

U.S. DEPARTMENT OF COMMERCE

Performance Progress Report

2. Award Or Grant Number

37-50-M09002

4. Report Date (MM/DD/YYYY)

01-26-2011

1. Recipient Name

Rural Economic Development Center, Inc.

6. Designated Entity On Behalf Of:

The e-NC Authority

3. Street Address

4021 Carya Drive ,

8. Final Report?

Yes

No

9. Report Frequency

Quarterly

Semi Annual

Annual

Final

5. City, State, Zip Code

Raleigh, NC 27610-2914

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

10-01-2009

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

10-01-2014

7b. Reporting Period End Date:

12-31-2010

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

In the Fall 2010 data submission, 56 of the 114 identified broadband companies in NC submitted data, meaning approximately 58 providers did not participate. Nevertheless, those that did participate provided data that covered approximately 98% of the state's geographic area. Many smaller providers continue to indicate that they struggle with time and capacity for collecting and submitting the data or they do not respond at all. e-NC has ongoing conversations and technical support for providers needing assistance, and e-NC continues reaching out to non-responsive providers via email, phone, postal service, etc (in addition to researching some who may no longer be in business). A few have specifically said that they will not participate and have asked that we not contact them further. The Fall 2010 data pull did experience an increase in responses, but the list of total providers contacted also grew due to additional providers being identified, and the portion of nonresponsive providers remains at approximately half. For the Spring 2011 data submission, e-NC is hoping to double its efforts to reach out to non-participating providers as well as working to verify whether some of the smaller companies identified by e-NC are in fact still in operation. As far as major providers, e-NC is working with Frontier Communications, to see how they can best submit data on the North Carolina infrastructure acquired in 2010 through the buyout of Verizon landlines.

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

To date, the e-NC Authority has submitted only provider data obtained directly from providers to the NTIA, and provider data is all that is on the NC online broadband map at this time. As previously reported, e-NC has collected data through other means as well. These methods include: consumer data collected through survey sampling (completed in summer 2010) and Web-enabled data mining by an independent contractor (completed in late 2009/early 2010). e-NC is still working with its database contractor and external evaluators to determine how to compare results within the SQL broadband database and the newer geodatabase and assess how the data from each method differs and which methods offer the best solutions for broadband data collection. The e-NC Authority expects to continue some, but not all of these additional data collection methods in future data pulls. The e-NC Authority continues to explore additional methods of data collection including some combination of methods for Web-mined data. e-NC is also continuing its GIS-based modeling to map wireless coverage areas based off of equipment specs provided by the wireless companies. The models were completed in 2010. It has been somewhat challenging to get the small wireless providers to submit the data needed to model their coverage areas, but those that do participate are provided with maps of their modeled coverage area. e-NC plans to continue to map and refine individual wireless providers' coverage areas every six months as new data is collected.

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

Planned verification activities inevitably have evolved as the project moves forward. But in general, e-NC continues to look at verification in the following categories:

Implementation of the newly-provided SBDD Check Submission tool: This recent provision of an automated client-side check for geometry, expected values, and business rules will be useful to e-NC for streamlining validation work and ensuring statewide dataset compliance prior to submission.

Additional quality control measures within datasets: While working in the data, there are countless ways to implement quality control

measures to verify various fields within the data. These steps are discussed in the white paper submitted to NTIA in November 2010, and e-NC will continue to provide relevant updates as this workflow develops. The addition of running PostGreSQL geometry validation is also targeted prior to Spring 2011 submission.

Comparison and evaluation of current data collection methodologies: The e-NC Authority is continuing its comparison of multiple methods of data collection, with the comparison of these multiple methods providing an avenue for data verification and determination of the strongest data collection methods. Within each method itself are also multiple opportunities for various internal verification processes (such as call-backs to respondents to verify responses on the consumer survey, etc.). The e-NC Authority has been working with its database contractor on the best ways to query and compare these multiple data sources, and with its external evaluators.

See answer continued in separate attachment (PPR - Additional Information).

10g. Have you initiated verification activities? Yes No

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

Comparison and evaluation of current data collection methodologies: While this activity was initially planned to be completed in 2010, it has proved to be more complex than anticipated. Recent completion of the SDE-in-PostGreSQL database will better facilitate cross-method and cross-data pull comparison. The external evaluators for e-NC are currently reviewing results of the data queries and reports developed within the database. e-NC plans to submit a more comprehensive report to NTIA on these findings in early 2011.

Further automations within the broadband databases: e-NC expects to have these automations in place for the spring 2011 data collection.

Quality control measures within datasets: These items are covered more fully in the white paper. With the new relational geodatabase in place, and with the new database automations, these QC measures will be fully implemented for the spring 2011 data collection.

Continued exploration of additional data sources and data feedback: This work is on-going.

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

All verification activities explained above are underway.

Staffing

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

Jobs equal to 8.05 FTEs were created or retained in the fourth quarter 2010 as a result of the NTIA SBDD funding. This figure includes ARRA-funded e-NC staff time and contractor time.

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

Note: the project has been fully staffed under the original mapping and planning work. Under the supplemental proposal, 3 technical assistance staff members were to be added. Two of the technical assistance staff members started work on October 25, with the third starting work on January 19, 2011.

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

For year 2 of e-NC's grant, we are requesting break-out of staff time as listed below. These percentages represent a total of 5.1 FTEs for e-NC staff for year 2 of the grant.

10n. Staffing Table

Job Title	FTE %	Date of Hire
Executive Director	60	
Assistant Director	50	
Dir. of Research & Development	40	
Sr. Telecommunications Specialist	10	
Data Administrator/GIS Specialist	75	02/01/2010
Communications & Outreach Director	30	
Research Associate	60	07/13/2010
Sr. Technical Assistance Director	62	10/25/2010
Technical Assistance Director - East	62	10/25/2010

Technical Assistance Director - West	62	01/19/2011
FTE percentages above are for e-NC grant year 2. Total personnel budgeted costs are the same as in the supplemental proposal, but we will be submitting request for approval of revised % time by individual staff members, as reflected here. Total FTEs - 5.1		

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
Telogical Systems	Web-Enabled Data Mining for Collection of Broadband Data	N	Y	10/26/2009	11/30/2009	25,000	0
University of North Carolina at Greensboro	Mobile and Fixed Wireless Propagation Modeling for NC and GIS Support	N	Y	12/01/2009	12/31/2010	270,877	0
University of North Carolina at Chapel Hill	Consumer Survey on Broadband Availability	N	Y	12/01/2009	07/31/2010	129,782	22,661
Foothills Connect Business & Technology Center	Collecting Broadband Data at the Consumer Level	Y	Y	01/01/2010	03/31/2010	35,980	0
Rockingham County for Rockingham County Business & Technology Center	Collecting Broadband Data at the Consumer Level	Y	Y	01/01/2010	03/31/2010	35,265	0
MCNC	Hosting and Storage of Broadband Data Database, and Development of Speed Test	Y	Y	01/01/2010	12/31/2011	70,489	0
Topsail Technologies, Inc.	Database Development and Maintenance for e-NC	Y	Y	01/05/2010	12/31/2011	144,576	0
East Carolina University	PLANNING - Citizen Surveys for Broadband Planning	N	Y	12/01/2009	12/31/2011	65,741	19,588
Strategic Networks Group, Inc.	PLANNING - Analysis of Broadband Adoption and Strategic Gaps	Y	Y	02/01/2010	10/31/2010	185,990	0
Michael Baker Jr., Inc.	GIS Mapping/Hosting for e-NC	Y	Y	08/01/2010	12/31/2011	148,938	0
Topsail Technologies, Inc.	e-NC Website Upgrades and Maintenance	Y	Y	10/01/2010	12/31/2011	66,000	

Funding

10p. How much Federal funding has been expended as of the end of the last quarter? \$1,426,706 10q. How much Remains? \$5,184,290
 10r. How much matching funds have been expended as of the end of last quarter? \$345,441 10s. How much Remains? \$1,357,108
 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	\$1,587,859	\$1,012,604	\$2,600,463	\$171,153	\$150,988	\$322,141
Personnel Fringe Benefits	\$473,128	\$305,177	\$778,305	\$41,458	\$35,177	\$76,635

Mapping Budget Element	Federal Funds Granted	Proposed In-Kind	Total Budget	Federal Funds Expended	Matching Funds Expended	Total Funds Expended
Travel	\$58,000	\$0	\$58,000	\$94	\$6,172	\$6,266
Equipment	\$0	\$0	\$0	\$0	\$0	\$0
Materials / Supplies	\$163,480	\$39,000	\$202,480	\$0	\$5,463	\$5,463
Subcontracts Total	\$2,529,372	\$230,455	\$2,759,827	\$877,299	\$87,531	\$964,830
Subcontract #1	\$0	\$0	\$0	\$270,877	\$64,828	\$335,705
Subcontract #2	\$0	\$0	\$0	\$185,990	\$0	\$185,990
Subcontract #3	\$0	\$0	\$0	\$87,571	\$15,291	\$102,862
Subcontract #4	\$0	\$0	\$0	\$78,308	\$0	\$78,308
Subcontract #5	\$0	\$0	\$0	\$254,553	\$7,412	\$261,965
Construction	\$0	\$0	\$0	\$0	\$0	\$0
Other	\$252,020	\$115,313	\$367,333	\$0	\$60,110	\$60,110
Total Direct Costs	\$5,063,859	\$1,702,549	\$6,766,408	\$1,090,004	\$345,441	\$1,435,445
Total Indirect Costs	\$1,547,137	\$0	\$1,547,137	\$336,702	\$0	\$336,702
Total Costs	\$6,610,996	\$1,702,549	\$8,313,545	\$1,426,706	\$345,441	\$1,772,147
% Of Total	80	20	100	80	20	100

Hardware / Software

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

10v. If yes, please list

1 laptop, \$2028, charged as match

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

Two additional laptops have been purchased as match in Q1 2011 under the supplemental funding budget (technical assistance) and will be reported in the next quarter. GIS software license costs may be charged to the grant in the future if the State begins to charge e-NC for use of the license.

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

10y. If yes, please list

Web-mined data from Telogical Systems (Oct. 2009), \$25,000

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

10aa. If yes, please list

On November 23, 2010 the e-NC Authority, in partnership with contractor Michael Baker Jr., Inc., launched its NC Broadband Map (<http://e-ncbroadband.org/>). The current map reflects provider data only. e-NC with Michael Baker will update the map every six months following data submission to NTIA. e-NC continues to work on some additional functionality for the map such as an advanced page. e-NC's mapping handout explaining map functionality and tools still underdevelopment will be submitted separately to NTIA for reference, as an accompaniment to this report. Also on November 23, the e-NC Authority presented its map to the NC House Select Committee on High Speed Internet. On December 17 e-NC held a meeting for broadband service providers (in person and by webinar) to review the map and collect any feedback. The e-NC Authority continues to receive and respond to map feedback via the online mapping application. The map feedback offers a possible additional tool for data verification and suggestions for map refinements.

Probably the key frustration expressed by the public and state leaders in terms of the map is around overstatement of coverage, due to collecting coverage via census blocks instead of individual addresses, although this methodology for displaying coverage is explained in the map disclaimer and reiterated by e-NC. e-NC continues to work to determine how best to quantify the broadband availability data in terms of looking at coverage by county and across the state.

Also during this quarter the e-NC Authority worked to refine the details of its new SBDD programs funded under the NTIA supplemental funding, looking at how they can complement the mapping work. Those programs are covered under the "planning" portion of this reporting form.

10bb. Please describe any challenge or obstacle that you have encountered and detail the mitigation strategies the project team is employing
We are addressing the issue of non-compliance by individual providers directly through one-on-one conversations and more generally with collective outreach efforts (email contact, a new resource page for providers on e-NC's website, instructional meetings and webinars) and the development of tools to assist their submission of data in the appropriate format. Templates for submission of data by providers are being provided along with opportunities for consultancy on individual provider questions. Some providers understand their serviceable areas but not in terms of census block, so e-NC has helped them identify the census blocks using custom, interactive local area maps using ArcReader, a free downloadable map software by ESRI. Mixed geometries for census block level data are provided to e-NC despite requests for 2000 vintage, so e-NC has worked with mapping techniques to "translate" 2009 geometry to 2000 while minimizing inaccuracies and developed a potential "best method" described in the metadata. Another challenge that remains is submission of data by providers well after all deadlines set for them by e-NC, allowing insufficient time for processing and follow up. It is hoped that communicating to providers that their data may not be included if they do not follow our deadlines in order to allow time for processing/mapping will result in more reasonable submission dates, therefore ensuring higher data quality.
See answer continued in separate attachment (PPR - Additional Information).

10cc. Please provide any other information that you think would be useful to NTIA as it assesses your Broadband Mapping Project
Although there have been some delays in obtaining data according to the original schedule and in implementing the evaluation project, we feel that the overall design and approach taken is still valid and will deliver important insights to guide our mapping efforts going forward. We are anticipating the delays and challenges that moving to 2010 Census Blocks will pose for providers in the fall, and are planning additional technical assistance to offer them specifically on this issue. We also continue to look at opportunities to document best practices within this project, related to data verification systems and also specific collection methods such as the wireless propagation study.

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

Year one planning work included conducting the Citizen Survey by East Carolina University. The survey work is complete. Key findings are posted on our Website at http://www.e-nc.org/public/citizen_survey. Year one planning also included the extensive report from Strategic Networks Groups looking at how households and industry sectors in NC are using broadband. This SNG work was completed in October 2010. The final report is available here http://www.e-nc.org/public/strategy_survey. Also in year one planning activities was a proposed vulnerable populations conference. This workshop has not yet been held but e-NC has developed a survey on broadband use for targeted organizations working with vulnerable populations, to get a sense of how best to focus our efforts. This survey should be distributed in February 2011.

With the supplemental funding awarded to e-NC in October 2010, all broadband planning work will be incorporated into e-NC's new SBDD programs: technical assistance, LITE-UP (computer ownership) and state capacity building.

Technical Assistance: As called for in the proposal, e-NC has hired three technical assistance directors to work in western, central and eastern NC. Two new staff members joined us on October 25, 2010, with the western person joining the staff on January 19, 2011. As part of this program, e-NC will be holding seven regional meetings across the state between February 14 and April 4, 2011 http://www.e-nc.org/public/regional_broadband_updates. Some of the goals of the meetings include: providing information about the technical assistance program, presenting the new NC Broadband Map, and informing communities about local broadband projects funded by BTOP/BIP. e-NC is in the process of developing its detailed project plan for the technical assistance program to be submitted to the NTIA in February.

See answer continued in separate attachment (PPR - Additional Information).

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

Since these programs are just being developed, we have not yet encountered any real challenges or obstacles.

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

We do not anticipate changes, although the details of the programs are being fleshed out and will be provided to the NTIA in February.

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?

None at this time.

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

None at this time.

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

None at this time.

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

Angie Bailey

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

12d. Email Address

abailey@e-nc.org

12b. Signature of Authorized Certifying Official

Submitted Electronically

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

02-16-2011