

**Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Pennsylvania Office of Public Safety Radio Services,  
Commonwealth of PA Middle Mile Broadband Project**

**Summary**

The Pennsylvania Office of Public Safety Radio Services (OPRS) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to construct new and upgrade existing broadband infrastructure in Pennsylvania's unserved and underserved northern tier with the purpose of increasing bandwidth available to anchor institutions and last mile providers seeking to link into middle mile backbone. The project is called the Commonwealth of PA Middle Mile Broadband Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to OPRS, through BTOP, as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three (3) years. This timeline is driven by the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in unserved and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act (NEPA) of 1969, which limits the types of activities that can be undertaken prior to completion of required environmental reviews. BTOP grant recipients, whose activities are not categorically excluded from further environmental review, must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA and use it as the basis for finding that the Project would not have a significant impact on the environment. Following such a finding, the BTOP grant recipient may then begin construction or other activities that could impact the environment.

An EA for the Project was completed by OPRS in July 2010, and reviewed, determined sufficient, and adopted by NTIA as part of the development of this Finding of No Significant Impact (FONSI).

The Project includes:

- Construction of six new towers to replace existing towers that currently do not have sufficient structural stability to support the new antenna or equipment;
- Removal of one existing tower;
- Expansion of existing tower compounds at nine sites;
- Construction of ten new 12 foot x 25 foot equipment shelters;
- Installation of nine new generators and associated fuel tanks at selected tower sites;
- Addition of new network-related equipment at five tower sites; and upgrading of equipment at an additional 51 tower sites and 43 micro-cell pole locations, to include replacement of antennas and pole mounted equipment.

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Based on a review of the analysis in the EA, NTIA has determined that the Project would not result in any significant environmental impacts. Therefore, the preparation of an Environmental Impact Statement (EIS) is not required. The basis for the determination is described in this FONSI.

Additional information and copies of the EA and FONSI are available to all interested persons and the public through the BTOP website ([www2.ntia.doc.gov/](http://www2.ntia.doc.gov/)) and the following contact:

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### **Purpose and Need**

The purpose of the Project is to increase bandwidth throughout Pennsylvania's unserved and underserved northern tier and make broadband services available for anchor institutions, schools, libraries, healthcare providers, and last mile providers seeking to link into the middle mile backbone. The Project will add microwave system capacity to existing Multiprotocol Label Switching (MPLS) backbone, along with expanding the presence of MPLS technology to a select number of non-ring microwave paths that were not previously upgraded. The Project will cover 25 counties and support 327 municipalities and boroughs throughout these counties.

### **Project Description**

OPRS will increase bandwidth available to anchor institutions and last mile providers by leveraging existing infrastructure at 66 tower sites and 43 micro-cell poles in 25 counties across northern Pennsylvania. Although some level of activity is anticipated at all Project sites and locations, ground-disturbing activities will occur at only 15 tower sites in ten counties. These activities will include construction of six new towers, ranging in total height (including attached lightning rods or antennas) from 200-350 feet. Each of these tower sites, and three existing tower sites, will also require compound expansion, which may include pouring of new tower foundations, installation of cable ice bridges, relocation of existing equipment (such as generators and fuel tanks), expansion of fence lines, and landscaping. The existing guyed tower in Pleasant Township, Warren County will be removed to facilitate the construction of a

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replacement tower at the same site. Ten new equipment shelters will be constructed at the tower sites, and nine tower site compounds will be expanded to facilitate planned construction activities. These plans will result in ground-disturbing activities in surrounding areas. However, the planned tower site construction activities are not expected to have a significant or long-term impact on the environment.

Staging areas for construction will be limited to the areas immediately surrounding the compound and access roads. The existing roads and utilities will be used for construction activities, and no new access roads or expansions are planned. The anticipated construction period for each tower is eight weeks, and three weeks will be required to remove one existing tower. The anticipated schedule for construction of the new equipment shelters and installation of generators and other equipment is four weeks. Overall, the construction period for the Project is not expected to exceed eighteen months.

New generators will be installed at nine tower sites, and six existing generators will continue normal operation at their present tower site locations. New equipment (e.g., cable ice bridges) will also be placed at the base of five existing tower sites. Ground-disturbing activities will not be required to complete these portions of the Project.

The Project also includes the placement of antennas or pole-mounted equipment on 43 micro-cell poles. The final location of each micro-cell upgrade has not been identified in order to allow the last mile provider or anchor institution flexibility to determine and implement the upgrades at targeted locations based on specific needs or bandwidth requirements. However, in order to ensure that OPRS completes grant milestones in a timely fashion, when the twenty-four month mark of the project schedule is reached, OPRS will select specific site locations from a list of existing micro-cell poles and install any of the forty-three links that have not yet been installed. Placement of antennas or pole-mounted equipment will not require ground-disturbing activity and is considered environmentally neutral.

### **Alternatives**

NTIA requires that an EA include a discussion of the no action alternative. The no action alternative provides a baseline against which the effects of the Project may be compared. Under the no action alternative, the Project would not be implemented and the site-specific impacts associated with the Project would not occur in the Project area. Two alternatives were identified and eliminated from further consideration. One alternative eliminated from further consideration involved construction of an entirely new wireless system rather than simply upgrading and replacing portions of the existing system. That would have required a significant increase in the number of towers to be constructed. The other alternative eliminated from consideration involved a reduction in the scope of construction such that ground-disturbing activities would be needed at only six sites. However, this alternative would have negative impacts on the “reach” of the network design into unserved and underserved areas of Pennsylvania and, thus, would not meet the purpose and need.

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*Alternative 1 – Construction and Upgrades of Towers and Micro-Cell Pole Sites (preferred alternative).* This construction method allows OPRS to provide increased bandwidth in twenty-five counties, while only requiring ground-disturbing activities in ten of the counties. This alternative constitutes the Project and the proposed action, and is described above under “Project Description.”

*No Action Alternative.* Under the no action alternative, OPRS would not construct or upgrade new towers or micro-pole sites, resulting in state law enforcement, public safety and public service agencies, and local communities located in the Pennsylvania’s northern tier to continue to have minimal broadband connectivity. All existing property would remain as it presently exists, and no construction or installation of new equipment would occur. The no action alternative served as the baseline for assessing the impacts of the alternatives.

*Alternatives Considered But Not Carried Forward.* OPRS considered two alternatives to the current Project. First, OPRS considered the replacement of the existing system by constructing an entirely new system. The new system would require construction of 230 towers and 650 micro-cell pole sites, and other potentially environmentally significant activities required to meet utility needs and create sufficient construction and staging areas. OPRS determined that this would not be a feasible alternative because the required activities would be costlier and potentially produce a greater environmental impact. OPRS also considered reducing the proposed construction activities of the Project. However, a reduction in the number of towers or equipment upgrades below the level currently proposed would reduce the system’s performance, reliability, and security and would not provide any benefit to the current underserved or unserved end-users living in Pennsylvania’s northern tier.

These alternatives were considered but eliminated from the EA analysis because they did not meet the purpose and need of the Project due to higher costs, increased environmental impacts, or inadequate system performance.

### **Findings and Conclusions**

The EA analyzes existing conditions and environmental consequences of the Project and the no action alternative within 11 major resource areas. The resource areas analyzed included Noise, Air Quality, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts of the project were also evaluated in the EA.

Implementation of the Project is not likely to result in any recognizable environmental impacts and does not involve any unusual risks or impacts to sensitive areas.

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***Noise***

Minor noise impacts are anticipated as a result of generator operation. The total number of generators will not increase from the current number, and the projected annual generator usage will range only from 36 to 132 hours per generator. Furthermore, the tower sites are not regularly occupied for long periods of time, and residential and commercial structures are situated greater than 500 feet from each tower site. Minor noise impacts are also anticipated as a result of machine usage during construction activities, but these impacts will be short term and not significant. Thus, the Project will have no significant, long-term, direct or indirect impact on noise levels.

***Air Quality***

Minor air emissions are anticipated as a result of generator operation and machine usage during construction activities. However, projected annual fuel usage of the generators ranges only from 100 to 590 gallons per site. Some short term impacts to air quality are anticipated during the construction process, but the Project will not contribute significant amounts of air pollutants or greenhouse gasses to the overall, long-term air quality. OPRS will follow Executive Order 13514 and applicable EPA regulations to further mitigate any adverse impacts associated with air emissions. Minor air emissions are also anticipated as a result of machine usage during construction activities, but these impacts will be short term and not significant. Accordingly, the Project will have no significant direct or indirect impacts on air quality.

***Geology and Soils***

Based on consistency between current site usage and Project activities, and given the limited footprint in each location (i.e., less than 0.5 acres) the Project will have no significant direct or indirect effects on geology or soils.

***Aesthetic and Visual Resources***

The Project is entirely within the right-of-way of existing tower areas or compounds. Towers and equipment shelters in the Project are of similar character to existing improvements. Therefore, the Project will have no direct effects on aesthetics and visual resources.

***Water Resources***

Although hydric soils are located in the vicinity of three of the tower sites, compound expansions and tower construction activities are not expected to adversely impact these soils. In addition, although a wetland area appears to be located within 300 feet of one site, no wetland areas or water crossings were observed on any of the sites, and no U.S. Army Corps of Engineers permits are required for the project as planned. Based on these findings and the limited footprint of each site, the Project will have no significant direct or indirect effect on water resources.

***Biological Resources***

Based on information provided in the Environmental Protection Agency's Endangered Species Protection Program Database, OPRS determined that five federally Threatened and Endangered

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Species may be present within the Project area. These species include the Indiana Bat, the Northeastern Bulrush, the Northern Riffleshell Mussel, the Club Shell Mussel, and the Bald Eagle.

Four agencies have jurisdiction over biological resources in Pennsylvania, the U.S. Fish and Wildlife Service, the Pennsylvania Game Commission, the Pennsylvania Fish and Boat Commission, and the Pennsylvania Department of Conservation and Natural Resources. As part of a Section 7(c) Endangered Species Act review, the Pennsylvania Natural Diversity Inventory (PNDI) contacts these agencies and generates an Environmental Review Receipt that includes the agency responses and instructions to contact one or more agencies when it is determined one or more species may be potentially impacted by a given project.

A PNDI project review for the Project was conducted on May 10, 2010. The Environmental Review Receipt indicated no potential impacts to the above-referenced species.

With respect to potential impacts to migratory birds, towers included in the Project will range in total height from 200 to 350 feet – heights which are lower than towers already in place throughout the Project area and at the targeted tower sites. The towers will be constructed as self-supported lattice towers, and the one existing guyed tower will be removed. The towers will be lit in compliance with Federal Aviation Administration requirements. Furthermore, the sites are not located in wetland areas or other reported bird concentration areas or critical habitats. No evidence of bird strikes was observed at the existing towers during the site visits, and no significant bird strikes issues have been reported in the past.

For these reasons, no significant impacts to biological resources have been identified relative to the implementation of the Project.

***Historic and Cultural Resources***

According to the EDR NEPA Check® report dated May 7, 2010, the Pennsylvania Bureau of Historic Preservation (PBHP) finds that there are no listed or eligible Historic Places within one mile of the Project sites. Additionally, in a letter dated June 17, 2010, the Pennsylvania Historical and Museum Commission determined that no National Register eligible or listed historic or archaeological properties were located in the area of the Project.

Notification of the Project was provided to potentially interested Tribal Historical Preservation Offices (THPO) through the Federal Communication Commission's automated Tower Construction Notification System. As of the date of EA submission, at least twelve of the potentially affected tribes have indicated no objection to the Project and have requested to be notified in the event that culturally significant Native American artifacts are unearthed during construction.

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Should the construction inadvertently encounter buried cultural deposits, OPRS and its contractors will halt construction in that vicinity and immediately contact the staff at the PBHP and interested THPO's to assess the significance of the discovery.

***Land Use***

Landowners have been contacted by OPRS and have agreed to the construction activities. OPRS has issued modified site license agreements to each landowner, documenting the planned construction activities. Nine of the sites will have expanded compound areas to include surrounding areas of agricultural land, periodically mowed grass, vegetation, sparse woodland, and/or woodland. Twelve of the sites are located in state forests, state game lands, or near the Allegheny National Forest. Communication towers are already located at the Project sites, and the equipment shelters are of similar character to existing improvements. For these reasons, the Project is not expected to have significant impacts on land use.

***Infrastructure***

The communications infrastructure will be extended to those locations served by the Project. Other than these improvements, the Project will not have any identifiable impacts to infrastructure (e.g., utilities, waste disposal services, transportation networks) located within the Project area.

***Socioeconomic Resources***

The no action alternative would have an adverse impact to the targeted communities because new and/or improved broadband services would not be provided.

Implementing the Project will offer new and/or improved broadband access to unserved or underserved schools and libraries, government facilities, and medical facilities in Pennsylvania's northern tier. The Project covers 25 counties and would support 327 municipalities and boroughs throughout these counties. All of the municipalities to be served are within a census tract that contains at least one block defined by the Pennsylvania Department of Community and Economic Development (DCED) as an unserved or underserved area. The benefits of the Project are proportionately shared throughout the northern tier's population, and no adverse environmental justice impacts are anticipated.

***Human Health and Safety***

OPRS conducted a review of each Project site against maps of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) sites, Resource Conservation and

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Recovery Act (RCRA) sites, Toxic Substance Control Act (TSCA) sites, and brownfield sites. No such waste sites were identified within the vicinity of the Project area.

All contractors implementing the Project will comply with applicable National Electrical Code, National Fire Protection Association, Occupational Safety and Health Administration, Uniform Building Code, and ANSI/TIA/EIA-222 standards.

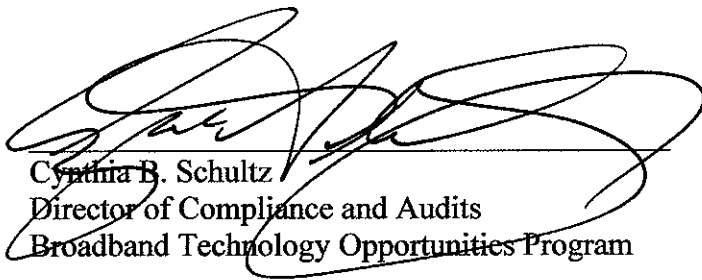
**Cumulative Impacts**

Although cumulative impacts were not specifically addressed in the individual resource impact analysis, reviews by state and federal agencies indicated that any negative impacts associated with the Project will be minimal and temporary in nature, and cumulative impacts will be no greater than those that would occur under the no action alternative. Furthermore, enhanced connectivity in underserved and unserved areas of Pennsylvania's northern tier will have a major positive impact to medical services, education, and local economies over the long-term.

**Decision**

Based on the above analysis, NTIA concludes that with the environmental protection measures specified for implementing the Project, the construction and operation of the Project will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses indicate that the proposed action is not a major Federal action significantly affecting the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:



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Date