U.S. DEPARTMENT OF COMMERCE

Performance Progress Report

2. Award Or Grant Number
55-50-M09015

4. Report Date (MM/DD/YYYY)
10-29-2010

1. Recipient Name
Public Service Commission of Wisconsin

6. Designated Entity On Behalf Of:
Wisconsin

3. Street Address
610 North Whitney Way,

5. City, State, Zip Code
Madison, WI 53705

8. Final Report?
◯ Yes
◉ No

9. Report Frequency
◉ Quarterly
◯ Semi Annual
◯ Annual
◯ Final

7. Project / Grant Period Start Date: (MM/DD/YYYY)	7a. End Date: (MM/DD/YYYY)	7b. Reporting Period End Date:	9a. If Other, please describe:
11-01-2009	10-30-2014	09-30-2010	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
105	105	77	66	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

Only two providers have expressly refused to participate the Wisconsin program: Heircomm Networks and LiteWire Internet Services Inc. Both have been contacted and have informed the LinkAMERICA Alliance that they do not wish to participate in the program. We will continue to periodically reach out to them, but do not anticipate a change of heart.

More often, we simply do not receive a response to repeated requests for data. When this happens we continue to contact the provider via phone and e-mail to assist in any way we can. The numbers in section 10a above reflect participation in Round 2 of the collection process and they indicate that 66 of 105 known providers responded with new data. Of the 39 who did not respond, 20 had supplied data in Round 1 but did not respond in Round 2. We have submitted their Round 1 data again with our Round 2 submission. Further, we used third party data to estimate coverage for two additional providers who did not respond in either Round. As a result, our October 2010 submission included data for 88 providers of the 105 known providers.

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 LinkAMERICA team uses third party data and estimation techniques to augment provider data. For estimation, we primarily begin with reported middle mile infrastructure points and use common engineering principles to determine potential coverage and speed. This process is repeated in each data submission Round.

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

The LinkAMERICA team uses common procedures in each of the four LinkAMERICA states. Data verification consists primarily of these separate processes:

1) PDF check maps and other "check data": This information is generated from provider submissions. Maps and other summarized forms of data are shown to the providers after their initial data has been normalized and formatted per NOFA standards. Providers have the opportunity to visually check the data and mapped representations of their coverage/speed, and make corrections if necessary. This process occurs at the beginning of each data Round.

2) Processes are run within the data itself to flag potential errors. In particular, we look for areas where coverage is reported outside of a known Exchange Area Boundaries, or where a single census block is shown as covered without any adjacent covered blocks ("islands"). We also looked for census blocks that are uncovered but surrounded by fully covered blocks ("donut holes"). We investigate these anomalies with providers when possible and correct the data based on their feedback. This process is ongoing with each data Round.

3) Consumer Feedback/Verification: We currently provide a consumer feedback mechanism that allows users of the state map to report errors in coverage or speed information. This mechanism includes the precise longitude and latitude of the report so it can be properly investigated. In the future, we will aggregate user reports into a scoring mechanism that allows other users to see areas where provider data may be in error - based on reports from fellow users. This feature is being designed and a delivery date has not been set.

4) Drive testing using multi-frequency and multi-technology wireless analysis tools is being pilot tested in another state and is currently scheduled for use in Wisconsin in years 3-5 of the program.

10g. Have you initiated verification activities? ◉ Yes ◯ No

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

As described above, our verification activities are ongoing. We perform all of the above processes in each data collection Round and before submittal of data to NTIA. We continue to analyze the data to address any further identified errors as we update the online maps after each data collection Round.

In the first section above we show that "0" datasets have been "verified." We do this because we are not certain of NTIA's definition of "verified." Because provider, third party, and consumer reported data will always have some degree of error, data can never be 100% verified without a trip to each physical location in the state - which is obviously not within the scope or budget of this project.

Further, since networks expand constantly, information that is verified in one cycle may be incorrect in the next.   Instead, we perform as many error checking measures as possible on the provider data in each Round to ensure we display the data as it has been reported it to us - and that as many potential errors as possible have been corrected. As mentioned above, we will also be implementing the consumer feedback mechanism in the months to come to provide an additional perspective on the accuracy of the data. Of course consumers can also be wrong about where service is available, so we will not override provider reports, but will simply offer another source of feedback to map users that will indicate where there may be issues with the data. This will be challenging, however, due to the use of census block geography. We anticipate a certain level of user confusion since coverage may not be offered in sections of small blocks that are shown as covered on the maps due to NOFA guidelines.

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

The only verification activity that has not been initiated is the drive testing of wireless signals, which is currently scheduled to begin in early 2012.

Staffing

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

An analysis of actual hours worked in Q3 shows that the project has resulted in a total of 1.45 FTE jobs created/retained at the Prime and Sub Recipient level.

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?

N/A

10n. Staffing Table

Job Title	FTE %	Date of Hire
CEO - Supervisory Role	5	11/01/2009
Project Director	30	11/01/2009
Project Manager	35	11/01/2009
GIS Director	30	11/01/2009
Internal System Support/Architecture	15	11/01/2009
Provider Relations Manager	30	11/01/2009

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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
CostQuest Associates Inc./LinkAMERICA Alliance	Project Management/GIS Programming & Planning Services	Y	Y	11/01/2009	10/30/2011	1,232,328	0

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Funding

10p. How much Federal funding has been expended as of the end of the last quarter? $754,847   10q. How much Remains? $4,824,874

10r. How much matching funds have been expended as of the end of last quarter? $168,931   10s. How much Remains? $946,959

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	$537,572	$321,380	$858,952	$0	$0	$0
Personnel Fringe Benefits	$156,929	$127,301	$284,230	$0	$0	$0
Travel	$27,500	$5,770	$33,270	$0	$0	$0
Equipment	$57,928	$9,950	$67,878	$0	$0	$0
Materials / Supplies	$4,400	$9,950	$67,878	$0	$0	$0
Subcontracts Total	$3,679,503	$0	$3,679,503	$754,847	$0	$754,847
Subcontract #1	$1,717,684	$0	$0	$0	$0	$0
Subcontract #2	$1,961,819	$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

Mapping Budget Element	Federal Funds Granted	Proposed In-Kind	Total Budget	Federal Funds Expended	Matching Funds Expended	Total Funds Expended
Construction	$0	$0	$0	$0	$0	$0
Other	$0	$608,726	$608,726	$0	$168,931	$168,931
Total Direct Costs	$4,463,832	$1,074,129	$5,537,961	$754,847	$0	$754,847
Total Indirect Costs	$0	$41,761	$41,761	$0	$0	$0
Total Costs	$4,463,832	$1,115,890	$5,579,722	$754,847	$168,931	$923,778
% Of Total	80	20	100	13	3	17

Hardware / Software

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

10v. If yes, please list

Laptop computers and software were purchased for the Project Manager and Provider Relations staff members. Twenty-five percent of the costs were allocated to WI.
6/4/2010: Dell-Mobility Bundle-Provider Relations-XDW8598K9/ Computer Equip < $5000 / $42.60/ 25% / $10.65
6/8/2010: Dell-Latitude E550-Provider Realtions-XDWF3CWW7 / Computer Equip < $5000 / $1,315.30 / 25% / $328.83
7/8/2010: Dell-Latitude, Program Manager XDXWD5P88 / Computer Equip < $5000 / $1,411.13/ 25% / $352.78
Total equipment costs allocated to WI: $692.26

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

No software or hardware remains to be purchased from the original Year 1-2 budget.   The Supplemental (Years 3-5) budget has added approximately $60,000 for software and hardware to support both the ongoing data collection/mapping activities and the statewide address file development project.   Address File project equipment will be purchased in Year 2 and the data collection/mapping equipment in Years 4 & 5.

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

10y. If yes, please list

American Roamer, Media Prints, and ExchangeInfo

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

10aa. If yes, please list

The first "beta" version of the Wisconsin Broadband Map was launched to the general public in August 2010 after an internal and provider review period. This is a major project milestone.

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

As with all LinkAMERICA states, the largest challenge is collecting complete and accurate data from providers - and identifying when that data may be incomplete or inaccurate. Inaccuracies are identified using the verification techniques described. Incomplete datasets are handled on a case by case basis.

In the second round of data collection, we generated a customized instruction sheet and "check map" for each provider. These sheets specifically identified the type of information that was missing and explained how such information should be reported in Round 2. This was a very time consuming process, but given the diverse nature of the providers submissions it was necessary to treat each submission on a case by case basis.

Wisconsin providers in particular have also objected to the use of street segments to depict coverage. Most smaller providers do not have the ability to identify street segments in large census blocks as required in the NOFA. As a result, we typically ask for a map of their service territory and use GIS overlays to identify street segments that fall within those boundaries. The nature of street segments themselves means this is not always a perfect fit. Even after properly identifying street segments, providers argue that showing only the street segment itself (with a 100m buffer on each side) severely under represents where they could (and would) offer coverage for consumers who request it. More detail is given in the next section.

As described in other reports, we also had difficulty gathering Maximum Advertised Speed at the Census Block level. Several large providers flatly refused to give this information, citing the fact that it is "not listed in the NOFA". Others remain confused about the definition of "Advertised" and seem to be providing a single maximum speed that is literally advertised in the newspaper or on TV for the entire market area - instead of offering a CB by CB analysis of what maximum speeds are possible.

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

In Wisconsin in particular, the LinkAMERICA Alliance is receiving feedback regarding the depiction of coverage in large census blocks. Specifically, several RLECs have objected to the combination of fully shaded representations of coverage in small blocks and shaded street segments in large blocks.

First, they argue that the street segments do not show the reach of their service. We currently buffer to 100m on each side of the segments, but many RLECs state that they will offer service much farther from the edge of these streets. The precise distance they will go is dependent upon many factors, so there is no common buffer distance that works for all providers in all locations. In their eyes, unless we shade their entire coverage area (not just the streets) we are telling consumers that access is not available, when that may not be the case.

In a related argument, they also object to the use of fully shaded areas (via shapefiles) to depict wireless coverage. Because the wireless carriers are not shown by street segment, it often appears that their coverage extends into areas not covered by the wireline providers (distances greater than 100m from the road centerlines). The wireline providers consider this unfair, since they would at least like the option of deciding whether they can extend service to those customers or not. To mitigate this issue, we have changed the messaging in the bubble that shows the list of providers for an area and still include wireline providers in the list in other areas of a

large block where they cover at least one street segment. We are implementing this change in November. NTIA may wish to monitor this issue as the national map is designed.

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

In Q3 the final version of the initial stakeholder interview summary report was published to both the PSCW and the general public via the LinkWisconsin website. Other activities and milestones include the following:

1) Preparation of a detailed regional planning team "recruitment tool" including a spreadsheet with key regional and subject area contacts and criteria for recruiting regional planning team members.
2) Development of several background documents to help inform in-state planning partners and potential regional planning team members regarding the purpose and objectives for the LinkWISCONSIN planning process.
3) Creation of a LinkWISCONSIN broadband planning dashboard with relevant planning data and structured webforms to guide content development for the creation of regional broadband investment plans.
4) The addition of an in-state staff person to the LinkAMERICA team to support the planning process with a stronger local presence.
5) Development of a final Planning Project timeline and tasklist in conjunction with key PSCW staff members.
6) Attendance at the statewide meeting of the Executive Directors of the Association of Wisconsin Regional Planning Councils to introduce LinkWISCONSIN and invite their involvement.
7) Finalization of geographic boundaries for Wisconsin's planning regions
8) Developed multiple interactive video segments to outline key findings from initial interviews and to serve as a platform for the collection of additional consumer and stakeholder data.

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

No major obstacles have been identified that will impact the team's ability to meet project goals/objectives.

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

Planning Budget Element	Federal Funds Granted	Proposed In-Kind	Total Budget	Federal Funds Expended	Matching Funds Expended	Total Funds Expended
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?

No further information.

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

No challenges have been encountered that will hinder our ability to complete the assigned tasks and achieve program goals.

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

No further information.

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 Sarah Klein	12c. Telephone (area code, number, and extension) 608-266-3587
Division Administrator	12d. Email Address sarah.klein@psc.state.wi.us
12b. Signature of Authorized Certifying Official Submitted Electronically	12e. Date Report Submitted (Month, Day, Year) 12-08-2010