

Broadband USA Applications Database

Applicant Name: McDowell County Schools

Project Title: One-to-One Outreach

Project Type: Sustainable Adoption

Executive Summary

The Blue Ridge Parkway crosses mountainous regions that retain the natural beauty of hundreds of years ago. Families have lived in homes hidden by their dense forests for generations. But times have changed; creating demand for broadband services and availability of technology providers and resources to these communities is critical to their survival, much as telephone lines were needed in the past. Recovery Act & BTOP objectives will be met in McDowell County through the high schools One-to-One Outreach program so the counties mountain folks are not forgotten and have options for the future. Recent results of the North Carolina Broadband Service Inventory (June 2009), indicated that the majority of homes and businesses in the northern and southern sections of McDowell are un-served by broadband or underserved with only mobile or wireless broadband service available. The premise behind the program is that access to laptop computers in the homes of students will drive demand for additional broadband.

Results of other one-to-one programs in North Carolina indicated a boost in demand and usage of technology applications and economic benefits. The McDowell County School system proposes to bring students and their neighborhoods into the Twenty First Century through a targeted one-to-one laptop outreach for students and their families in McDowell high schools. The 76.7% rural designation in McDowell includes populated areas without adequate infrastructure for home technology usage. The youth of these communities struggle to stay up with their peers in other counties and regions of the country because they do not have personal computers at home and they are limited in their access to broadband. The one comprehensive high school with over 1400 students and over 100 teachers is inadequately equipped for technology upgrades and increased numbers of computers. Students are limited in what they can do as part of their portfolios and senior projects now required in NC because the school cannot provide an adequate end-user infrastructure with the wiring, access points, and controllers to boost the speed of transmission.

Computer education, technical training, and access through a one-to-one laptop initiative are proposed to expose students and their families to technology which will increase and sustain broadband usage. The McDowell initiative will provide wireless installation, technical support, network support, training during and after school hours, and ongoing professional development on technology integration in curriculum. Lack of funds to purchase home computers limits low income adults who do not have access to opportunities for on-line training and job searching. The increased exposure to technology will provide knowledge of access to the resources available on the internet.

A year long study of the feasibility of a one-to-one program in the schools was conducted in cooperation with the County Manager, Chairman of the County Commission, Chairman of the Chamber of County, Business leaders, School Administrators, and Senior Level District Management. A presentation was made to the McDowell Board of Education and pilot programs were initiated in two small high school locations, Early College (n=118) and the Alternative Education Center (n=100). These sites were provided wireless access through wiring upgrades, wireless access points, dedicated servers, and Mac Book or Dell laptops. The enthusiastic reception and preliminary results in these locations encouraged the superintendent to seek funds to expand this to McDowell High School to reach more students and families.

The school system Technology Director has a structured approach to putting laptops into the hands of students. They participate in a roll-out of the community outreach laptop initiative, beginning with teacher development and access to the laptops, laptop carts implemented throughout the classrooms for in school use, student and parental training and signed agreements by all parties responsible for the laptops and then take home privileges. In addition, parents will be encouraged to continue their education on the use and care of the laptops and internet applications; courses that stimulate their interest through relevant content and targeting needs will be offered after school hours. The course selection will provide ongoing development in the participating schools and future interest in expanded broadband is the intended outcome.

The schools currently do not have adequate labs on site to expand broadband education, awareness, training, and access to adults in the community, as well as to students. They lack the end-user infrastructure in the schools and laptops to extend student learning. This proposal includes the installation of wiring compatible with a wireless network consisting of Cisco Aironet Access Points and Wireless controllers to provide coverage to support 1300 + laptops in a single school location. Laptops, which will enable students to develop twenty first century skills and participate in portfolio and senior projects that demand the use of graphics and video productions, will be purchased with grant funds. Personnel to successfully support the equipment and implement the program are included in the project; a project manager, facilitators, and technicians who will work with contractors while overseeing the end-user installation, installation of access points and other equipment, training and support of educators on care and maintenance of the computers, a help desk for all users to seek assistance with hardware and software issues, and comprehensive community-wide efforts to make McDowell County broadband ready and actively using and pursuing technology access and upgrades. The equipment, support for the schools as anchor institutions, job-creating strategic facilities, will provide full access for vulnerable populations.