Broadband in the Upper Peninsula of Michigan

> A high-speed Internet connection is a modern lifeline to quality jobs, information, and vital services ranging from interactive telemedicine to higher education.

The twenty-first century is presenting Michigan with a new challenge in preserving and improving its beloved way of life. Yet, thousands of Michigan residents still have no access to quality, high-speed broadband.

The Great Lakes State is taking a huge step forward to fix this problem with an important initiative to expand broadband access to areas where it doesn't exist and enhance the quality of service in areas that are already served.

Connect Michigan is a statewide broadband initiative that includes broadband inventory mapping, research, and local demand creation. Connect Michigan, in collaboration with the state's broadband providers, is maintaining a broadband inventory reflect "real-time" high-speed Internet availability across the state. This resource is accessible to the general public via the Connect Michigan website, www.connectmi.org.

The data collected from the Connect Michigan initiative will soon be displayed in the national broadband map, which will help inform policymakers and provide consumers with improved information on broadband Internet services available in the United States. This national map is scheduled for release no later than February 17, 2011.

Connectmi.org allows broadband subscribers to test their connection speed and describe how broadband impacts their lives. Those who do not currently have broadband access can add their name and address to a secure database of households that would like to subscribe if given the opportunity.

Did you know?

- **75.51%** of the households in Michigan's Upper Peninsula have access to broadband at advertised speeds of 6 Mbps. (84.03% of those same households have the most basic broadband speed available)

- **20,229** households in the Upper Peninsula have no access to broadband at all, and NO households can subscribe to broadband at speeds greater than 10 Mbps

- **67%** of Michigan households have adopted broadband

- **82%** of Michigan households own a computer, and this translates to more than 1.3 million Michigan adults who do not have a computer

Upper Peninsula Broadband Availability by Speed Tier

The table below shows broadband availability in the Upper Peninsula of Michigan according to speed tiers. These speed tiers represent how many households are able to subscribe to broadband services at an "advertised" speed, or in other words, a maximum speed. Actual speeds may be, and often are, slower than advertised. This table also provides a comparison between the Upper Peninsula and the state as a whole.

Michigan's Upper Peninsula Counties				Michigan Statewide	
Speed Tier	% Availability	Served HHs	Unserved HHs	Speed Tier	% Availability
768 Kbps	84.03%	106,475	20,229	768 Kbps	96.79%
1.5 Mbps	81.34%	103,099	23,605	1.5 Mbps	95.36%
3 Mbps	79.13%	100,260	26,444	3 Mbps	93.65%
6 Mbps	75.51%	95,680	31,024	6 Mbps	91.89%
10 Mbps	62.65%	79,377	47,327	10 Mbps	89.76%
25 Mbps	00.00%	0	126,704	25 Mbps	11.40%
50 Mbps	00.00%	0	126,704	50 Mbps	4.32%
100 Mbps	00.00%	0	126,704	100 Mbps	0.08%
1 Gbps	00.00%	0	126,704	1 Gbps	00.00%

Upper Peninsula Broadband Availability by Platform (at 768 Kbps Speed Tier)

The table below shows broadband availability in the Upper Peninsula of Michigan according to platform. Many areas will often have more than one type of broadband service available to them. This table also provides a comparison between the Upper Peninsula and the state as a whole.

Michigan's Upper Peninsula Counties			Michigan Statewide	
Platform	% Availability	Served HHs	Platform	% Availability
Cable	63.31%	80,215	Cable	84.35%
DSL	68.21%	86,421	DSL	87.10%
Fiber	0.15%	193	Fiber	0.62%
Fixed Wireless	47.14%	59,728	Fixed Wireless	30.28%
Mobile Wireless	86.27%	109,302	Mobile Wireless	99.09%

Broadband in Michigan's
Upper Peninsula

Upper Peninsula Estimated Availability of Broadband Service by County

MI Upper Peninsula Terrestrial Broadband (Excluding Mobile)				
			≥ 768 Download/200 Upload Kbps Speeds	≥ 3Mbps Download Speeds
County	Household Density	Number of Households	Percentage Households Served	
Alger	4.12	3,785	81.05%	80.45%
Baraga	3.71	3,353	71.85%	70.33%
Chippewa	8.63	13,474	91.01%	87.35%
Delta	13.53	15,836	88.55%	86.90%
Dickinson	14.86	11,386	93.69%	87.61%
Gogebic	6.74	7,425	85.30%	79.44%
Houghton	13.63	13,793	78.39%	72.68%
Iron	4.93	5,748	79.40%	72.35%
Keweenaw	1.84	998	78.15%	24.36%
Luce	2.75	2,481	57.70%	57.42%
Mackinac	4.96	5,067	64.48%	55.04%
Marquette	14.15	25,767	91.67%	87.84%
Menominee	10.09	10,529	75.11%	65.87%
Ontonagon	2.64	3,456	91.62%	90.33%
Schoolcraft	3.06	3,606	59.99%	58.87%

Source: Connect Michigan, October 2010

Broadband availability among the counties that make up the Upper Peninsula by household at two speed tiers:

- 768 Kilobits Per Second Download/200 Kilobits Per Second Upload; and

- 3 Megabits Per Second Download or Greater

Broadband in Michigan's Upper Peninsula

Upper Peninsula County-Level Estimated Availability by Broadband Technology

MI Upper Peninsula Percentage of Households Served by Broadband, by Technology Platform (≥ 768 Download/200 Upload Kbps Speeds)						
County	Cable	DSL	Fiber	Fixed Wireless	Mobile Wireless	All Platforms Except Mobile
Alger	48.05%	78.77%	0.00%	0.00%	79.18%	81.05%
Baraga	42.25%	66.18%	0.00%	0.63%	77.67%	71.85%
Chippewa	59.14%	77.99%	0.00%	76.38%	84.81%	91.01%
Delta	75.83%	66.50%	0.00%	73.00%	87.74%	88.55%
Dickinson	81.99%	66.71%	0.00%	82.33%	98.52%	93.69%
Gogebic	73.55%	72.38%	0.00%	0.00%%	95.29%	85.30%
Houghton	55.16%	63.32%	1.40%	53.92%	70.25%	78.39%
Iron	25.50%	68.81%	0.00%	60.37%	89.54%	79.40%
Keweenaw	29.13%	1.80%	0.00%	72.62%	22.02%	78.15%
Luce	0.00%	57.50%	0.00%	0.00%	85.54%	57.70%
Mackinac	37.17%	48.82%	0.00%	36.48%	79.01%	64.48%
Marquette	84.35%	77.37%	0.00%	54.20%	95.29%	91.67%
Menominee	57.48%	52.47%	0.00%	9.84%	86.23%	75.11%
Ontonagon	42.81%	90.22%	0.00%	0.00%	59.69%	91.62%
Schoolcraft	46.93%	56.06%	0.00%	0.00%	89.02%	59.99%

Source: Connect Michigan, October 2010

The table above showcases broadband availability among the counties of Michigan's Upper Peninsula by household according to five platforms:

- Cable;
- DSL;
- Fiber-to-the-Home
- Fixed Wireless; and
- Mobile Wireless

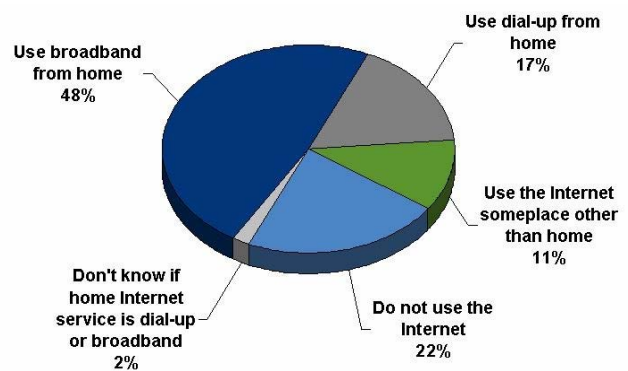# Broadband Adoption in Michigan's Upper Peninsula

2010 Key Technology Benchmarks in the Upper Peninsula:

- Households with broadband service: 48% (statewide avg. = 67%)

- Households with a computer: 75% (statewide avg. = 82%)

- Residents who access the Internet from home or someplace else: 78% (statewide avg. = 87%)

- Residents who subscribe to mobile wireless via laptop or cell phone/mobile device: 15% (statewide avg. = 25%)

Other Statewide Key Findings:

- Broadband adoption among rural residents is significantly lower than their urban or suburban counterparts. In addition, computer ownership rates are also lower among rural residents.

- Low-income households are less likely to subscribe to home broadband service, and they are also less likely to access the Internet altogether (from home or any other location).

- On average, Michigan broadband subscribers pay $43.59 per month for their home broadband service. Among residents who do not subscribe to home broadband service, 24% cite cost as a barrier to adoption.

Percentage of Upper Peninsula Michigan residents who:

Q: Do you have access to the Internet at home?,
Q: Do you have access to the Internet from any locations outside of your own home?, and
Q: Which of the following describe the type of Internet service you have at home?
(n=74 residents of Michigan's Upper Peninsula)

- 43% of Michigan residents without home broadband service say it is because they do not need Internet service or don't understand the benefits, while 29% say it is because they do not own a computer.

- Two-thirds of Michigan Internet users (66%) search for health or medical information online, while 34% communicate with their health insurance company, and 26% interact with doctors or healthcare professionals online.

- E-government services are utilized by many Michigan Internet users: 50% report that they search online for information about government services or policies. In addition, 48% conduct online transactions with government offices (such as e-filing taxes).

- Many Michigan Internet users go online for educational purposes. Statewide, 51% conduct research for schoolwork online, 38% interact with teachers online, and 22% take classes online.

- Michigan residents also use the Internet for work purposes. Among Michigan Internet users, 49% interact with their co-workers online, 48% go online to search for jobs or employment, and 33% report that they go online to work from home at least occasionally.

- In Michigan, 17% of employed adults report that they telework. Teleworking could also provide an additional boost to the state's workforce, as more than one out of seven retirees, and more than two-fifths of adults with disabilities and homemakers say they would likely join the workforce if empowered to do so by teleworking.

The Michigan Public Service Commission has enlisted Connected Nation, through its subsidiary nonprofit Connect Michigan, to undertake a comprehensive broadband program that focuses on projects that relate to broadband planning activities, such as the identification of barriers to the adoption of broadband service and information technology services, the creation and facilitation of local technology planning teams, and the establishment of computer ownership and Internet access programs.

The National Telecommunications and Information Administration (NTIA) has awarded Connected Nation approximately $5 million for the initiative over a five-year period in Michigan. Connected Nation is a national, non-profit organization with programs or initiatives in more than 30 states in the U.S., and **is committed to facilitating public-private partnerships to encourage digital inclusion at the local, state, and federal levels.**

Connected Nation is a national leader in technology expansion and the largest broadband mapping agent in the country. Connected Nation has mapping partnerships with more than 1,400 state-based broadband service providers.

Connected Nation is committed to continue working with broadband providers, state officials, the NTIA, and the FCC to develop accurate and pragmatic broadband mapping tools that will help refine our local, state, and national broadband strategies.

Connected Nation is working with states and communities to bridge the digital divide, and has been collecting data since 2003 regarding broadband usage and adoption trends and the barriers that still prevent many from using these technologies. Today, Connected Nation tracks longitudinal survey data from 2003 - 2010 representing a total sample of approximately 90,000 residents and businesses, by demographic, across 14 states. In 2011, another 28,000 residential surveys and another 10,000 business surveys will be conducted under our current projects.

Connected Nation's experience working with communities to promote digital inclusion is helping to shape our national broadband policy. Connected Nation supported the Broadband Data Improvement Act, not just the mapping programs, but also the call to engage with communities and state leadership in coordinated strategies for broadband adoption expansion. The FCC used Connected Nation's data in Minnesota to inform the NBP analysis of broadband availability across the country, and based on our experience working at the grassroots level to promote broadband expansion and the data collected across multiple states, Connected Nation gave extensive input to the FCC during the National Broadband Plan's development. The FCC requested further information on various occasions and cited Connected Nation's filings in the final report.