

**U.S. DEPARTMENT OF COMMERCE**

**Performance Progress Report**

2. Award Or Grant Number

42-50-M09065

4. Report Date (MM/DD/YYYY)

01-04-2012

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:

12-31-2011

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 120 (78%) broadband providers operating within the state, the project team has also encountered some challenges in obtaining the full cooperation of the remaining 26 (22%) providers. More specifically, as of December 31, 2011:

- 10 of 120 (8%) broadband providers contacted explicitly indicated to the outreach staff that they would not participate in the program.
- 6 of 120 (5%) broadband providers indicated they would participate but have not supplied their data yet. The project team will continue to outreach to each of them in preparation for the April 2012 update cycle.
- 9 of 120 (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 April 2012 update cycle.
- 1 of 120 (1%) broadband providers contacted have submitted partial data sets, but has yet to submit complete data. The project team will continue to outreach to this provider to obtain complete data for the April 2012 update cycle.

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

- 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 October 2011 data submittal.

For more details, please refer to the Q4 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 (PDE), which includes detailed Internet connectivity information, was used to populate Pennsylvania's community anchor institution database. In addition, this quarter, the project

partnered with PDE to incorporate connectivity data sourced from an annual state survey of libraries.

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

Provider Confidence Maps have been produced since the last reporting period for the quarter ending 09/30/2011. These maps with lower confidence areas are being distributed to broadband service providers with the request for data current as of December 31, 2011. Also, progress has been made on the secure broadband mapping website which will support Stakeholder Validation.

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
- \*\*Provider Confidence Maps
- \*\*SBDD Check Submission
- \*\*Stakeholder Validation

For a description of each component, please refer to the Q4 Supplemental Answers Document.

A white paper more fully describing Pennsylvania's DATA DEVELOPMENT & VALIDATION METHODOLOGIES was provided with the October 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 October 2011 data submission, with the exception of a portion of the Stakeholder Validation and Provider Confidence Maps components, 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 October 2011 data submittal to the NTIA. Full implementation of the following portion of the Stakeholder Validation and Provider Confidence Maps components are planned for the April 2012 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 October 2011 data submission. Full implementation of a secure broadband mapping website where project partners can review detailed provider coverage data is planned for the April 2012 delivery and will continue for subsequent update cycles.

\*\*Provider Confidence Maps: As a result of the Confidence Level/Statistical Modeling, Pennsylvania's consultant produced and distributed confidence maps per provider which highlight questionable areas of reported broadband availability when compared against the verification datasets. Providers are to respond with justification for these questionable areas or to take corrective action in their data for the next data submission.

## Staffing

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

The staffing on the project decreased during the 4th Quarter 2011 to 3.00 FTEs, comprised of 18 unique individuals working on this project (and paid with federal grant dollars) 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 (paid with federal grant dollars) due to project ramp up, and development/validation of the May 2010 initial data submittal to the NTIA. A cumulative total of 78 unique individuals have worked on the project (and were paid with federal grant dollars) since inception.

10n. Staffing Table

Job Title	FTE %	Date of Hire
State Project Manager	0	01/01/2010
Program Manager	48	01/27/2010
Administrative Manager	0	01/27/2010
Collaboration Manager	1	01/27/2010
IT Manager	0	01/27/2010
Data/Mapping Manager	0	01/27/2010
GIS Specialist - RK	20	02/18/2010
GIS Specialist - MJ	40	02/24/2010
GIS Specialist - JS	1	02/16/2010
GIS Specialist - RH	0	02/18/2010
GIS Specialist - KN	11	11/05/2010
GIS Specialist - CB	0	03/16/2011
GIS Specialist - TK	7	09/26/2011
GIS Specialist - ST	0	09/12/2011
GIS Specialist - ND	9	11/04/2011
GIS Specialist - SJ	5	10/25/2011
Software Developer - XC	18	01/28/2010
Software Developer - KK	0	04/14/2010
Software Developer - MO	0	09/28/2011
Field Manager	5	01/27/2010
Outreach Associate	1	01/27/2010
Sub - Field Technician	0	03/03/2010
Sub - Software Developer	98	05/03/2010
Sub - Telecom Consultant	0	02/18/2010

Sub - Sr. GIS Analyst	0	04/12/2010
Sub - GIS Programmer	46	03/08/2010
Sub - GIS Technician	0	
Sub - Sr. Consultant	0	02/01/2010
Sub - Plan/Collaboration	11	02/01/2010

**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
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 5-year broadband mapping project	Y	Y	01/12/2012	06/30/2014	2,101,574	0
SUBCONTRACTS YET TO BE EXECUTED  Listed as Subcontract #5 in the Budget Worksheet (10t)	Subcontracts are either in process or yet to be awarded to carry out the following supplemental project activities (technical assistance; manufacturing benchmark study; adoption surveys; regional working groups; cost modeling)	N	N	09/27/2010	12/31/2014	2,399,773	1,000,000

**Funding**

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,607,518      10q. How much Remains? \$3,647,209  
 10r. How much matching funds have been expended as of the end of last quarter? \$717,405      10s. How much Remains? \$1,450,995  
 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	\$255,680	\$338,170
Personnel Fringe Benefits	\$308,071	\$211,540	\$519,611	\$28,178	\$37,129	\$65,307
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	\$1,496,818	\$0	\$1,496,818
Subcontract #1	\$1,547,700	\$0	\$1,547,700	\$1,463,620	\$0	\$1,463,620
Subcontract #2	\$33,198	\$0	\$33,198	\$33,198	\$0	\$33,198
Subcontract #3	\$2,101,574	\$0	\$2,101,574	\$0	\$0	\$0
Subcontract #4	\$0	\$0	\$0	\$0	\$0	\$0
Subcontract #5	\$2,399,773	\$1,000,000	\$3,399,773	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$4,000	\$417,495	\$421,495	\$32	\$424,180	\$424,212
Total Direct Costs	\$7,356,301	\$2,168,400	\$9,524,701	\$1,607,518	\$717,405	\$2,324,923
Total Indirect Costs	\$0	\$0	\$0	\$0	\$0	\$0
Total Costs	\$7,356,301	\$2,168,400	\$9,524,701	\$1,607,518	\$717,405	\$2,324,923
% Of Total	77	23	100	69	31	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

No additional data sets have been purchased since the last reporting period for the quarter ending 09/30/2011. The project continues to use the following third party data sets:

\*\*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. - \$75,000

\*\*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. - \$14,956

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 assistance necessary to produce acceptable maps of their service areas from the data/format the provider has available.

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

Here is some positive feedback that was received through the Feedback function on the public Pennsylvania Broadband Mapping Website, [www.broadbandinpa.com](http://www.broadbandinpa.com). "On behalf of the Wattsburg Area School District, Erie County, I want to thank you for the development of this site. We are currently working on our technology plan and this website has helped us to determine who has broadband access in our school district. Great Job!"

Please refer to the Q4 Supplemental Answers Document for additional information summarizing provider participation over the course of the project and sample maps from the state public broadband map.

## 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

**ORGANIZATIONAL PLANNING** - Strategic and organizational planning efforts continued related to the State Capacity Building component (which supports the project team managing this program) in an effort to ensure the best organizational plan and fit moving forward. The need to reevaluate the component was unexpected upon submission of the original proposal, but was critically necessary following the recent change in administration, various state agency restructuring, and multiple personnel changes. Although this effort has delayed the launch of some supplemental project components, it is both appropriate and wise to undertake this process now before the project is fully launched, so as to ensure the best use of limited state/federal funds, leverage operational efficiencies, increase program impact, and promote sustainability. Staffing and organizational recommendations were finalized during Q3-2011, presented during Q4-2011, and final decision making on and execution of a new organizational and staffing plan is expected to occur during Q1-2012. The commonwealth's project director will continue to keep NTIA Program Staff informed of developments in this area and will update the work plan accordingly.

**PROCUREMENT LOGISTICS** - The commonwealth's project team also continued preparations related to the issuance of procurement and execution of subgrants to carry out the scope of work for each project component. Steps included the finalization of an interagency subgrant agreement between the Governor's Office of Administration (OA) and the Department of Community and Economic Development (DCED); receipt by DCED of the spending authority from the state Office of the Budget as required to allow the letting of contracts funded by federal funds; finalizing scope of work and budget with subgrantees; holding kick-off and associated partner meetings; responding to vendor inquiries, and registration of potential qualified interested bidders for procurements yet to be released.

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?

The supplemental Project Plan included the following additional components to be implemented over the course of project years 2-5.

**\*\*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.

Pennsylvania received formal approval/notice to proceed from NTIA in Q2-2011. Related contractual/procurement arrangements commenced in Q3-2011 and continued through Q4-2011.

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, the Commonwealth is currently reevaluating the State Capacity Building portion of its supplemental proposal (which supports the project team managing this program)

to ensure the best organizational plan and fit within state government moving forward, while fostering sustainability. Pennsylvania's staffing/organizational recommendations were finalized during Q3-2011, presented during Q4-2011, and final decision making on and execution of a new organizational and staffing plan is expected to occur during Q1-2012. The commonwealth's project director will continue to keep NTIA Program Staff informed of developments in this area and will update the work plan accordingly.

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

Technical Assistance/Manufacturing Benchmarking Study: Interagency agreement executed; DCED spending authority established; 4 subgrants in process. Technical Assistance cases have commenced; small business clients/community anchor institutions being referred to the program.

Planning & Collaboration/Cost Modeling: Launch of these components is presently on hold pending outcome of the State Capacity Building/organizational redesign effort, completion of which is necessary before additional staff can be hired to execute those plans.

PA's team continues to attend NTIA webinars; communicate with other SBDD grantees and engage various stakeholders, including Broadband Technology Opportunities Programs (BTOP) and Broadband Initiatives Program (BIP) awardees, and the state's Health Information Exchange coordinator to share information, identify best practices, and explore opportunities for partnership and collaboration.

10.q. Additional Explanation: At the prior request of the federal program office, PPR #10.q. above (Remaining Fed Funds) is to match SF425 #10.h. (Unobligated Bal of Fed Funds). At the close of Q4-2011, \$1,607,518 in federal funds had been expended (as shown in SF425 #10.e. Fed Share of Expenditures and PPR #10.t. Total Fed Funds Expended) and an additional \$2,101,574 in federal funding (as shown in SF425 #10.f. Federal Share of Unliquidated Obligations) was committed to use and/or under contract, however had not yet been expended/paid out. Therefore, PPR #10.q. above (\$3,647,209) reflects the total amount of federal funds that have not yet been expended OR committed. All figures reported on both the SF425 and PPR are correct/accurate, however the SF425 allows for tracking of both actual expenditures and committed but unliquidated funds, while the PPR budget table accounts only for actual expenditures.

Thus, 50% of federal funds were expended or committed to use at the close of Q4-2011. This ratio is expected to increase to at least 70% in Q1-2012.



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)

717-705-5462

12d. Email Address

ssuleski@pa.gov

12b. Signature of Authorized Certifying Official

Submitted Electronically

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

01-30-2012