

**U.S. DEPARTMENT OF COMMERCE**

**Performance Progress Report**

2. Award Or Grant Number

34-50-M09066

4. Report Date (MM/DD/YYYY)

04-30-2012

1. Recipient Name

State of New Jersey

6. Designated Entity On Behalf Of:

NJ Office of Information Technology

3. Street Address

300 Riverview Plaza,

8. Final Report?

Yes

No

9. Report Frequency

Quarterly

Semi Annual

Annual

Final

5. City, State, Zip Code

Trenton, NJ 08625-0212

7. Project / Grant Period  
Start Date: (MM/DD/YYYY)

02-01-2010

7a. End Date: (MM/DD/YYYY)

01-31-2015

7b. Reporting Period End Date:

03-31-2012

9a. If Other, please describe:

N/A

**10. Broadband Mapping**

10a. Provider Table

| Number of Providers Identified | Number of Providers Contacted | Number of Agreements Reached for Data Sharing | Number of Partial Data Sets Received | Number of Complete Data Sets | Number of Data Sets Verified |
|--------------------------------|-------------------------------|---|--------------------------------------|------------------------------|------------------------------|
| 0                              | 0                             | 0   | 0                                    | 0                            | 0                            |

10b. Are you submitting the required PROVIDER DATA by using the Excel spreadsheet provided by the SBDD grants office?  Yes  No

10c. Have you encountered challenges with any providers that indicate they may refuse to participate in this project?  Yes  No

10d. If so, describe the discussions to date with each of these providers and the current status

Two providers who provided data in the past indicated they would not submit data for this round. One Communications informed us via email that they did not believe their data was complete or accurate enough to submit. Sidera informed us that they no longer serve customers in New Jersey. Six providers who had previously submitted data did not respond to our multiple requests for new data. For three (Advanza, NBS and New Edge), we re-submitted the data they had provided six months ago. For the other three (Broadview, Cavalier Wave2Wave), the data was more than six months old and we have information that they were involved in mergers or bankruptcy proceedings. Hotwire Communications has repeatedly declined to participate in this program due to the burden of collecting data.

10e. If you are collecting data through other means (e.g. data extraction, extrapolation, etc), please describe your progress to date and the relevant activities to be undertaken in the future

We have provided a summary of the various data sources we have used both for collection and to support our validation activities. Two providers (Cogent Communications, Jersey Shore Wireless) referred us to the data available on their public web sites in lieu of submission. We have used web-based sources and aggregators to get information on potential broadband service providers and resellers, such as, the Broadband Internet Directory (<http://broadband.theispguide.com/>), [www.dslone.net/nj](http://www.dslone.net/nj), [www.globalspec.com](http://www.globalspec.com), [www.broadbandinfo.com](http://www.broadbandinfo.com), etc. We continue to use the results of our survey of 3,101 NJ residents and the FCC data for verification. We have collected Community Anchor institution (CAI) data, including reference data, broadband data from institutions via our website, and data from NJEDge, the NJ Hospital Association, the NJ Department of Health and Senior Services and NJ applications to the federal e-Rate program. We use NJ placenames data from the following sources: State of NJ geographic information ([https://njgin.state.nj.us/NJ\\_NJGINExplorer/DataDownloads.jsp](https://njgin.state.nj.us/NJ_NJGINExplorer/DataDownloads.jsp)), Federal Government placename information ([http://geonames.usgs.gov/domestic/download\\_data.htm](http://geonames.usgs.gov/domestic/download_data.htm)), and US Postal Service data (available for a fee).

10f. Please describe the verification activities you plan to implement

The following list includes verification activities that we have already implemented:

1. Verify Provider Name & FRN vs. FCC data by checking the (dbaname, provname, frn)-tuple against our FRN reference table.
2. Verify coverage area and other data elements are within NJ: This verification differs depends on the specific data element and includes checking latitude range, longitude range, valid census block id within NJ, and valid zip code in NJ.
3. Address verification via geo-coding: We use several geo-coding capabilities to verify specific data elements.
4. Validate data in all fields: We review all data elements for uniqueness and validity; i.e., census block ids, TIGERLine street segments, speed tier codes, etc.
5. Technology and speed consistency checks vs. known provider capabilities and/or Web site advertisements. We also review technical specifications from standards.
6. Visual inspection of individual provider coverage maps for outlier detection.

7. Data consistency across tables via basic cross-table consistency checks.
8. NTIA validation rule set. We perform all rules in the NTIA check\_submission rules; i.e., speed codes versus technology, overview versus detail consistency, etc.
9. Compare cable data to cable franchise municipality data: For cable providers we check coverage areas against municipalities in their franchise area.
10. Survey of 3100 NJ households: Householders who responded that they were broadband users were asked who their service provider was and this data was compared against service provider serving areas for verification.
11. Doughnut hole study, performing self-consistency check of submitted wireline data. Details are found in Methodology reporty.
12. Longitudinal study from scraper data: We have been conducting a limited longitudinal study of service plan offerings and prices from major providers using a panel survey design. We will be expanding and automating this study with the supplemental funding in 2012.

10g. Have you initiated verification activities?  Yes  No

10h. If yes, please describe the status of your activities

Activities 1 through 11 in the response to Question 10f have been implemented and are in use for verification. Activity 12 from the response to Question 10f has also been implemented. It is being extended and automated will be used for verification when complete. There are three verification activities which we have not yet implemented:

12. We investigated verification against cell tower location data from NJ OIT emergency communications office but have not identified a suitable source of reference data. We will be on the lookout for other sources.

13. Crowd sourcing applications for speed tests

14. Crowd sourced methods and incentives for collecting data on wireless availability

10i. If verification activities have not been initiated please provide a projected time line for beginning and completing such activities

There are two verification activities which are not yet implemented.

13. Crowd sourcing applications for speed tests: This work was funded on the supplemental funding and will begin when we get the requisite Purchase Order to our subcontractor.

14. Crowd sourced methods and incentives for collecting data on wireless availability: This work was also funded on the supplemental funding and will begin when we get the requisite Purchase Order to our subcontractor. .

### Staffing

10j. How many jobs have been created or retained as a result of this project?

As a result of the Broadband Mapping program, 2.8 positions were retained.

10k. Is the project currently fully staffed?  Yes  No

10l. If no, please explain how any lack of staffing may impact the project's time line and when the project will be fully staffed

Although OIT received funding to hire two positions, we are required to obtain a waiver from the Civil Service Commission. Given the current situation, OIT has requested proposals from staffing organizations, however the responses were lacking.

10m. When fully staffed, how many full-time equivalent (FTE) jobs do you expect to create or retain as a result of this project?

Two additional FTEs would be created

10n. Staffing Table

| Job Title                                    | FTE % | Date of Hire |
|--|-------|--------------|
| Executive Director/Senior Principal Engineer | 30    | 03/01/2010   |
| Principal Engineer                           | 100   | 03/01/2010   |
| Senior Systems Engineer                      | 100   | 03/01/2010   |
| Principal Engineer                           | 40    | 03/01/2010   |
| Senior Systems Engineer                      | 10    | 03/01/2010   |

Add Row

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### Sub Contracts

10o. Subcontracts Table

| Name of Subcontractor | Purpose of Subcontract | RFP Issued (Y/N) | Contract Executed (Y/N) | Start Date | End Date | Federal Funds | In-Kind Funds |
|-----------------------|------------------------|------------------|-------------------------|------------|----------|---------------|---------------|
|                       |                        |                  |                         |            |          |               |               |

|     |   |   |   |            |            |           |         |
|-----|---|---|---|------------|------------|-----------|---------|
| ACS | Perform data collection and planning activities | Y | Y | 05/25/2010 | 01/31/2015 | 3,473,670 | 420,000 |
| TBD | TBD   | N | N |            | 01/31/2015 | 163,717   | 60,304  |

Add Row
Remove Row

**Funding**

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,327,488      10q. How much Remains? \$3,598,618

10r. How much matching funds have been expended as of the end of last quarter? \$842,674      10s. How much Remains? \$474,899

10t. Budget Worksheet

| Mapping Budget Element    | Federal Funds Granted | Proposed In-Kind | Total Budget | Federal Funds Expended | Matching Funds Expended | Total Funds Expended |
|---------------------------|-----------------------|------------------|--------------|------------------------|-------------------------|----------------------|
| Personal Salaries         | \$840,000             | \$358,286        | \$1,198,286  | \$0                    | \$197,588               | \$197,588            |
| Personnel Fringe Benefits | \$292,656             | \$128,983        | \$421,639    | \$0                    | \$54,947                | \$54,947             |
| Travel                    | \$30,927              | \$0              | \$30,927     | \$0                    | \$400                   | \$400                |
| Equipment                 | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Materials / Supplies      | \$125,136             | \$350,000        | \$475,136    | \$0                    | \$105,000               | \$105,000            |
| Subcontracts Total        | \$3,637,387           | \$480,304        | \$4,117,692  | \$1,327,488            | \$484,739               | \$1,812,227          |
| Subcontract #1            | \$3,473,670           | \$420,000        | \$3,893,670  | \$1,327,488            | \$484,739               | \$1,812,227          |
| Subcontract #2            | \$163,717             | \$60,304         | \$224,021    | \$0                    | \$0                     | \$0                  |
| Subcontract #3            | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Subcontract #4            | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Subcontract #5            | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Construction              | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Other                     | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Total Direct Costs        | \$4,926,106           | \$1,317,573      | \$6,243,679  | \$1,327,488            | \$842,674               | \$2,170,162          |
| Total Indirect Costs      | \$0                   | \$0              | \$0          | \$0                    | \$0                     | \$0                  |
| Total Costs               | \$4,926,106           | \$1,317,573      | \$6,243,679  | \$1,327,488            | \$842,674               | \$2,170,162          |
| % Of Total                | 79                    | 27               | 100          | 61                     | 39                      | 100                  |

**Hardware / Software**

10u. Has the project team purchased the software / hardware described in the application?  Yes  No

10v. If yes, please list

We have purchased the following hardware and software.

PowerEdge T110 Server at a price of \$1229.26, purchased on July 2010.

TerraGo Publisher for ArcGIS at a price of \$2,295.00 July, purchased on July 2011.

TerraGo Publisher for ArcGIS Support Subscription at a price of \$459.00 purchased on July 2011

10w. Please note any software / hardware that has yet to be purchased and explain why it has not been purchased

N/A

10x. Has the project team purchased or used any data sets?  Yes  No

10y. If yes, please list

We have purchased two sets of data as listed below:

First, the USPS AISVIEW DVD, at a price of \$176.57, was purchased in May 2010

Second, we have purchased two annual licenses for ESRI data:

We purchased FESRI StreetMap Premium Mapping/Display NAVTEQ State (New Jersey) (1 Year) Term License for \$400.00 in September 2010.

We purchased ESRI StreetMap Premium Geocode NAVTEQ State (New Jersey) (1 Year) Term License for \$600.00 in September 2010.

10z. Are there any additional project milestones or information that has not been included?  Yes  No

10aa. If yes, please list

N/A

10bb. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing

1. CAI identification and outreach is time-consuming and response rates are low. We implemented a web-based data submission capability and performed outreach throughout all 21 counties in the state. We partnered with the New Jersey Department of Education and have included questions necessary for our CAI reporting in a mandatory survey of schools being conducted by the DOE in April 2012. The DOE results will become available in May.

2. Sometimes multiple government offices are co-located in one geographic location; e.g., a large building or complex that may include county government offices, court, jail, and/or other government offices. Here the challenge is avoid incorrectly overstating broadband capability or understating the need for broadband services. We perform manual assessments to address this.

3. Service provider speeds associated with address data sometimes represent the price plan chosen by the customer and are neither max advertised speed nor typical speed. If we can identify a maximum advertised speed from the provider's Web site, we use that.

Otherwise, we keep the maximum speed encountered in the census block and report it as max advertised. If customers' selections in neighboring CBs are vastly different, we use the highest speed in a (subjectively defined) area as max advertised.

4. We receive little or no information on typical speeds that we consider credible. We have left that null in all cases.

5. We found some of the NTIA's warning-level validations to be too restrictive (e.g., maximum downstream speed over ADSL), requiring repeated interactions with multiple providers for verification of submitted data. We are hoping the NTIA corrects these validations prior to the next round.

10cc. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project

N/A

## 11. Broadband Planning

11a. Please describe progress made against all goals, objectives, and milestones detailed in the approved Project Plan. Be sure to include a description of each major activity / milestone that you plan to complete and your current status

There are four activities in the original planning award, all of which are on track.

Activity 1, "Understanding and Addressing Barriers to the Adoption of Broadband and Information Technology Services," focuses on analyzing the survey data to document household-level barriers to broadband adoption and model the bases of non-adoption. A manuscript titled "Modeling Digital Exclusion: The Impact of Poverty, Social Isolation, and Political Disengagement" was delivered in 1Q2012.

Activity 2, "Addressing Gaps, Developing Programs and Assessing Progress in Improving Broadband Penetration," focuses on both better understanding the reasons that traditionally underserved communities are not adopting the Internet and on identifying programs that have been successful in addressing the extant socio-economic and cultural barriers to bridge the digital divide in specific communities across New Jersey. In 1Q2012 the report "Poverty, Inequality, and the Social and Political Effects of the Digital Divide" was delivered.

Activities 3 and 4 on "Analysis of the Impact of the Spread of Broadband on New Jersey's Economy" and "Collecting, Analyzing and Sharing Detailed Market Data Concerning Use Concerning Use and Demand for Broadband Service between Public and Private Sectors" address state-level econometric analysis and related analytics. During 1Q2012 work has begun on: surveying some of the broadband adoption programs in New Jersey, examining the training grants of the NJ Department of Labor and Workforce Development, and assessing outcomes of grants and courses offered on the NJ Training Opportunities website.

11b. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing

N/A

11c. Does the Project Team anticipate any changes to the project plan for Broadband Planning?  Yes  No

11d. If yes, please describe these anticipated changes. Please note that NTIA will need to approve changes to the Project Plan before they can be implemented

N/A

**Funding**

11e. How much Federal funding has been expended as of the end of the last quarter? \$0                      11f. How much Remains?                      \$0

11g. How much matching funds have been expended as of the end of last quarter?    \$0                      11h. How much Remains?                      \$0

11i. Planning Worksheet

|                           |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|
| Personal Salaries         | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Personnel Fringe Benefits | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Travel                    | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Equipment                 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Materials / Supplies      | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontracts Total        | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontract #1            | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontract #2            | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontract #3            | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontract #4            | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Subcontract #5            | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Construction              | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other                     | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Direct Costs        | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Indirect Costs      | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total Costs               | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| % Of Total                | 0   | 0   | 0   | 0   | 0   | 0   |

**Additional Planning Information**

11j. Are there any additional project milestones or information that has not been included?

N/A

11k. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the Project Team is employing

N/A

11l. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project

N/A



12. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purpose set forth in the award documents.

|   |  |
|---|--|
| 12a. Typed or Printed Name and Title of Authorized Certifying Official<br><br>Shelley Bates | 12c. Telephone<br>(area code, number, and extension)<br><br>X      |
|   | 12d. Email Address<br><br>shelley.bates@oit.state.nj.us            |
| 12b. Signature of Authorized Certifying Official<br><br>Submitted Electronically            | 12e. Date Report Submitted<br>(Month, Day, Year)<br><br>06-15-2012 |