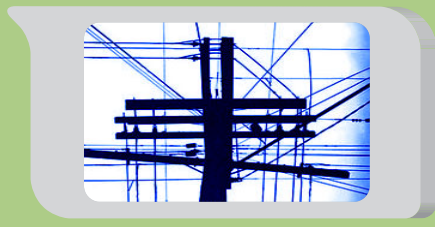## WHAT IS BROADBAND?

Broadband or "high-speed" internet access is generally considered any internet service that allows significantly faster speeds than dial-up internet access services. For the purpose of NHBMPP, it is defined by the National Telecommunications and Information Administration (NTIA) as internet access that is at least 768 kbps downstream (from the internet to the user) and 200 (kbps) upstream (from the user to the internet). However, these speeds may not be adequate for many of today's users. Kbps = Kilobits per second, Mbps= Megabits per second

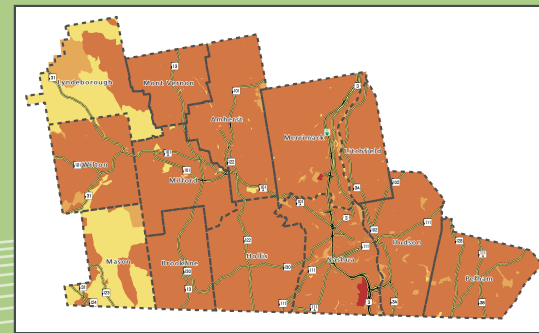| Application	Minimum Speed	Ideal Speed
High-Definition Television	10 Mbps	18 Mbps
Online Games	2 Mbps	14 Mbps
Video on Demand	1.5 Mbps	12 Mbps
Voice Calls	54 Kbps	1 Mbps
Video Conferencing, Virtual World	1 Mbps	1 Mbps
Web Browsing	64 Kbps	4 Mbps
Audio Streaming	128 Kbps	1 Mbps

WHERE IS BROADBAND AVAILABLE?

WHAT CAN YOU DO WITH YOUR CURRENT SERVICE?

As part of the NHBMPP, broadband coverage data from New Hampshire's providers are mapped, verified, and made available to the public every 6 months. Maps of your specific area can be found at iwantbroadbandnh.com/mappingresults

At the download speed of 3mbps, you can do: email, web browsing and shopping, moderate social media use, Voice over IP (VoIP), Limited Virtual Private Network (VPN), and send/receive medium-size documents.

At the download speed of 25mbps, you can do: High definition videoconferencing, high speed business-business applications, "Smart homes" and teleworking, high-definition audio/video streaming, real-time medical imaging & consultation, and send/receive large documents.

- 768kbps-1.5mbps
- 1.5mbps-3mbps
- 3mbps-6mbps
- 6mbps-10mbps
- 10mbps-25mbps
- 25mbps-50mbps
- 50mbps-100mbps
- 100mbps-1gbps

The map above shows broadband availability at the download speeds indicated.

WHAT SERVICE PROBLEMS ARE YOU FACING?

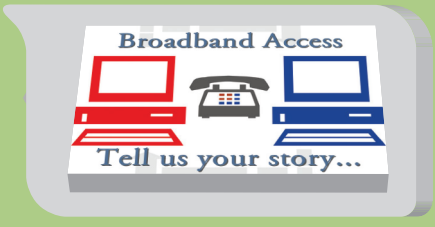In the Greater Nashua Region, we've heard from you that:

- Service does not exist in the area advertised as "served" by the service provider.
- High latency in particular areas (high time delay experienced by a system). "I hate spending so much to get so little."
- Need to extend service to more rural locations, but the economics of installation are a barrier.
- "In order to telecommute, my costs are high for fractional T-1 line from AT&T through Fairpoint. DSL does not reach my house, fixed wireless was tried in the town but failed at my location due to lack of service issues. Cable is not available."

PROGRESS IS BEING MADE IN NEW HAMPSHIRE

Network New Hampshire Now (NNHN) will ensure that residents of all ten counties in NH will be able to plug into a powerful future with internet connectivity. NNHN is funded by $44.5 million in economic stimulus money and matched with $22 million in private and in-kind funding.

NNHN plans to provide enhanced broadband services and speeds up to 10Gbps directly to approximately 200 community anchor institutions, including K-12 schools, libraries, higher education institutions, public safety agencies, and health care facilities.

By June 2013, New Hampshire will have 750 more miles of fiber-optic network, last mile networks in Enfield & Rindge, and a faster, more robust public safety microwave network. This is an important step in bringing Broadband to NH communities. **Visit networknhnow.org for more info.**

HOW TO GET INVOLVED

For general information on the NHBMPP, please visit: **www.iwantbroadbandnh.org**

BROADBAND DATA COLLECTION
The University of New Hampshire (UNH) is collecting broadband availability data, including speed and types of technology. On a yearly basis, data will be mapped, verified and displayed to the general public. To validate service data availability in your neighborhood and to tell us your story, TAKE THE SURVEY & SPEED TEST at: www.iwantbroadbandnh.org/speed_test

BROADBAND PLANNING AND TECHNICAL ASSISTANCE
The New Hampshire Broadband Mapping and Planning Program (NHBMPP) offers broadband planning & technical assistance to a wide range of groups and organizations located throughout the state. The goals are simple... to assist schools, libraries, healthcare providers, small businesses, municipalities, communities, non-profits and others:

- to assess their broadband (BB) needs;
- to develop plans for obtaining affordable BB access;
- to realize the opportunities available with BB; and
- to provide technical assistance and training to leverage the advantages of broadband connectivity

For more information, contact:
David T. Foote
Manager, Planning and Technical Assistance, NHBMPP
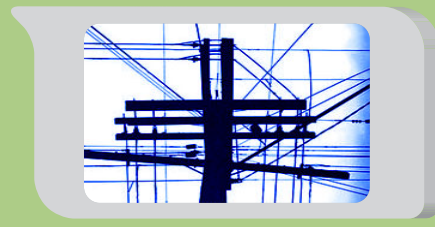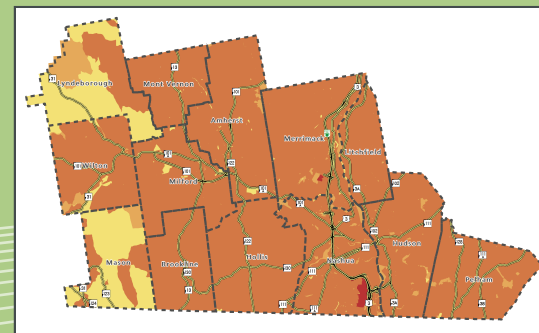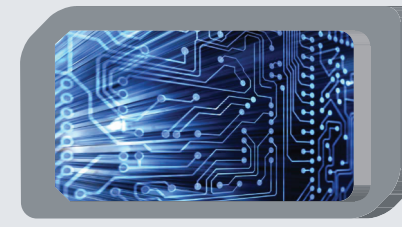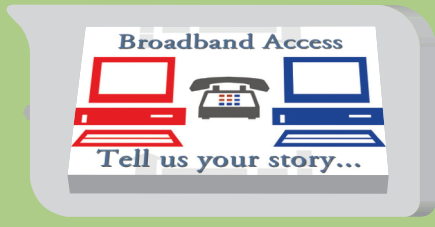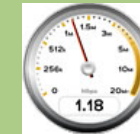University of New Hampshire –david.foote@unh.ed

NRPC SECTOR BASED ANALYSIS
NRPC and the Greater Nashua Broadband Stakeholder Group will be conducting interviews with education, health, community, public safety and business sectors to collect data and analyze broadband needs. Please contact Jennifer DiNovo at jennifer@nashuarpc.org for more information.

WHY BROADBAND? WHY DOES IT MATTER TO YOU?

The value comes from the significant difference in speed and capacity offered by broadband internet.

A business... can be provided with the tools it needs to be competitive, communicate with customers and to grow

A resident...can be guaranteed that they will have access to the information and services that they need and want

Communities...can be provided with an array of tools that support civic engagement, economic development, and other elements needed to sustain vibrant communities

Healthcare providers...can ensure that all patients have access to affordable healthcare services and doctors and hospitals have access to the digital tools that they need to provide quality care

Government leaders...can ensure that government is efficient, open and accessible by making information and services readily available to citizens

Public safety...can ensure that law enforcement officers and first responders have reliable communications technologies to quickly and safely respond to emergencies

General Benefits include: job growth, economic recovery, keeping local businesses in the region, attracting new businesses and jobs to the region, opportunities to access to new jobs from home, ability to start and run businesses from rural homes, easier access to jobs training and college classes via distance learning (NH Fast Roads)

What are the economic impacts of broadband?

- For every 1% increase in broadband penetration in a state, employment is projected to increase by 2-3% (Brooking Institution, 2008)

- U.S. investment in broadband and related information technology has driven 1/3 or more of the productivity growth of the decade (USTelecom Analysis, 2012)

ABOUT THE PROJECT

The New Hampshire Broadband Mapping and Planning Program (NHBMPP) is a comprehensive program that seeks to understand where broadband is currently available in NH, how it can be made more widely available in the future, and how to encourage increased levels of broadband adoption and usage. We recognize that a vibrant local and state economy requires broadband infrastructure to support economic development, energy efficiency, advances in health care, and improved educational opportunities, as well as the knowledge base and resources to effectively utilize that infrastructure.

Funded by the American Recovery and Reinvestment Act through the National Telecommunications and Information Administration (NTIA), the NHBMPP comprises two main components: a broadband availability inventory and mapping effort, and a suite of planning and technical assistance initiatives. Both components are part of a national effort to expand broadband access and adoption through improved data collection and broadband planning. A regional broadband plan will be developed, based on the project results, that will be aggregated into a state plan.

NEW HAMPSHIRE
broadband
MAPPING & PLANNING
PROGRAM

BROADBAND
EDUCATION FOR:

the greater nashua region

NEW HAMPSHIRE
broadband
MAPPING & PLANNING
PROGRAM

NRPC
Nashua Regional Planning Commission
www.nashuarpc.org
9 Executive Park Drive, Suite 201, Merrimack, NH
603-424-2240

INTRODUCTION

For many rural communities in New Hampshire, access to the internet for residents, businesses, government, health fields, etc. is only available through either slow dial-up connections or satellite signals that are both unreliable and expensive. The State of New Hampshire, through the New Hampshire Broadband Mapping and Planning Program (NHBMPP), is working on a five year program to improve and expand broadband access and use so that communities can take advantage of all of the benefits of reliable, high-speed access to the internet. Specifically, the NHBMPP is a comprehensive mapping and planning project comprising of the following:

- Mapping broadband (BB) availability to identify unserved and underserved areas
- Collecting field data to help verify and improve mapping results
- Inventorying community anchor institutions to determine their BB access
- Assisting communities to better understand their BB access options
- Working with groups to assess BB needs and promote BB use
- Designing instructional tools to support increased BB adoption and use
- Delivering technical assistance and training to BB Stakeholder Groups
- Developing broadband best practices
- Developing regional broadband plans in New Hampshire

BROADBAND