

**ANNUAL PERFORMANCE PROGRESS REPORT FOR SUSTAINABLE BROADBAND ADOPTION**

**General Information**

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b> Department of Commerce, National Telecommunications and Information Administration	<b>2. Award Identification Number</b> 23-43-B10581	<b>3. DUNS Number</b> 607132466
<b>4. Recipient Organization</b> AXIOM Technologies, LLC 3 Water Street, Machias, ME 04654-1118		
<b>5. Current Reporting Period End Date (MM/DD/YYYY)</b> 12-31-2011	<b>6. Is this the last Annual Report of the Award Period?</b> <p style="text-align: center;"> <input type="radio"/> Yes    <input checked="" type="radio"/> No                 </p>	
<b>7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.</b>		
<b>7a. Typed or Printed Name and Title of Certifying Official</b>  Mary Walton	<b>7c. Telephone (area code, number and extension)</b> 207-496-0681	
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<b>7b. Signature of Certifying Official</b> Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b> 02-18-2012	

**PROJECT INDICATORS**

**1. Does your Sustainable Broadband Adoption (SBA) project foster a particular broadband technology or technologies? If so, please describe this technology (or technologies) (600 words or less).**

The Washington County Education and Employment through Sustainable Broadband Adoption Project (WCEESBA) will take advantage of recently installed wireless broadband technology and provide educational and employment opportunities that will sustain and grow three of the largest industries in the County: blueberry farming, fishing and healthcare. Axiom will partner with the Central Maine Medical Center College of Nursing and Health Professions as Sub-Recipient, and Anchor Institutions: University of Maine at Machias, Downeast Community Hospital, Downeast Institute for Applied Marine Research and Education, Sunrise County Blueberry Cooperative and other collaborators. The Program will address the underserved, unemployed and underemployed residents by providing education and training opportunities in healthcare, computer and Internet technology skills and cost effective and efficient fishing and farming operating methods, all through the use of broadband technology and computer skill and customized software training and usage. Currently, only a small percentage of businesses are taking advantage of this technology and as it has been proven to open doors to education and training opportunities and increase profitability, a dramatic increase in demand for broadband is expected, resulting in improved service adoption rates. At program inception, Axiom had brought high-speed wireless Internet service to over 100 regions (46 towns) with over 80 Access Points in Washington County, creating an umbrella over 2,500 square miles in the area. Axiom now has over 100 Access points and as outlined within this report, has increased, interest, usage and knowledge to a large part of the Washington County population through its program offerings via wireless and DSL technologies. Axiom identified wireless as the best candidate for rural last-mile service delivery, which previously had limited broadband connectivity, demonstrating significant advantages in cost and capability. Axiom Technologies is implementing a program to prove the concept of leveraging new broadband technology use to bolster a dwindling natural resource-based economy and become a guide for other regions and States faced with similar 21st century challenges. Washington County produces more than 90% of the world's blueberry crop and has 3,598 (23%) of Maine's small and medium-sized commercial fishing and marine harvesting operations, many of whom are small, economically and socially disadvantaged businesses. The Washington County EESBA economic metrics for subject businesses will include: 1) employee competency and capability; 2) new market access; 3) process automation; 4) effects on operating costs; 5) effects on gross revenue; and blending next generation technology with natural resource-based industry.

A rugged laptop computer able to withstand field operations will be provided to each subject business and configured to utilize the high capacity data network. These machines will, in the course of the consulting and guidance process, be equipped with appropriate software and technology tools to support and enhance the subject businesses operation. Axiom personnel will install and configure these systems in conjunction with appropriate personnel from the subject business. The end result of this physical construction and installation period will be the creation of a high capacity, business oriented network throughout these communities. The CoNHP will expand its existing DLE Nursing Program into rural and remote Washington County, Maine, offer educational and financial support for successful entry and upon completion of the degree program, provide skilled, high-paying jobs for area residents and supply a badly needed healthcare workforce in a Health Profession Shortage Area. The Remote Teaching site in Washington County at the Downeast Community Hospital (DECH) will be for its RN Program and will provide enrollment opportunities not currently available to Washington County residents, allowing them to obtain a degree without traveling great distances, thus saving both time and expense; increase admittance to the CONHP RN Program (current rate of 1:4 applicants), and assist in addressing the severe nursing shortage in Maine (exceeded 2,500 nurses in 2010), especially in rural areas such as Washington County. Mannekin simulation through Polycom videoconferencing (real-time) will provide clinical experiences for the nursing student within the classroom setting.

**2a. Please list all of the broadband equipment and/or supplies you have purchased during the most recent calendar year using BTOP grant funds or other (matching) funds, including any customer premises equipment or end-user devices. If additional space is needed, please attach a list of equipment and/or supplies. Please also describe how the equipment and supplies have been deployed (100 words or less).**

Manufacturer	Item	Unit Cost per Item	Number of Units	Narrative description of how the equipment and supplies were deployed
AMD	410 Microscope w/Digital Camera	8,600	1	This microscope will be utilized by Axiom's SubRecipient (CoNHP) in conjunction with their Distance Learning Education (DLE) Program during clinicals for RN nursing degree certification and education. It will be deployed to the classroom space at Dowast Community Hospital in Machias
NEC	LCD Projector	10,800	1	The LCD Projector will also be used with the DLE Nursing Program for education and teaching curriculum to the nursing students at CoNHP. It will be deployed to the classroom space at Downeast Community Hospital in Machias
<b>Totals</b>		19,400	2	

Add Equipment

Remove Equipment

**2b. To the extent you distribute equipment/supplies to beneficiaries of your project, please describe the equipment/supplies you distribute, the quantities distributed, and the specific populations to whom the equipment/supplies are distributed (600 words or less).**

All equipment listed was distributed to the College of Nursing and Health Professionals (CoNHP) for their Advanced Placement Bridge Distance Learning Education Program being broadcast out of their main campus in Lewiston, Maine, to their remote teaching site at Down East Community Hospital in Machias, Maine. Quantities distributed are as listed and the beneficiaries will be the nursing students participating in the Programs offered by CoNHP. In January 2011, an Advanced Placement Bridge Program began at DECH in Machias, and another started in the fall of 2011 for student applicants who did not meet the qualifications to take the full RN course and are currently taking prerequisite courses at UMM in order to qualify for the course offering. A third class will also start in January

2012, and the Program should have a full complement of students. Additional course offerings will be expanded to meet future needs after or during Project implementation, according to student needs and the CoNHP's ability to implement various courses. The students taking these courses include the unemployed, underemployed and LMI populations. ONGOING TRAINING!!!

**3. For SBA access and training provided with BTOP grant funds, please provide the information below. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent calendar year. For each type of training (other than open access), please count only the participants who completed the course.**

Types of Access or Training	Number of People Targeted	Number of People Participating	Total Training Hours Offered
Open Lab Access	0	0	0
Multimedia	0	0	0
Office Skills	0	0	0
ESL	0	0	0
GED	0	0	0
College Preparatory Training	0	0	0
Basic Internet and Computer Use	0	0	0
Certified Training Programs	0	0	0
Other (please specify): 0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>

**4. Please describe key economic and social successes of your project during the past year, and why you believe the project is successful thus far (600 words or less).**

Although the WCEESBA Program is still in its infancy stages, being implemented less than one year ago, it is evident by the level of support received to date that the businesses and residents of Washington County and throughout the State of Maine are excited by its start-up. As of the end of 2011, we have 46 business hook-ups to either wireless or DSL internet with 188 new users; and 210 new Household connections with approximately 447 new users. In addition, the program has 108 students receiving some form of computer and/or Internet training, amassing over 10,761 hours. The training programs for the Farmers/Fishers has 21 participants with interactive and personalized guidance from industry expert consultants who are working with them to customize software and programs that will increase their productivity, update their State and Federal antiquated reporting requirements, and make their businesses more cost-efficient. The DLE Nursing Program is now fully operational with two classes of nursing students that will allow them to participate in a nursing degree program without the time and expense of traveling great distances (or having to relocate) and which will allow ALL participants to raise their standard of living and improve the local and regional economies through increased and better paying jobs in the top industries within the Region. Enthusiasm for the Project is not limited to Washington County; Axiom's CEO has traveled across the State and beyond to garner support and collaborate on the project on many local, state and a few national levels. It is clear that many entities are excited and interested about replicating the programs to fit their industries or adapting portions of it to fulfill unmet needs. As we move forward, and needing Broadband to conduct business becomes more of an issue for remote and isolated pockets of the country like Washington County, we expect that both programs will continue to grow and expand beyond its current boundaries.

**5. Please estimate the level of broadband adoption in the community(ies) and/or area(s) your project serves, explain your methodology for estimating the level of broadband adoption, and explain changes in the broadband adoption level, if any, since the project began.**

5a. Adoption Level (%):	Narrative description of level, methodology, and change from the level at project inception (600 words or less).
17	At the time of applying for this Award, Axiom Technologies had broadband infrastructure in place across approximately 70% of Washington County, accounting for an estimated 22,500 people or 10,044 households, yet at that time had only 800 subscribers (4% of the population or 12.6% of households). The other 30% of the populated area is covered by other providers and the subscribership rate is unknown. Using Axiom's numbers as a gauge, it is apparent that broadband has not yet become a tool that is widely used in Washington County, either by most businesses or the general population. The programs generated by the Washington County EESBA will stimulate the demand for broadband, create jobs and give the local economy a badly needed boost. Axiom has estimated that as a result of this project (when implemented), over a two year period, household subscribership will increase by 944 households and 141 businesses and/or anchor institutions. In the short time since Program inception, Axiom has increased the 800 subscribers by 32% or 256 subscribers (210 households and 46 businesses), for a total of 1,056 subscribers and boost the adoption rate to over 17% in a relatively short period of time.

**6. Please describe the two most common barriers to broadband adoption that you have experienced this year in connection with your project. What steps did you take to address them (600 words or less)?**

Prior to this Award, we found that two of the most common barriers to Broadband adoption have been lack of training on how to use the technology and the difficult topography of the region that makes Broadband access difficult. Axiom has solved some of this difficulty through the establishment of widely located and strategically placed Access Points that have made it possible for internet connections to exist virtually anywhere within the Region. Evidenced by increased subscribership and a large interest in the technology and no-cost training to learn to use the technology for business and personal use, we have seen that the Program has resulted in more residents and businesses embracing the use of the technology to make their lives easier and their businesses more profitable. We will continue to "brainstorm" ways to establish more Access points to reach the most difficult areas within and around Washington County and provide accessible training whenever and wherever we can to make the technology more "user friendly" and become second nature for doing business and living every day life.

**7. To the extent that you have made any subcontracts or sub grants, please provide the number of subcontracts or sub grants that have been made to socially and economically disadvantaged small business (SDB) concerns as defined by section 8(a) of the Small Business Act, 15 U.S.C. 647, as modified by NTIA's adoption of an alternative small business size standard for use in BTOP. Please also provide the names of these SDB entities. (150 words or less)**

None/Does not Apply

**8. Please describe any best practices / lessons learned that can be shared with other similar BTOP projects (900 words or less).**

There are many lessons learned so far with the implementation of this multi-faceted project, however, we have found it intriguing to watch the interaction between the fishers/farmers and the consultants for their industries. It has been a learning experience for all parties involved and it is Professor Kevin Athearn's task to take the information gleaned from interviews and interactions and formulate a "Plan" to identify, evaluate and formulate solutions to the problems facing the workers and their industry. As such, we have attached a paper he prepared entitled, "Report on First Evaluation Interviews with Blueberry Growers," that will allow you a glimpse of the process and formulation of proposed outcomes. It addresses the industry background, identification of needs, process needed for finding solutions and evaluation of Year One.