

**New Hampshire Broadband Mapping & Planning Program
Service Provider Data Collection Requirements***

March, 2011 Submission

** Full NTIA data specifications will be provided upon request*

The following summarizes the data collection requirements for participants in the State Broadband Data Development (SBDD) program as issued by the National Telecommunications and Information Administration (NTIA) in the following documents:

- Notice of Funds Availability (NOFA) - July 8, 2009
- NOFA Clarification - August 7, 2009
- NTIA Data Model Modification – January, 2011

In this document, we have extracted the requirements that focus specifically on facilities-based providers of broadband service. Additional guidance is included in the NTIA documents for mobile wireless or satellite broadband providers.

For the purposes of the SBDD, “broadband service” is the provision, on either a commercial or noncommercial basis, of data transmission technology that provides two-way data transmission to and from the Internet with advertised speeds of at least 768 kilobits per second (kbps) downstream **and at least 200 kbps upstream** to end users, or provides sufficient capacity in a middle mile project to support the provision of broadband service to end-users within the project area.

1. Broadband Service Availability in Provider’s Service Area

(a) Availability by Service Address-Service Associated with Specific Addresses

In the original NOFA, NTIA required each awardee to collect broadband service data to the specified end-user location for each facilities-based provider in their state, and reporting at that level of granularity remains the stated preference of NTIA as well as the New Hampshire Broadband Mapping Program. However, the subsequent NOFA clarification indicated that awardees may instead provide NTIA a list of all census blocks of no greater than two square miles in area in which broadband service is available to end users, along with the associated service characteristics. For those census blocks larger in area than two square miles, awardees must provide NTIA either the address-specific data as described in the original Notice or a list of all street segments with address ranges in such census blocks in which broadband service is available to end users, along with the associated service characteristics. “Broadband service” is “available” at an address if the provider does, or could, within a typical service interval (7 to 10 business days) without an extraordinary commitment of resources, provision data transmission meeting the above definition of broadband.

In addition to the availability of service, the required service characteristics data fields are:

- Provider Name
- DBA Name - “Doing-business-as” name
- Provider Type - Category of provider type (see details below for codes)

- FRN - Provider FCC Registration Number
- End User Address
- Category of End User - Category of End User served at the Address (see details below for codes)
- Technology of Transmission - Category of technology available for the provision of service at the address (see details below for codes)
- Maximum Advertised Downstream Speed - Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed can achieve consistently during expected periods of heavy network usage (see details below for codes)
- Maximum Advertised Upstream Speed - Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed can achieve consistently during expected periods of heavy network usage (see details below for codes)
- Typical Downstream Speed - Speed tier code for the downstream data transfer throughput rate that most subscribers to service at the maximum advertised downstream speed can achieve consistently during expected periods of heavy network usage (see details below for codes)
- Typical Upstream Speed - Speed tier code for the upstream data transfer throughput rate that most subscribers to service at the maximum advertised upstream speed can achieve consistently during expected periods of heavy network usage (see details below for codes)
- Full FIPS ID - Current block identifier; a concatenation of Census 2000 state Federal Information Processing Standards (FIPS) code, Census 2000 county FIPS code, Census 2000 census tract code, Census 2000 tabulation block number, and current block suffix 1.

2. Residential Broadband Service Pricing in Provider's Service Area

(a) Average Revenue per End User and Weighted Average Speed

The original NOFA required awardees to collect both average revenue per end user associated with residential subscribers, and subscriber-weighted nominal speed (blended average rate). The clarification removed the revenue data as a requirement, although the New Hampshire program remains interested in collecting this information from providers who may have the data available.

Subscriber-weighted nominal speed across the provider's service area by Metropolitan or Rural Statistical Area remains a requirement. The required data fields include:

- Provider Name
- DBA Name - "Doing-business-as" name
- FRN - Provider FCC Registration Number
- County – 3-digit County ANSI (FIPS) Code
- State – 2-digit State ANSI (FIPS) code
- Technology of Transmission - Category of technology available for the provision of service at the address (see details below for codes)
- Subscriber-Weighted Nominal Speed (blended average rate in kbps, see below for methodology)

A provider's subscriber-weighted nominal speed (in kbps) should be calculated as the sum of the products of the provider's advertised maximum download data transmission rate (in kbps) for each

residential rate tier advertised by the provider in the county, times the average monthly number of residential subscribers receiving the advertised download transmission rate tier for the relevant reporting month (i.e., June or December, as applicable), divided by the average total number of residential subscribers for all the included data transmission rate tiers in the county for that month. This is expressed in the following formula:

$$\frac{(\text{speed tier-1 in kbps} \times \text{no. of tier-1 subscribers}) + (\text{speed tier-2 in kbps} \times \text{no. of tier-2 subscribers}) + \dots}{\text{total average monthly subscribers}}$$

For example, if the service provider offers two tiers of service with advertised maximum download speeds of 1500 kbps and 6000 kbps, calculate the product of 1500 kbps times the average monthly number of residential subscribers to the 1500 kbps speed tier plus the product of 6000 kbps times the average monthly number of residential subscribers to the 6000 kbps speed tier and divide the sum by the sum (or total) of the average monthly number of residential subscribers in both tiers.

3. Broadband Service Infrastructure in Provider's Service Area

(a) Last-Mile Connection Points

The original NOFA required awardees to collect a list of the locations of the first points of aggregation in the networks (serving facilities) used by facilities-based providers to provide broadband service to end users. As per the clarification, awardees are no longer required to report this data unless there is no other means to reasonably verify the network service area availability data required under Section 1 above.

(b) Middle-mile and Backbone Interconnection Points

Awardees shall provide NTIA with a list of interconnection points of facilities in their state that provide connectivity between (a) a service provider's network elements (or segments) or (b) between a service provider's network and another provider's network, including the Internet backbone. (Collectively, (a) and (b) are "middle-mile and backbone interconnection points").

Middle-mile and backbone interconnection points typically enable relatively fast data rates, are built to handle substantial capacities, and may be service-quality assured.

Examples might include: points of interconnection enabling communications between an incumbent local exchange carrier central office and the Internet, between a cable aggregation point (headend) and the Internet, or between a wireless base station and the provider's core network elements that connect to other networks including the internet.

The listings are required to include the following elements:

- Provider Name
- DBA Name - "Doing-business-as" name
- FRN - Provider FCC Registration Number
- Ownership – Flag to indicate whether facility is owned (0) or leased (1)

- Serving Facility Capacity – Serving capacity of transport facility (see details below for codes)
- Serving Facility Type – Type of transport facility (see details below for codes)
- Latitude
- Longitude
- Elevation – Elevation relative to grade to the nearest foot

Technology of Transmission Codes	
Technology	Description
10	Asymmetric xDSL
20	Symmetric xDSL
30	Other Copper Wireline
40	Cable Modem – DOCSIS 3.0
41	Cable Modem – Other
50	Optical Carrier/Fiber to the End User
60	Satellite
70	Terrestrial Fixed Wireless – Unlicensed
71	Terrestrial Fixed Wireless – Licensed
80	Terrestrial Mobile Wireless
90	Electric Power Line
0	All Other

Speed Tier Codes		
Upload Speed Tier	Download Speed Tier	Description
1	--	Less than or equal to 200 kbps
2	--	Greater than 200 kbps and less than 768 kbps
3	3	Greater than or equal to 768 kbps and less than 1.5 mbps
4	4	Greater than or equal to 1.5 mbps and less than 3 mbps
5	5	Greater than or equal to 3 mbps and less than 6 mbps
6	6	Greater than or equal to 6 mbps and less than 10 mbps
7	7	Greater than or equal to 10 mbps and less than 25 mbps
8	8	Greater than or equal to 25 mbps and less than 50 mbps
9	9	Greater than or equal to 50 mbps and less than 100 mbps
10	10	Greater than or equal to 100 mbps and less than 1 gbps
11	11	Greater than or equal to 1 gbps

Serving Facility Capacity Codes	
Data Rate Code	Interconnection Point Data Rate
1	Multiple T1s and less than 40 mpbs
2	Greater than 40 mpbs and less than 150 mpbs
3	Greater than 150 mpbs and less than 600 mpbs
4	Greater than or equal to 600 mpbs and less than 2.4 gbps
5	Greater than or equal to 2.4 gbps and less than 10 gbps
6	Greater than or equal to 10 gbps

Serving Facility Type Codes	
Code	Description
1	Fiber
2	Copper
3	Hybrid Fiber Coax (HFC)
4	Wireless

Provider Type Codes	
Code	Description
1	Broadband Provider as described in the NOFA. This means that they are facilities-based (owning the connection point to the household), offer broadband speeds over 768 Kilobits per second (Kbps) downstream and 200 Kbps upstream, and they provide or can provide this service within 7-10 days without an extraordinary commitment of resources.
2	Reseller. This means that they do not own the facilities that connect to the household, however, they meet the other requirements of a “Broadband Provider” as described in the NOFA; offering broadband speeds over 768 Kilobits per second (Kbps) downstream and 200 Kbps upstream, and they provide or can provide this service within 7-10 days without an extraordinary commitment of resources.
3	Other. This could include providers who own the facilities connecting to the household; however, they do not provide internet service to consumers. The Program Office will provide space for grantees to explain these in the data model.

Category of End User Type Codes	
Code	Description
1	Residential
2	Governmental
3	Small Business
4	Medium or Large Enterprise
5	Other