

U.S. DEPARTMENT OF COMMERCE

Performance Progress Report

2. Award Or Grant Number

42-50-M09065

4. Report Date (MM/DD/YYYY)

07-07-2011

1. Recipient Name

Executive Office of the Commonwealth of Pennsylvania

6. Designated Entity On Behalf Of:

N/A

3. Street Address

Commonwealth Avenue, 207 Finance Building,

8. Final Report?

- Yes
 No

9. Report Frequency

- Quarterly
 Semi Annual
 Annual
 Final

5. City, State, Zip Code

Harrisburg, PA 17120

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

01-01-2010

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

12-31-2014

7b. Reporting Period End Date:

06-30-2011

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

While the Pennsylvania Broadband Mapping team has been quite successful in reaching agreements with and securing complete data from 94 of the 115 (82%) broadband providers operating within the state, the project team has also encountered some challenges in obtaining the full cooperation of the remaining 21 (18%) providers. More specifically, for the April 2011 delivery2011:

- 7 of 115 (6%) broadband providers contacted explicitly indicated to the outreach staff that they would not participate in the program.
- 9 of 115 (8%) broadband providers contacted had not responded to repeated contacts by the project team. The project team will continue to outreach to each of them in preparation for the October 2011 update cycle.
- 4 of 115 (3%) broadband providers contacted during the initial delivery cycle had indicated that they would supply their data, but have not yet done so and did not respond during the April 2011 data delivery request. The project team will continue to outreach to each of them in preparation for the October 2011 update cycle.
- 1 of 115 (1%) broadband providers contacted has submitted a partial data set, but has yet to submit complete data. The project team will continue to outreach to this provider to obtain complete data for the October 2011 update cycle.

Further, of the 94 providers whose data was included in the April 2011 data delivery, the following challenges are noted:

- 3 of those providers had provided complete data in response to previous data requests, but were non-responsive for the April 2011 data update cycle. Their previously submitted data was included in the April 2011 data submittal.
- 5 of those providers were satellite providers who indicated that they cover 100% of the state and have yet to provide details on where dead zones exist. Their data indicating 100% coverage was included in the April 2011 data submittal.

For more details, please refer to the Q2 Supplemental Answers Document.

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

The Pennsylvania broadband mapping project is collecting source data directly from broadband service providers and community

anchor institutions. Where the source data for community anchor institutions is lacking, the project team is leveraging data elements from other sources. For example, for K-12 Schools, current and historical data from the Pennsylvania Technology Inventory (PATI), a survey administered annually by the Pennsylvania Department of Education, which includes detailed Internet connectivity information, was used to populate Pennsylvania's community anchor institution database.

The project continues to work closely with the Commonwealth's Geospatial Technologies Steering Committee, relevant state agencies/offices (e.g. Department of Community and Economic Development, Governor's Office of Administration, Department of Health, Department of Education, Pennsylvania Emergency Management Agency, Governor's Center for Local Government Services, State System of Higher Education, Public Utility Commission, etc.), and other external partners (e.g. Economic Development Districts, Pennsylvania Commission for Community Colleges, public safety organizations and associations, etc.) to seek out additional data sources and partners to augment the data collection and verification efforts.

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

Pennsylvania's broadband mapping project employs a multi-prong approach to ensure the provider data is accurate and complete. Specifically, the project employs the following validation methodologies and resources:

- **Quality Assurance/Quality Control
- **Data Validation via Market Intelligence Sources
- **Data Validation Using State Supplied Data Points
- **Field Validation
- **Wireless Coverage Analysis
- **Topology Validation
- **Automated Validation Processing
- **Provider Validation
- **Confidence Level/Statistical Modeling
- **SBDD Check Submission
- **Stakeholder Validation

For a description of each component, please refer to the Q2 Supplemental Answers Document.

A white paper more fully describing Pennsylvania's DATA DEVELOPMENT & VALIDATION METHODOLOGIES was provided with the April 2011 data submission.

10g. Have you initiated verification activities? Yes No

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

All of the verification activities listed above in 10f were performed on the April 2011 data submission, with the exception of a portion of the Stakeholder Validation component, as discussed below in 10i. The verification processes described are repeatable for each semi-annual data update cycle.

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

As described in the previous items 10f and 10h, rigorous verification activities were conducted for the April 2011 data submittal. Full implementation of the following portion of the Stakeholder Validation component is planned for the October 2011 delivery:

**Stakeholder Validation: Aggregated broadband coverage maps will be provided to the 10 regional Economic Development Districts (EDD) and other project partners for review relative to their jurisdictions and the interactive coverage maps. Currently, some comments has been received from the such entities through the feedback function on the state's public broadband mapping website and these were addressed in the April 2011 data submission. Full implementation of a secure broadband mapping website where project partners can review detailed provider coverage data is planned for the October 2011 delivery and will continue for subsequent update cycles.

Staffing

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

The staffing on the project decreased during the 2nd Quarter 2011 to 1.48 FTEs, comprised of 14 unique individuals working on this project during the quarter. All of these personnel were retained staff.

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

N/A

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

The project peaked at full staffing during 2nd Quarter 2010 at 9.88 FTEs due to project ramp up and development/validation of the initial data submittal to the NTIA in May 2010. A cumulative total of 71 unique individuals have worked on the project since inception.

10n. Staffing Table

Job Title	FTE %	Date of Hire
State Project Manager	0	01/01/2010
Program Manager	41	01/27/2010
Administrative Manager	0	01/27/2010
Collaboration Manager	6	01/27/2010
IT Manager	0	01/27/2010
Data/Mapping Manager	0	01/27/2010
GIS Specialist (RK)	27	02/18/2010
GIS Specialist (MJ)	11	02/24/2010
GIS Specialist (JS)	4	02/16/2010
GIS Specialist (RH)	0	02/18/2010
GIS Specialist (KN)	0	11/05/2010
GIS Specialist (CB)	0	03/16/2011
Software Developer (CX)	13	01/28/2010
Software Developer (KK)	9	04/14/2010
Field Manager	26	01/27/2010
Outreach Associate	1	01/27/2010
Sub - Field Technician	0	03/03/2010
Sub - Software Developer	7	05/03/2010
Sub - Telecom Consultant	0	02/18/2010
Sub - Sr. GIS Analyst	0	04/12/2010
Sub - GIS Programmer	0	03/08/2010
Sub - GIS Technician	0	
Sub - Sr. Consultant	0	02/01/2010
Sub - Plan/Collaboration	4	02/01/2010

Add Row

Remove Row

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
Michael Baker Jr. Inc.	Outreach, data collection, integration, analysis, verification, website development and hosting, and other broadband mapping-related services over the term of the 2-year broadband mapping project	Y	Y	01/27/2010	12/31/2011	1,547,700	0
The Pennsylvania State University	Event planning, coordination, and logistical support related to hosting of Pennsylvania Broadband Summit in September 2010	N	Y	06/04/2010	09/21/2010	33,198	0
Funds Yet to Be Contracted - (NOTE: These procurements were placed on hold pending NTIA's formal approval of Pennsylvania's project work plan submitted during the previous quarter 2011-Q1) Listed as Subcontract #3 in the Budget Worksheet (10t)	Several subcontracts will be executed or amended to carry out the supplemental project activities (broadband mapping years 3-5; technical assistance; adoption surveys; regional working groups; cost modeling; manufacturing benchmark study)	N	N	09/27/2010	12/31/2014	4,501,347	1,000,000

Add Row

Remove Row

Funding

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,554,251 10q. How much Remains? \$5,802,050

10r. How much matching funds have been expended as of the end of last quarter? \$657,188 10s. How much Remains? \$1,511,212

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	\$785,498	\$539,365	\$1,324,863	\$82,490	\$212,377	\$294,867
Personnel Fringe Benefits	\$308,071	\$211,540	\$519,611	\$28,178	\$20,096	\$48,274
Travel	\$0	\$0	\$0	\$0	\$416	\$416
Equipment	\$16,664	\$0	\$16,664	\$0	\$0	\$0
Materials / Supplies	\$159,823	\$0	\$159,823	\$0	\$0	\$0
Subcontracts Total	\$6,082,245	\$1,000,000	\$7,082,245	\$1,443,583	\$0	\$1,443,583
Subcontract #1	\$1,547,700	\$0	\$1,547,700	\$1,410,385	\$0	\$1,410,385
Subcontract #2	\$33,198	\$0	\$33,198	\$33,198	\$0	\$33,198
Subcontract #3	\$4,501,347	\$1,000,000	\$5,501,347	\$0	\$0	\$0
Subcontract #4	\$0	\$0	\$0	\$0	\$0	\$0

Mapping Budget Element	Federal Funds Granted	Proposed In-Kind	Total Budget	Federal Funds Expended	Matching Funds Expended	Total Funds Expended
Subcontract #5	\$0	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$4,000	\$417,495	\$421,495	\$0	\$424,299	\$424,299
Total Direct Costs	\$7,356,301	\$2,168,400	\$9,524,701	\$1,554,251	\$657,188	\$2,211,439
Total Indirect Costs	\$0	\$0	\$0	\$0	\$0	\$0
Total Costs	\$7,356,301	\$2,168,400	\$9,524,701	\$1,554,251	\$657,188	\$2,211,439
% Of Total	77	23	100	70	30	100

Hardware / Software

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

10v. If yes, please list

N/A

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

****Telogical/Centris Wireline Market Intelligence Database:** This data set was developed using a methodology that incorporates deep web crawling and additional means, including direct mail harvesting and advertising collaterals (including door to door) to gather cable and telecommunication provider information, and is commercially available. This data set is used as a validation source for provider service area coverage, Technology of Transmission, and Speed. - \$50,000

****American Roamer Wireless Market Intelligence Data:** Commercially available data set used as an independent source to verify information submitted by Providers of wireless broadband service. This data set is used as a validation source for provider service area coverage. - \$12,773

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

****Provider Resistance:** As indicated in response to 10d, the project team has encountered several broadband providers who have refused to participate or have not responded to continued outreach attempts. Mitigation: For those companies that have indicated that they are resource-constrained, Pennsylvania, acting through its consultant Michael Baker Jr, Inc., will continue to identify ways to partner with providers and provide the resources, expertise, and hands-on technical assistance necessary to produce acceptable maps of their service areas from the data/format the provider has available.

In addition, supplemental funding has also been programmed to address the lack of coverage data for those wireless providers who have not submitted data or have refused to participate. Michael Baker Jr, Inc. will develop propagation models for up to 18 providers with an average of eight (8) towers per provider from public source information and associated field surveys for wireless coverage areas and speed tiers. Field investigation will be performed at up to 144 towers site for the missing wireless provider data. At each site,

11i. Planning Worksheet						
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?

The supplemental Project Plan included the following additional components to be implemented over the course of project years 2-5. Having received formal approval/notice to proceed from NTIA in late May 2011, work and/or procurements related to the following new components can commence in Q3-2011:

****BROADBAND PLANNING/COLLABORATION:** Aimed at encouraging adoption by certain constituencies and more vulnerable communities through implementation of the state broadband plan, regional working groups, measurement of broadband utilization, identification of barriers to adoption, and awareness and outreach efforts.

****TECHNICAL ASSISTANCE:** Involves the implementation of a statewide broadband outreach, training, technical, and implementation assistance program to foster broadband adoption among community anchor institutions, local governments, first responders, and small businesses. By focusing on institutional users, this project will build capacity locally and stimulate job creation.

****STATE CAPACITY BUILDING:** Supports three key state positions, whose dedicated time to this effort are integral to ensure the successful direction, implementation, and monitoring of the state's SBDD broadband data collection, mapping, and other program purposes, while building capacity at the state level and coordinating the State Broadband Plan. In addition, this project supports the cost to physically transition the mapping platform in-house from the consultant during 2014.

****MANUFACTURING BENCHMARKING STUDY:** Supports a statewide research and benchmarking effort of the availability and contribution of broadband internet telecommunications to the Pennsylvania manufacturing sector by evaluating its impact on growth and productivity.

****COST MODELING:** Involves the engagement of one or more consultants to conduct broadband cost modeling. The outcome will provide information and perspective on what considerations – financial and otherwise – inform the business case to trigger deployment.

11k. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the Project Team is employing
STATE CAPACITY BUILDING: Due to the recent change in administration in Pennsylvania (new Governor in office effective January 2011 and organizational restructuring within the Governor's Office of Administration and the Department of Community and Economic Development), the Commonwealth is currently reevaluating the State Capacity Building portion of its supplemental proposal (which was formally approved in May 2011) to ensure the best organizational plan and fit within state government moving forward, while fostering sustainability. Pennsylvania's staffing plan and other recommendations will be finalized during Q3-2011. The commonwealth's project director will keep NTIA informed regarding developments in this area.

11l. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project
 Staff attended the SBDD Grantee Conference held April 28-29, 2011 in Fort Worth, TX and found this event to be an extremely valuable forum to discuss program requirements, priorities, best practices, and network with NTIA, the FCC, and peers in other states around the topics of broadband coverage mapping, broadband planning, and state capacity building. Pennsylvania's team looks forward to future such opportunities and will do its part to keep those discussions going through participating on the resultant committees. Staff also continued its communication with recipients of BTOP funding to exchange information and explore opportunities for partnership/collaboration.

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

Sue Suleski

12c. Telephone
(area code, number, and extension)

717-787-5440

12d. Email Address

ssuleski@state.pa.us

12b. Signature of Authorized Certifying Official

Submitted Electronically

12e. Date Report Submitted
(Month, Day, Year)

08-01-2011