town is locked with a single carrier.

Menahga Schools

E-Rate provider doesn't seem to be able to support any higher bandwidth. Not able to switch carrier until next round of E-Rate

Cass Lake Bena Schools

None

Describe the issues you are having with access and bandwidth, if any?

Medical Center

Essentia Health

As we continue to invest in MPLS technology and true ethernet technologies, we will require rural sites to have other means of transport than traditional TDM copper lines or bundling of T1's. We take advantage of fiber connections whenever possible because this can provide us bandwidth as needed, but also is more reliable and stable. Uptime of our data connections are key to our business. We cannot have outages at any of our sites, as this will effect our ability to serve our patients. Our Electronic Medical Health Record (EMR) is dependend on sites remaining connected.

Cuyuna Regional Medical Center

Some employees that work from home do not have sufficient bandwidth for productive work speeds

Lakewood Health System

Would like more bandwidth between our satellite locations, but having the freshwater network available to us at minimal cost, makes other options not feasible.

Describe the issues you are having with access and bandwidth, if any?

City

City of Brainerd

None

City of Harding

As stated above, we are limited to one supplier. Increasing bandwidth is costly and is not paid for by the City. Having the council member computers networked together would be VERY beneficial...also a website to interact with the residents and public.

City of Hewitt

The City of Hewitt recently entered into a three contract with our only internet provider. This three year contract lowered the monthly bill for our service from \$150 to \$122 per month.

City of Walker

None

County

Todd County

N/A

Crow Wing County

Do not have any currently. Would like to see better options between Counties and Municipalities for future collaboration.

Cass County Courthouse and Campus

None

How does the lack of or inadequate broadband in your service area affect your ability to offer efficient and effective services?

School

Bertha Hewitt Schools

We currently are receiving our ISP support through FED.

Cass Lake Bena Schools

No effect

Central Lakes College

The main impact is for students trying to take online courses, do course work online, or access services online.

Eagle Valley Schools

no problem.

Freshwater

none at all.

Little Falls Schools

The high cost of internet bandwidth to our school district limits our ability to provide high speed bandwidth to our students in the rural areas who have no access to high speed internet or simply can not afford the service. It greatly reduces our ability to expand our classrooms.

Long Prairie Schools

There are no issues at the school but student access at home is a barrier to personalized learning initiatives.

Menahga Schools

Holding off on using more cloud based applications until bandwidth can meet demand.

Mid-State Schools

No

How does the lack of or inadequate broadband in your service area affect your ability to offer efficient and effective services?

School

Pequot Lakes Schools

Affects work flow and classroom instruction

Pierz Schools

We are doing well now. We could do different things if we knew all students had access from home.

Upsala Schools

We don't necessarily have a lack of bandwidth, but our carrier has been known to drop connection regularly, and it becomes sporadic in terms of access.

Verndale Schools

We will struggle to offer the telepresence classes on a regular basis and we will need more bandwidth as we continue to build our iPad initiative.

Medical Center

Cuyuna Regional Medical Center

Ability to be flexible with some employees being able to work from home.

Essentia Health

Today, we are not seeing this effecting our business, but the world of healthcare is changing rapidly and we will have needs for faster connections in the very near future. We are at capacity with the T1 bundling technology because soon and after 6MB, we we don't see any realized gains in speeds because of the overhead required when bundling. There is a point of zero returns realized.

Lakewood Health System

Sometimes we have slow network speeds, which slows down our providers workflows with patients.

How does the lack of or inadequate broadband in your service area affect your ability to offer efficient and effective services?

City

City of Harding

Having the city council computers connected through a network would be very helpful, but cost would be extremely high.

City of Hewitt

We have recently learned that Hewitt does have fiber optic lines running through the City. The local internet provider is currently not equipped to offer a fiber optic service to our community and if they were to install the equipment to do so, the price would be too high for the majority of citizens to afford.

City of Pequot Lakes

Downloads take too much time for meetings and staff. Uploads take staff time.

City of Royalton

We do not have broadband at this time.

County

Cass County Courthouse and Campus

Does not directly affect us due to connection to MNet.

Crow Wing County

Less collaboration.

Todd County

N/A

What are the key elements of your technology plan?

School

Bertha Hewitt Schools

Providing mobile Chrome books replacing desktop models. Increase the number of one-to-one devices. We promote a Bring Your Own Device initiative.

Brainerd Schools

BYOD and wireless infrastructure supported by fiber ring.

Eagle Valley Schools

We are very much in need of updated computers right now. After that the need for more bandwidth will be even more "front-and-center".

Freshwater

Upgrading network switches purchased by 2003 RUS grant to enable further growth of bandwidth to local schools.

Little Falls Schools

A mobile devices for each student in E-12 will be a reality next school year. Wireless access for all students and staff will be a necessity as well anytime, anywhere learning. Provide mobile access on the buses will also be important as we move forward.

Long Prairie Schools

Expanding our personal learning device project and transforming the educational process to meet the needs of 21st century learners.

Pequot Lakes Schools

Personalization for students, Bring Your Own Device in schools, digital curriculum and instruction delivery

Verndale Schools

We are working to become a 1:1 school. We would like to have the technology in all students hands at all times. The training of our staff is another concern. We need to ensure they have the training to teach the 21st century learner.

What are the key elements of your technology plan?

School

Upsala Schools

depends on budget, the need for students to access the computers and network far outweigh the need for improved infrastructure. but alas, the rate and speed will increase with the new equipment.

Menahga Schools

Keep upgrading computers on a regular basis. Strive to stay current with wire-less and bandwidth needs. Look to implement forward thinking technologies that are emerging as industry standards.

Central Lakes College

Innovative Teaching with Technology. Support for online learning.

Cass Lake Bena Schools

In regards to broadband, we intend to make sure that we are supplied with adequate bandwidth and throughput.

Medical Center

Essentia Health

We are investing in high speed, MPLS technology networks. We feel this is the future that will provide us connectivity to meet the needs of our future.

Cuyuna Regional Medical Center

Increased access for our customers to their medical information and increased functionality such as Physician access, scheduling appointments etc.

Lakewood Health System

Data Warehouse eMPI Cloud based storage and applications

What are the key elements of your technology plan?

City

City of Harding

The Council has only had short discussions about creating a site. But that is costly too.

City of Hewitt

The City of Hewitt has begun to discuss the possibility of running fiber optic lines above ground by using the existing power line infrastructure through out the City. This plan would depend on both an accessible fiber optic line being run along either highways 210 or 71 and the willingness of both the power company and internet provider to go along with such an installation.

City of Pequot Lakes

Keeping up to date with technology equipment and software

City of Royalton

We want to be proactive in our approach to technology. We don't want to be caught off guard and end up reacting to a need rather than planning for change.

County

Todd County

Fast efficient service for public coming in to receive services maximum technology uptime for staff serving the public efficient systems

Based on your technology plan what will be your future needs?

School

Bertha Hewitt Schools

We anticipate the number of devices increasing in the near future.

Brainerd Schools

21st century skill adoptions by students and staff will drive our need, as will cultural evolution of communication and work.

Cass Lake Bena Schools

Increase bandwidth as necessary based on demonstrated needs.

Eagle Valley Schools

We will eventually need more bandwidth.

Freshwater

Increased bandwidth for more online video, classes and ITV.

Little Falls Schools

The Little Falls school district will soon need 500 Mbps internet access. This access will provide us with bandwidth we need at school. More importantly we need competition in the broadband at home arena so that we can have lower and more affordable prices for our families to be able to purchase internet services for their homes.

Long Prairie Schools

We believe that have accounted for future needs at the school.

Menahga Schools

Secondary provider to backup and supplement primary provider will be necessary.

Mid-State Schools

Currently being assessed

Based on your technology plan what will be your future needs?

School

Pequot Lakes Schools

Expanded bandwidth, professional development, hardware replacement

Pierz Schools

Increasing student engagement to their own learning with technology.

Upsala Schools

our future needs will be a new computer lab. We currently are running a lab of 40 - 2002 model imac computers. they are quite dated, and need to be changed. Also we have need for improving our infrastructure to 1gb connections as well.

Verndale Schools

We will continue to need more bandwidth, infrastructure (switches, UPS, wireless access points), and updated technology. All of these items are costly and require proactive maintenance and budgeting.

Medical Center

Cuyuna Regional Medical Center

Additional Bandwidth. Improved bandwidth for private residences so employees can work effectively remotely.

Essentia Health

As we continue to roll out our telehealth initiatives, this is going to be challenge. We would be very challenged to run high definition video 720p with these small connection types. The video may run, but it would be at the expense of the entire site, thus resulting in poor performance with our EMR application by other staff members.

Lakewood Health System

More internet bandwidth will be needed as more and more items move to cloud based. Redundant internet will most likely be needed in the future to make sure we can access cloud based applications and files. Telemedicine will drive the need for higher bandwidth also.

Based on your technology plan what will be your future needs?

City

City of Brainerd

Likely more bandwidth will be need, capacity exists but will have to pay for the increase.

City of East Gull Lake

No need to upgrade at this time.

City of Harding

Eventually we would like to have a basic website to interact with the public. A better internet service would be helpful.

City of Hewitt

To be competitive with other communities Hewitt will need to find a way to bring in faster internet service for our citizens at an affordable price.

City of Royalton

We have more and more applications that will require us to upgrade if it is available. Our council has been budgeting for technology upgrades for the past several years. We may not know what that technology will be (more aps for water/sewer or public safety), but we want to make sure we include it in the budget.

County

Cass County Courthouse

Unknown, depends on several remote access projects.

Cass County Courthouse and Campus

Bandwidth needs may grow, but also depends on hte developemtn of applications. We may become more distributed and less central.

Todd County

This is really driven by the State of MN and what upgrades they offer. At this time I see the 100Mbps as sufficient for the next three years and then we will need to re-evaluate what the State has to offer.

What are the most significant barriers to implementing your technology plans?

School

Bertha Hewitt Schools

The funding available for technology.

Eagle Valley Schools

Money.

Freshwater

Lack of funds to cover costs.

Little Falls Schools

High cost of increased bandwidth for school and home. High cost of mobile device internet access on busses.

Long Prairie Schools

Home access for students and some staff.

Pequot Lakes Schools

Capacity of current staff, training time/resources, funds for further expansion

Pierz Schools

Money and Staff Expertise and Time for staff to transform delivery and content toward technology use.

Verndale Schools

The most significant barrier is expense, training, and staff conversion to digital learning.

Upsala Schools

Budget. There is never a guarantee that we will have money for the infrastructure nor new equipment. We have gone many years without any new upgrades.

Menahga Schools

Money. Additional IT personnel.

Central Lakes College

Cost and training/support.

Cass Lake Bena Schools

Money

What are the most significant barriers to implementing your technology plans?

Medical Center

Essentia Health

I don't feel we have experienced any barriers to date.

Cuyuna Regional Medical Center

areas that do not have adequate bandwidth offerings for our customers.

Lakewood Health System

Costs and bandwidth availability

City

City of Brainerd

Budget constraints

City of Harding

The cost...who would pay for faster, better service. Networking... who would set that up and creating a public website. Where can the City go to have these ideas put into operation and cover the cost of upgrading?

City of Hewitt

The greatest issue we find in Hewitt with internet service is the lack of companies to choose from. Having an internet "Monopoly" keeps the cost of service high; which in turn stunts demand for faster technology.

City of Royalton

Money and knowledge of what is available.

County

Todd County

Financial Constraints

Cass County Courthouse

Money

Cass County Courthouse and Campus

Funding

To what degree is your current system adequate for addressing these needs?

School

Bertha Hewitt Schools

Adequate but diminishing as the number of devices increases.

Brainerd Schools

Big pipe capacity!

Cass Lake Bena Schools

Our needs are being addressed.

Eagle Valley Schools

It meets our needs now - but won't in the near future.

Freshwater

The older Cisco switches that connect all Fed schools are limited to 10 - 100mg through put, thus limiting what schools will get for bandwidth.

Little Falls Schools

The District's current network can handle the increased bandwidth without a problem.

Long Prairie Schools

The school district system is more than adequate, the problem is affordable, reliable and adequate at-home access.

Menahga Schools

Upgrades to local ISP are currently able to meet our bandwidth needs. However, as more and more educational applications are moved over to the cloud; the needed bandwidth may become harder and harder to provide.

To what degree is your current system adequate for addressing these needs?

School

Pequot Lakes Schools

It is not. Much more training and expansion is necessary.

Upsala Schools

we do have connection, however it is quite slow, and with our data and information age, it makes it really difficult to improve our quality of education.

Verndale Schools

We do have limited funds to train staff on technology integration. We are fortunate have a technology integration specialist on staff to assist them with the conversion to digital teaching and learning. We have also had two successful years of implementation of our iPad initiative.

Medical Center

Cuyuna Regional Medical Center

Our system has capacity, but we have no control over bandwidth that is offered to remote areas.

Essentia Health

I feel our current system is adequate for our business today, but there is a need for increased bandwidth in the near future.

Lakewood Health System

It could handle some of the needs, but we would be implementing a less than stellar solution.

To what degree is your current system adequate for addressing these needs?

City

City of Brainerd

Current system is adequate, regular replacements needed to maintain performance and reliability.

City of Harding

We do connect through email !!

City of Hewitt

The current local service speed options are adequate, but the monthly cost for these higher speeds are way too high. The fastest service that is offered in our area is 1 G at a cost of \$2500 per month!

City of Pequot Lakes

Funding

City of Royalton

We have a franchise agreement with a cable company and so far the service is okay. At some time it would be better to have broadband to offer to our citizens.

County

Cass County Courthouse

We still have some capacity left in the WAN

Cass County Courthouse and Campus

System still adequately supports the needs of the County, but there are components that need to be refreshed to keep it current.

Crow Wing County

Current system is adequate, however lack of bandwidth between Counties and Municipalities hinders the ability for collaboration.

Todd County

I believe for local government the current system is adequate.