

Environmental Assessment for Citizen's Telephone Cooperative

Submitted 17 June 2011

Prepared by:
New River Valley Planning District Commission

Prepared for:
National Telecommunications and Information Administration
Herbert C. Hoover Building (HCHB)
U.S. Department of Commerce / NTIA
1401 Constitution Avenue, N.W.
Washington, D.C. 20230
(202) 482-2000

Environmental Assessment for Citizen’s Telephone Cooperative

Contents

Environmental Assessment for Citizen’s Telephone Cooperative	ii
Executive Summary	vi
Chapter 1: Purpose and Need	1
1.1: Project Need.....	1
1.2: Project Purpose.....	2
Chapter 2: Description of Proposed Action and Alternatives	4
2.1: Proposed Action.....	4
2.1.1: Project Construction Methods	9
2.2: No Action Alternative.....	14
2.3: Alternatives	14
2.3.1: All Buried Construction.....	14
2.3.2: All Aerial Construction	14
2.4: Alternatives Considered but Eliminated from Further Discussion	15
2.4.1: Wireless Broadband Provision.....	15
2.4.2: Satellite Broadband Provision.....	15
2.4.3: Utilizing Existing Copper Infrastructure	15
Chapter 3: Description of Affected Environment.....	16
3.1: Noise.....	16
3.2: Air Quality	16
3.3: Geology and Soils.....	17
3.4: Water Resources.....	17

3.4.1: Surface Water	17
3.4.2: Ground Water	17
3.4.3: Coastal Zones	18
3.4.4: Floodplains	18
3.4.5: Scenic Rivers	18
3.5: Biological Resources	19
3.6.1: Archaeological Resources	21
3.6.2: Architectural Resources	21
3.6.3: Native American Resources	21
3.7: Aesthetic and Visual Resources	21
3.8: Land Use	22
3.9: Infrastructure	22
3.10: Socioeconomic Resources	23
3.11: Health and Human Safety	23
Chapter 4: Analysis of Environmental Impacts	24
4.1: Noise	24
4.2: Air Quality	24
4.3: Geology and Soils	25
4.4: Water Resources	26
4.4.1: Surface Water	26
4.4.2: Ground Water	29
4.4.3: Coastal Zones	29
4.4.4: Floodplains	30
4.4.5: Scenic Rivers	30
4.5: Biological Resources	31

4.6: Historic and Cultural Resources	32
4.6.1: Archaeological Resources	32
4.6.2: Architectural Resources	33
4.6.3: Native American Resources	34
4.7: Aesthetic and Visual Resources	34
4.8: Land Use	35
4.9: Infrastructure	36
4.10: Socioeconomic Resources	38
4.11: Health and Human Safety	38
Chapter 5: Applicable Environmental Permits and Regulatory Requirements	41
5.1: Virginia Department of Transportation Land Use Permit	41
5.2: Locality Work Permit	41
5.3: Joint Permit Application	41
5.4: Railroad Activity Agreement	41
5.5: Building and Electrical Permit	41
5.6: Joint Use Agreements	42
5.7: Rights of Way and Easement Acquisition	42
5.8: Endangered Species Act	42
5.9: National Historic Preservation Act	43
5.10: Clean Water Act	43
5.11: Clean Air Act	43
Chapter 6: List of Agencies and Persons Contacted	45
Chapter 7: Environmental Assessment Preparation	46
Chapter 8: References	47
Appendix 1: Project Maps	50

Appendix 2: Equipment Sites Aerial Photography	75
Appendix 3: Soils Information	78
Appendix 4: Floodplains Maps.....	83
Appendix 5: Wetlands Maps and Impacts	93
Appendix 6: Agency Correspondence	110

Executive Summary

The Citizen's Telephone Cooperative's New River Valley Regional Open Access Network (NRV-ROAN) is a middle-mile proposal to expand existing open-access fiber into adjoining rural counties. The project route is unserved and the project area is currently underserved by open-access, middle mile fiber, and there is no existing continuous fiber. The proposed route will total approximately 186 miles of fiber where the majority of the fiber will be buried using direct bury and boring techniques while using aerial lines to cross waterways and to use existing utility poles. The project will take approximately three years from start to finish and will bring a much needed service to the area to aid in the region's ability to compete in the modern economy.

The service area for the proposed middle-mile project traverses a region composed of seven Virginia counties: Wythe, Pulaski, Floyd, Giles, Montgomery, Roanoke, and Botetourt counties. The route includes eight primary interconnection points; in Wythe County at the Progress Park Industrial Park, Pearisburg in Giles County, in Pulaski County at the Commerce Park near Dublin and at the intersection of Rte 114 and Rte 11 in Fairlawn, in Floyd County at Citizens Central Office near the town of Floyd, in Montgomery County at the intersection of Rte 114 and Rte 460 and at the Falling Branch Industrial Park in Christiansburg, and in Roanoke County near I-81 exit 150 and Rte 220 overpass. The Citizen's Telephone Cooperative project will build fiber to every school in Montgomery county, most schools in Pulaski county, 3 school locations in Giles County, 2 school locations in Wythe county, between the two NRCC campuses, and a diverse route to Radford University. The proposed project will make available broadband services to critical community facilities, including public schools, industrial authority properties, headquarters for state and local emergency services providers, and higher education facilities.

Economic development and future economic growth and stability are a major focus of the proposed Network. The proposed service area directly covers several major economic development facilities including the Pulaski Industrial Park, Pulaski Corporate Center, Cougar Industrial Park, the New River Valley Commerce Park, the New River Valley Competitiveness Center, Falling Branch Industrial Park, Mountain View Industrial Park, Progress Park Industrial Park, and Fairview Industrial Park.

In connecting the proposed facilities as well as underserved and unserved communities, the route was pre-determined as roads and other access routes from point A to point B is limited in rural areas. The fiber will be placed primarily along Virginia Department of Transportation (VDOT), town and city rights-of-way. The proposed route includes a mixture of buried and aerial construction methods. In areas where burying fiber is cost prohibitive or at the request of the locality, the fiber will be placed on existing telecommunications pole structures.

Two alternatives were identified but eventually dismissed as technically unfeasible. These alternatives include all buried construction and all aerial construction. The No Action alternative was ultimately dismissed as it would cause a business as usual outcome with limited broadband infrastructure construction in the region, limiting future economic development and restricting quality of life for region residents.

Most environmental impacts will be short-term during construction. There are anticipated to be no long-term impacts of this project to the environment.

It is desired that the long-term impact of this project will result in the betterment of the socioeconomic resources in the region. With access to better broadband, it is anticipated that the region will attract new industries and jobs to employ their residents and improve overall quality of life.

Following is a chart briefly summarizing the multiple resources in the project area, the affected environment and the associated environmental impact.

Resource Name	Affected Environment	Environmental Impact
Noise	Rights-of-way along projected path and surrounding areas	Temporary increase with no long term increase
Air Quality	Concentrations of pollutants and dust in project area air	Temporary increases in exhaust from vehicles and dust
Geology and Soils	Valley and Ridge Province of the Appalachian Highlands and parts of Blue Ridge Mountains	Minor impact to previously disturbed soils
Water Resources	New River, Roanoke River, and associated branches	Minor soil runoff and pole installation disturbance
Biological Resources	Valley and Ridge Ecoregion	Minor impact with mitigation strategies to avoid habitats
Historic and Cultural Resources	Historic buildings and buried artifacts along rights-of-way	Negligible impacts with buried lines and existing aerial lines
Aesthetic and Visual Resources	Viewshed and architectural resources in project area	Negligible impacts as much will be buried and use existing utility poles when aerial
Land Use	Rights-of-way, commercial, residential, and industrial land	Temporary increase in air pollution and dust, no permanent effect
Infrastructure	Roadways, rights-of-way, and existing utility poles and lines	Minor soil disturbance with burying and replacement of utility poles
Socioeconomic Resources	Residents and businesses in the 7 County area	Increase access to high technology and ability to compete in modern economy
Health and Human Safety	Air quality in project area, auto operators, pedestrians, and construction workers	Temporary and slight elevations in exhaust/dust, as well as danger to pedestrians and construction workers

The overall effect of this project is positive. The environmental impacts are generally short term caused by the construction of the project. These temporary effects will lead to the completion of a rural open

access network that will serve the region's population for many years to come and benefit local businesses, schools, governments and the future residents and businesses of the area.