

Draft Environmental Assessment

North Carolina Highway Patrol VIPER Communications Tower – Stanley (HP-1365)

Stanley, Gaston County, North Carolina

North Carolina Department of Public Safety/
North Carolina Emergency Management

FEMA 2011-SS-00119

October 2013



FEMA

**U.S. Department of Homeland Security
Federal Emergency Management Agency - Region IV
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Acronym List

ACHP -	Advisory Council of Historic Preservation
AGL -	Above Ground Level
APE -	Area of Potential Effects
A/C -	Air Conditioning
BMP -	Best Management Practices
CFR -	Code of Federal Regulations
CJIN -	Criminal Justice Information Network
dBA -	Decibels (Acoustic)
DHS -	Department of Homeland Security
EA -	Environmental Assessment
EPA -	Environmental Protection Agency
FAA -	Federal Aviation Administration
FCC -	Federal Communications Commission
FEMA -	Federal Emergency Management Agency
FERC -	Federal Energy Regulatory Commission
FIRM -	Flood Insurance Rate Map
FONSI -	Findings of No Significant Impact
FPPA -	Farmland Protection Policy Act
HAP -	Hazardous Air Pollutants
HP -	Highway Patrol
HSGP -	Homeland Security Grant Program
HVAC -	Heating, Ventilation, and Air Conditioning
kW -	Kilowatt
MPSCS -	Michigan Public Safety Communications System

NAD 83 -	North American Datum (1983)
NAVD 88 -	North American Vertical Datum (1988)
NEPA -	National Environmental Policy Act
NC -	North Carolina
NCDENR -	North Carolina Department of Environment and Natural Resources
NC SHPO -	North Carolina State Historic Preservation Office
NHO -	Native Hawaiian Organizations
NHPA -	National Historic Preservation Act
NO _x -	Nitrogen Oxide
NPA -	Nationwide Programmatic Agreement
NPDES -	National Pollutant Discharge Elimination System
NPS RTCA -	National Park Service Rivers, Trails and Conservation Assistance
NRHP -	National Register of Historic Places
OSHA -	Occupational Safety and Health Administration
PC -	Public Comment
PIN -	Parcel Identification Number
TCNS -	Tower Construction Notification System
TEP -	Tower Engineering Professionals, Inc.
THPO -	Tribal Historic Preservation Office
USDA -	United States Department of Agriculture
USFWS -	United States Fish and Wildlife Service
USGS -	United States Geological Survey
USPS -	United State Postal Service
VIPER -	Voice Interoperability Plan for Emergency Responders
VOC -	Volatile Organic Compound

1.0 INTRODUCTION

This Draft Environmental Assessment (EA) analyzes potential environmental impacts associated with the construction and operation of the proposed Stanley Voice Interoperability Plan for Emergency Responders (VIPER) Communications Tower within the southern portion of the Town of Stanley, Gaston County, North Carolina using grant funds from the Homeland Security Grant Program (HSGP), administered by the Federal Emergency Management Agency (FEMA) of the U.S. Department of Homeland Security. HSGP is one of over 20 grant programs authorized by Congress and implemented by the Administration to help strengthen the Nation against risks associated with potential terrorist attacks. HSGP requires grantees to comply with all relevant Federal Laws, Executive Orders, and regulations including the National Environmental Policy Act.

FEMA and others prepared this Draft EA in accordance with the National Environmental Policy Act (NEPA) of 1969, the President's Council on Environmental Quality regulations to implement NEPA, 40 Code of Federal Regulations (CFR) Parts 1500-1508, and FEMA's NEPA implementing regulations 44 CFR Part 10. FEMA will use this EA's findings and related Public Comments to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) for the proposed project.

2.0 PURPOSE AND NEED

The Proposed Action's purpose is to meet current radio frequency coverage needs of the North Carolina Highway Patrol in Gaston County and surrounding areas and to promote interoperability of Federal, State, and Local government public safety officials and first responders. According to the VIPER North Carolina State Legislative Report, dated December 2004, when completed the VIPER communications network would provide Federal, State, and Local government entities the following benefits, which are currently unattainable using existing communication systems:

- Seamless voice communication for public safety personnel and first responders
- Seamless interagency communications for public safety personnel and first responders
- Unobstructed interagency communication of Federal, State, and Local law enforcement agencies
- Improved safety of public safety personnel and first responders
- Improved public safety services for the citizens of North Carolina

3.0 ALTERNATIVES CONSIDERED

3.1 NO ACTION

Under No Action, The North Carolina High Patrol's communications infrastructure would neither be developed nor enhanced, current emergency services radio system network requirements would operate less efficiently, which would limit emergency responses. Current communications systems operated by many North Carolina State and Local government agencies have multiple problems because of overcrowding of channels, outdated or unserviceable equipment, inadequate vendor support, unavailable replacement parts, and routine system failures. Routine communication

system failures would require extensive funding to update existing equipment to meet federal mandates that require narrower bandwidths to conserve and more effectively use the existing frequency spectrum. Additionally, the existing communication systems used throughout Gaston County are incompatible between State and Local agencies and first responders, which hinders collaborative efforts and interagency operability. This slows emergency and law enforcement response times, and may increase risks to the general population and public safety first responders.

The No Action alternative serves as the baseline to assess the likely impacts of the other project alternatives. The No Action Alternative would not address the needs of public safety officials, including the North Carolina Highway Patrol, or the citizens of Gaston County.

3.2 PROPOSED ACTION

The North Carolina Highway Patrol's proposed Stanley VIPER Communications Tower would consist of a 420-ft tall self-supporting communications tower surrounded by an irregular shaped security fenced tower compound (37' x 22.75' x 10' x 43' x 8' x 45.83' x 24.75'). The fenced compound would include: an equipment shelter and a stand-alone 80 kW diesel emergency generator on a 5' 6" x 9' 6" concrete foundation pad (Figure 3).

The proposed, strategically located site would significantly expand communications coverage radius for Gaston County and parts of surrounding counties, to provide more reliable interoperable communications for public safety first responders in these areas.

3.3 ALTERNATIVES CONSIDERED AND DISMISSED

Two other action alternatives were considered and dismissed. The Criminal Justice Information Network (CJIN) Governing Board evaluated these alternatives, as well as the Proposed Action, to determine which alternative would most effectively meet State and Local governments' radio communication coverage requirements.

The first action alternative considered and dismissed was a partnership communications system similar to that used by the State of South Carolina. South Carolina's current system operates on the same system as the VIPER system (Motorola SmartZone 4.1). However, Motorola, Inc. owns and maintains South Carolina's system and associated equipment. Due to privatization of South Carolina's system and the amount of funding needed to maintain and expand the system, Motorola, Inc. required user fees of \$75 per radio. Due to high user fees, many local government entities in South Carolina reportedly do not use the system. Therefore, the CJIN Governing Board dismissed this alternative from further consideration for the Stanley project.

The second alternative considered and dismissed was a satellite based communications system. Satellite based systems are beneficial because they are not susceptible to most dangers on or near the earth's surface. However, they have many drawbacks, including limited operation inside buildings or in densely vegetated areas, lengthy delays associated with long signal travel distances, and routine satellite orbit re-alignments and adjustments. The CJIN Governing Board dismissed this alternative from further consideration because the negatives outweighed the positives.

4.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

Stanley Communication Tower Project would be located within the southern portion of the Town of Stanley, Gaston County, North Carolina. Gaston County’s population was 206,086 and Stanley’s population was 3,556 in 2010 (U.S. Census Bureau). The Town of Stanley is near the northern border of Gaston County, and about 18 miles northwest of the City of Charlotte.

The proposed Stanley Communication Tower Project site is located at N 35° 20’ 55.337” latitude and W 81° 05’ 56.455” longitude (NAD 83), at an elevation of 823-ft AMSL (NAVD 88) (USGS map, Figure 2). The project site is shown on a Google Earth aerial photograph (Figure 4).

The Proposed Action project site is a 12.29-acre parcel currently owned by Gaston County Board of Education. The parent property is identified by the Gaston County Tax Assessor’s Office as PIN Number 3578485254.

The proposed Stanley communication tower fenced area would be located in an undeveloped forested portion of the parcel south of Durham Road, west of Dallas Stanley Highway, within the southern portion of the Town of Stanley, NC. Access will be provided by the proposed 20-ft wide gravel access drive which will extend west, through a portion of a maintained grass lawn, from the Springfield Elementary School track, for approximately 190-ft before reaching an existing earthen road and continuing northwest for approximately 112-ft before turning west-northwest and continuing approximately 50-ft through a portion of an undeveloped forest, before turning south for approximately 44-ft until reaching the proposed emergency services compound. Additionally, a proposed 20-ft wide gravel turn-around will proceed west-northwest through a portion of an undeveloped forested area for approximately 60-ft.

The table below summarizes the Proposed Action’s likely environmental impacts. Affected environmental/resources are further discussed after this table; unaffected environmental/resources are not discussed further.

Table 1: Summary of Impacts				
Affected Environment/ Resource	No Impact	No Significant Impact	Significant Impact	Mitigation/Best Management Practices (BMPs)/Other Information
Geology	X			None.
Soils		X		Minor soils impacts from construction. Required soil erosion reduction BMPs would be used. Details in this table’s Water Quality section. The project is consistent with the Farmland Protection Policy Act and no mitigation measures would be required.

Air Quality		X		Dust emissions would be reduced by decreasing vehicle speed and wetting exposed soils. Fuel-burning equipment running times would be minimized and engines would be properly maintained.
Wild and Scenic Rivers	X			No wild or scenic rivers in Gaston County.
Water Quality		X		Soil erosion reduction BMPs will be used, including among others: silt fences, wetting bare soil, and cover with wheat straw during and after construction; and vegetating bare soil after construction.
Wetlands	X			The project site does not have any wetlands.
Floodplains	X			The project site is not located in a floodplain (i.e., Special Flood Hazard Area).
Coastal Resources	X			Not applicable.
Threatened and Endangered Species		X		Two terrestrial threatened or endangered species are known to occur within Gaston County.
Migratory Birds		X		Tower would be less than 450 feet (137 meters) AGL. Tower lighting would be per Federal Aviation Administration (FAA) regulations.
Fish and Wildlife		X		Minor impact on wildlife and fish from minimal disturbance.
Vegetation	X			No notable impact on any vegetation.
Historic Properties	X			In the unlikely event that human remains or cultural or archeological materials and/or artifacts are discovered, all work would stop immediately, and the appropriate authorities (NCSHPO and FEMA) contacted within one working day.
American Indian/Cultural/Religious Sites	X			None known. Incidental discovery requirements below.
Socioeconomic Concerns		X		Improved communications in Gaston County and parts of surrounding counties, to improve public safety first response services.
Environmental Justice	X			No adverse impacts.
Human Health and		X		Improved interoperable

Safety				communications in Gaston County and parts of the surrounding counties, for better public health and safety.
Noise		X		Noise producing activities would be done during normal working hours of 7:00 a.m. to 5:00 p.m. local time.
Public Service and Utilities		X		No notable impact on electrical or communications infrastructure.

4.1 PHYSICAL RESOURCES

4.1.1 Geology and Soils

The Proposed Action site is located on the geologic formation identified as Battleground Formation (Zbt) which is described as quartz-sericite schist with metavolcanic rock, quartz-pebble metaconglomerate, kyanite-sillimanite quartzite, and garnet-quartz rock (Figure 7). Proposed Action site soils include Cecil (CeB2) Series, 2-8% slopes. Cecil series is generally described as well drained soils found on convex summits and interfluves and are formed from saprolite derived from granite and gneiss and/or schist. The soil generally consists of sandy clay loam to a depth of approximately 6-inches before changing over to clay and continuing to a depth of at least 40-inches below land surface (U.S. Department of Agriculture).

This area of Gaston County is in the Southern Outer Piedmont Ecoregion, within the Piedmont Physiographic Province of North Carolina. The Piedmont Physiographic Province comprises a transitional area between the rugged Appalachians Mountains and the flat and broad coastal plain regions. The Piedmont region is a complex mosaic of Precambrian and Paleozoic metamorphic and igneous rock which was once largely cultivated. However the region is now mostly planted in pine or has reverted to successional pine and hardwood woodlands. Soils in the Piedmont region are typically finer-textured than in the coastal plain region (Griffith, 2009).

Proposed Action site grading and excavating would cause temporary soil disturbance and possible soil erosion and sediment-laden surface runoff. Any minor erosion and surface runoff from construction will be further reduced or mitigated by the proper implementation of BMP’s, which may include, among others, wetting soil to reduce erosion and dust, installing silt and sediment control fences, and seeding and wheat straw mulching.

Based on review of USDA soil classification for the Proposed Action, project site soil types are defined as “prime.” Consultation with Kristen May, USDA North Carolina Area Research Soil Scientist, was done to determine if mitigation and regulatory requirements would be required. The proposed site received a total land evaluation score of 97 based upon the Farmland Protection Policy Act (FPPA), Farmland Impact Rating form provided to and completed by Ms. Kristen May. The Farmland Impact Rating form uses land evaluation and site assessment criteria, including among more: NRCS land evaluation, farmland relative value, area of non-urban use, percent of site farmed, distance to urban support services, effects of conversion, and compatibility with existing agricultural uses, to formulate a farmland impact score for proposed projects. Sites receiving less than 160 points do not need further consideration for protection due to the lack of potential adverse

impacts on existing land use activities. Therefore, the project is consistent with the Farmland Protection Policy Act and no mitigation measures would be required.

4.1.2 Air Quality

Existing Conditions

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. The standards have been established to protect the public from potentially harmful amounts of pollutants. Under the CAA, the EPA establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of sensitive populations, such as people with asthma, children, and older adults. Secondary air quality standards protect public welfare by promoting ecosystem health and preventing decreased visibility and damage to crops and buildings. The EPA has set National Ambient Air Quality Standards (NAAQS) for the following five major pollutants: carbon monoxide (CO), ozone O₃, nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and particulate matter. (<http://www.epa.gov/cleanairactbenefits/economy.html>).

Air Quality Index is a numeric score from 1 to 100, based on Environmental Protection Agency (EPA) annual reports. Higher Air Quality Index score indicates lower air quality. The number of ozone alert days is used as an indicator of air quality, as are the amounts of seven pollutants including particulates, carbon monoxide, sulfur dioxide, lead and volatile organic chemicals. According to the U.S. EPA, updated October 25, 2013, the Air Quality Index for Gaston County is 34.

Gaston County has been designated by the U.S. EPA as being in attainment with respect to the NAAQS for the designated criteria pollutants of carbon monoxide, 8-hour ozone, nitrogen dioxide, sulfur dioxide, lead, particulate matter with a diameter of 2.5 microns, and particulate matter with a diameter of 10 microns.

Construction vehicle and equipment activities would be during normal working hours of 7:00 a.m. to 5:00 pm, and would have minor, short-term adverse impacts on air quality at and near the Proposed Action site. However, due to limited duration of vehicle and equipment use, and properly maintaining and operating vehicles and equipment, criteria air pollutants would not increase above accepted levels, resulting in no significant air quality impact.

After construction completion, ambient air quality at and near the Proposed Action site would likely return to previous, normal levels. The Proposed Action would not result in long-term operation of significant emission-generating sources, nor would it significantly alter existing ambient air quality. The proposed 40 to 80-kW emergency diesel powered generator, located within the proposed tower compound, would be an intermittent emission source. Generator frequency and duration of emissions would be limited due to the generator only being used during power outages and routine inspections. Also, Federal regulations limit backup generator use to 500 hours per year. North Carolina Highway Patrol communication tower sites use 40 to 80-kW Generac® Industrial Diesel Generators. According to Generac® product specification sheets, the

generators are classified under Tier III of the EPA Emissions Compliance with an EPA Emissions Engine Reference of JDXL03.0113.

Brendan Davey of the North Carolina Department of Environment and Natural Resources (NCDENR) stated that emergency use generators are regulated under Title II of the Federal Clean Air Act. However, Mr. Davey also indicated there are no Federal Regulations under the Clean Air Act for emergency use generators with a rated capacity of under 590-kW for diesel fired engines (Appendix C).

Emergency generator use is not expected to cause ambient air quality levels to notably increase at the proposed tower site, nor any adverse long term impacts on air quality, due to the limited duration and frequency of generator use. Therefore, there would be no significant impact to air quality from operations-related activities.

4.2 WATER RESOURCES

4.2.1 Wild and Scenic Rivers

Tower Engineering Professional's (TEP) personnel reviewed information at the www.rivers.gov website, which indicates five Designated Wild and Scenic Rivers are located in North Carolina, but none are within Gaston County. Also, the National Park Service Rivers, Trails, and Conservation Assistance (NPS RTCA) program identified no significant streams within Gaston County. The Proposed Action would not impact Wild or Scenic Rivers, or significant streams.

4.2.2 Water Quality

The nearest jurisdictional water body, an unnamed tributary of Mauney Creek, is located about 100-feet south of the proposed tower site. According to North Carolina Department of Environment and Natural Resources (NCDENR), because the Proposed Action site is less than one acre, a NPDES permit is not required. Additionally, a site visit by TEP personnel, Mr. David Brown of the US Army Corps of Engineers, and Mr. Michael Burkhard of NCDENR Division of Water Quality, determined that the proposed project will not impact jurisdictional waters or wetlands and that "there are no jurisdictional features in the proposed footprint of the telecommunication facility." Based upon area topography, distance to the nearest surface water and the US Army Corps of Engineers determination, the Proposed Action would not adversely affect any water body or water quality.

Water quality impacts during tower and compound construction may originate from soil erosion and sediment-laden surface runoff from soil disturbance and exposure associated with temporary material staging locations, site preparation, access road construction, and daily site access for short periods during construction. Also, vehicle and equipment refueling has the potential for spills of petroleum products. All of these activities would be minor and temporary.

Considering the 0.26 acres of disturbance associated with the Proposed Action site and distance to the nearest surface water feature, construction is unlikely to result in significant erosion. Any minor erosion and surface runoff from construction will be further reduced or mitigated by using

BMPs. BMPs for soil erosion control for projects like this typically include silt fencing and/or straw bales to control erosion, minimizing exposed soil needed for each activity, siting staging areas to minimize erosion, replanting as soon as practicable, mulching, using temporary and/or permanent gravel covers, and limiting the number and speed of vehicles on the site.

Chemical, physical, or biological effects to water resources would not violate water quality standards and criteria. Construction would not significantly affect water quality.

Post-construction operations impacts would be limited to minor erosion before the site is fully revegetated or during emergency generator refueling. Herbicide uses may contaminate surface runoff and nearby “receiving” waters when applied to the gravel access road or fenced compound to prevent weed growth. However, the potential for water quality impacts from a petroleum spill from emergency generator refueling or from an herbicide spill or application are minimal due to the limited occurrences annually and the small quantity that would be needed onsite.

BMPs during project construction would continue until the site is fully revegetated. Under the authority of Section 311 (j)(1)(C) of the Federal Water Pollution Act (Clean Water Act) in Title 40, Code of Federal Regulations, Part 112 (40 CFR 112), a facility is not regulated under the SPCC Spill Prevention Plan if the aggregate aboveground storage tank capacity is under 1,320 gallons. According to the Construction Drawings completed by TEP, the NCHP proposes the installation of a diesel fueled emergency generator that will be equipped with an approximately 300-gallon diesel storage tank. The aggregate aboveground storage tank capacity associate with the Proposed Action is not anticipated to exceed 1,320 gallons. Therefore, a SPCC Spill Prevention Plan is not required. Chemical, physical, or biological effects to water resources are not expected to violate water quality standards and criteria. There would be no significant impact to water quality from operations activities.

4.2.3 Wetlands

According to site inspection, the USGS Mount Holly, NC 7.5 Minute Topographic Quadrangle Map (Figure 2), and National Wetlands Inventory Map (Figure 6), the Proposed Action is not located within a wetland, and would not affect any wetlands (“waters of the United States”).

4.2.4 Floodplains

The Proposed Action site is not located in a floodplain, based on FEMA Flood Insurance Rate Map (FIRM) Panel *3710357800J (*Panel Not Printed) (Figure 5). The Proposed Action would not affect floodplains (“Special Flood Hazard Areas”).

4.3 BIOLOGICAL RESOURCES

4.3.1 Threatened and Endangered Species and Critical Habitat

The U.S. Fish and Wildlife Service (USFWS) identified two terrestrial endangered species in Gaston County, North Carolina: the Schweinitz’s sunflower (*Helianthus schweinitzii*) and bog turtle (*Clemmys muhlenbergii*). The Proposed Action site habitat was compared to the species’ habitats. According to the USFWS, Schweinitz’s sunflower is currently found in disturbed

habitats which include roadsides, power line clearings, old pastures, woodland openings, and other sunny or semi – sunny situations. Although potentially suitable habitat for Schweinitz’s sunflower occurs near the project site, TEP personnel observed no occurrences during their visit. According to the USFWS, the bog turtle is currently found in areas of grassy, muddy, or sphagnum moss found in wetland areas such as swamps, marshy meadows, and/or bogs. TEP personnel observed no suitable habitat or occurrences of the bog turtle within or near the limits of the proposed disturbance area for the fenced tower compound.

The USFWS Asheville Field Office concurred with the determination that the Proposed Action would have “no effect” on any federally listed species (USFWS, 4/16/2013, Appendix B).

4.3.2 Migratory Birds

No burrows, nests, rookeries, or other signs of migratory bird species or critical habitat were readily apparent during the TEP site inspection on 9/21/2012. Additionally, the North Carolina Highway Patrol and Gaston County provided the USFWS Asheville Field Office with a letter dated 4-18-13, granting the USFWS access to the Proposed Action site to perform avian mortality studies (Appendix B).

The proposed self-supporting tower would be about 420 feet (128 m) AGL tall, and would have minor short and long-term minor impacts on migratory birds. Impacts to migratory birds could occur during erection of towers, antennas, ventilation, and air conditioning (HVAC) equipment installed using portable cranes. Construction activities along migratory bird pathways would have more potential to adversely affect migratory birds than activities in non-migratory areas. According to the “North American Migration Flyways” map obtained from the www.birdnature.com website, it is the opinion of TEP that the Proposed Action is not located within a known migratory bird pathway.

Temporary use of equipment such as cranes to erect the communication tower, and HVAC equipment and antenna installation, would have minor, short-term effects on migratory birds.

Effects on migratory birds may occur from birds’ collisions with the communication tower, particularly during periods of low visibility, and from tower lighting that may distract or attract some species. Tower design, lighting, and height above surrounding trees; seasons, adjacent land features, and migratory patterns, would also affect the potential adverse effects on migratory birds. Collision probability is difficult to determine programmatically because of the wide range of variables that affect collision potential and the lack of conclusive data on causes of collision. However, a study conducted by Joelle Gehring, Central Michigan University-Biology Department, “Avian Collision Study Plan for the Michigan Public Safety Communications System” (MPSCS), concluded, “Though there are fewer tall towers than towers in the 116 to 146 m AGL height range, towers >305 m (1000.7 feet) AGL are responsible for several times the number of fatalities than shorter towers.”

Adverse impacts on birds resulting from collisions generally occur during foggy or low cloud conditions at lighted towers. Towers supported by guy wires present greater collision risk than freestanding towers or buildings. The proposed self-supporting tower would be about 420 feet

(128 m) AGL tall. Variables such as structure height above surrounding trees, design, lighting, seasons, adjacent land features, and migratory patterns, would affect the potential and degree of adverse impacts on migratory birds.

To reduce impacts to migratory birds the North Carolina Highway Patrol is proposing that the 420-ft self-supporting tower will not require the use of guy wires. Additionally, the proposed structure will not exceed 450-ft AGL in height and according to FCC regulations will not require the completion of an Environmental Assessment regarding impacts to migratory birds. The proposed 420-ft AGL self-support tower will be lit according to FAA lighting style E (L-864/L-865/L-810). Further, due to concerns expressed in the USFWS-Asheville response dated April 16, 2013, the North Carolina Department of Public Safety (NC Highway Patrol) and Gaston County provided the USFWS Asheville Field Office with a letter dated 4-18-13, granting the USFWS access to the Proposed Action site to perform avian mortality studies (Appendix B).

4.3.3 Fish and Wildlife

The project site is inhabited by common small mammals, amphibians, insects, and other species typical in Gaston County. Tower and site construction would include excavating and grading, which could temporarily affect individual common, small mammals, amphibians, insects, and other species.

Proposed Action routine operations and maintenance would include mowing vegetation around the fenced compound and along the access drive edges. Mowing in these areas would maintain vegetation in early ecological successional stages of plant community development and may prevent reestablishment of some plant species. Similarly, normal tower site operations may lead to minor, local habitat degradation and occasional mortality of some wildlife or insect individuals.

After construction completion, potentially adverse impacts on wildlife species sensitive to disturbance could result from temporary noise generated by climate control such as heating and air condition equipment or emergency generator operation. This recurring, temporary low-level disturbance might exclude some wildlife or insect species, or promote colonization by disturbance tolerant wildlife or insect species.

Based on the limited area of disturbance associated with the proposed construction, any impacts would be temporary and limited to individuals. Proposed tower facility construction would not significantly impact wildlife species' overall populations.

4.3.4 Vegetation

The Proposed Action site is located in the Piedmont Physiographic Province. This province consists of once largely cultivated lands which have been planted in pine or has reverted to successional pine and hardwood woodlands. Vegetation in the area consists of white oak, southern red oak, post oak, and hickory with shortleaf pine, loblolly pine, and Virginia pine.

The Proposed Action site is in a portion of an mixed pine/hardwood stand consisting of Virginia pine (*Pinus virginiana*), sweet gum (*Liquidambar styraciflua*), yellow poplar (*Liriodendron tulipifera*), red maple (*Acer rubrum*), and willow oak (*Quercus phellos*).

Construction and Operations Impacts – Mechanized clearing of vegetation in the proposed construction site would be done before the tower facility construction. The mechanized clearing of vegetation would be about 0.12 acres and would have no significant impact on vegetation throughout the remainder of the parent property.

Tower facility routine operations and maintenance would include mowing vegetation around the fenced compound and possibly along the access road edges. Operations-related activities would not significantly impact area vegetation.

4.4 CULTURAL RESOURCES

4.4.1 ACHP Program Comment

NHPA requires the Federal Communications Commission (FCC) to consider impacts that any FEMA-funded communications tower projects, operating with a FCC license, may have on historic properties. On October 23, 2009, the Advisory Council on Historic Preservation (ACHP) issued a Program Comment (PC) for “Streamlining the Section 106 Review for Wireless Communications Facilities Construction and Modification Subject to Review Under the FCC National Programmatic Agreement (NPA) and/or the NPA for Collocation of Wireless Antennas.” According to the ACHP PC, FEMA is not required to conduct and complete its own Section 106 review process (no duplication of effort). Therefore, the Section 106 review conducted as part of the FCC NEPA review is described in this EA and accepted by FEMA. Additional Tribal consultations were completed by FEMA for any Tribes not included in the FCC review though have informed FEMA of their status as an interested party in the specified area.

4.4.2 FCC Nationwide Programmatic Agreement

In March 2005, the FCC implemented a Nationwide Programmatic Agreement (NPA) that established rules for Section 106 consultation with the State Historic Preservation Officers (SHPOs), Tribes (Tribal Historic Preservation Officers (THPOs) or other appropriate tribal official for tribes without a THPO) and Native Hawaiian Organizations (NHOs) that have been historically located in and/or have indicated interest in proposed communications facility sites; and public and local government involvement. To assist with the Section 106 review process, the FCC developed and instituted the Tower Construction Notification System (TCNS) using Form(s) 620/621. Form 620 is used to submit site specific information and records of local government consultations with the State Historic Preservation Officer (SHPO) and for American Indian Tribes with the Tribal Historic Preservation Officers (THPOs) for proposed communications tower facilities. The FCC Form 621 is also used to submit site specific information and records of local government consultations with the SHPO for proposed collocations of antennas on existing communications towers or non-tower structures such as buildings, elevated water tanks, and electric transmission towers.

Under the FCC NPA all Tribes and NHOs who have indicated interest in the area are required to respond within 30 days of receiving notification. If a response is not received within that timeframe, then a second “follow-up” notification is done to obtain response. When no response is received after the “follow-up” notification, then the FCC must be notified and interagency consultations are done with the non-responsive Tribe or NHO.

TCNS was available by Internet at <https://wireless2.fcc.gov/ulscllogin/index.htm> and required an identification number or FRN. Using TCNS, entities input a proposed communications facility’s site specific information, including: location, structure type, and structure height with and without attachments. Information entered into TCNS was then made available to the applicable SHPOs and THPOs who expressed interest in a specified geographic area.

4.4.3 State Historic Preservation Officer

TEP consulted the NC SHPO and NC Office of State Archaeology to view the applicable USGS 7.5-minute topographic quadrangle map (Mount Holly NC) to assess the Proposed Action’s potential significant impacts on architectural, historic, or archaeological resources. Also, TEP contracted Environmental Services, Inc., a cultural resources consulting firm, to perform an Archaeological Evaluation, of the Proposed Action’s potential effects on archaeological resources. The archaeological evaluation concluded that no archaeological resources eligible for inclusion in the National Register of Historic Places (NHRP) would be affected by the Proposed Stanley tower undertaking (action). In addition, the evaluation concluded that no additional archaeological investigation is recommended for the Proposed Action site. Further, TEP received concurrence from Ms. Renee Gledhill-Earley of NC Dept. of Cultural Resources-Environmental Review Coordinator and Ms. Susan G. Myers of NC Dept. of Cultural Resources: Office of State Archaeology-Project Registrar, regarding the proposed project on 4/26/2013 for FCC requirements that included a 1.5 mile visual Area of Potential Effects (APE) (Appendix B).

4.4.4 American Indian/Cultural/Religious Sites

The TCNS system notified seven (7) Native American Indian Tribes that expressed interest in Gaston County, North Carolina. These Tribes were the Eastern Band of Cherokee Indians, Tuscarora Nation, Cherokee Nation, United Keetoowah Band of Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, Shawnee Tribe, and Catawba Indian Nation. TEP used the provided TCNS Tribe list to contact these Tribes a second time, if needed, to obtain additional information on the Proposed Action. All Native American Indian Tribes concurred with the Proposed Action (Appendix B). Two (2) additional Tribes were contacted by FEMA due to a stated interest in the area, which include the Seminole Tribe of Florida and the Seminole Nation of Florida.

TEP sent follow-up notification letters on 4/9/2013 and 4/29/2013 to each Tribe (if needed) as identified by the TCNS system. Sections 4.4.4.1 through 4.4.4.7 summarize these consultations. Sections 4.4.4.8 through 4.4.4.9 summarize consultations conducted by FEMA.

4.4.4.1 Eastern Band of Cherokee Indians

TEP sent a follow-up notification to the Ms. Yolanda Saunooke of the Eastern Band of Cherokee Indians on April 9, 2013 by email. Ms. Saunooke responded by email and through the TCNS system on April 25, 2013 that stated, “the EBCI THPO has reviewed the provided materials including the Phase I archaeological report for the proposed communications tower construction on the Stanley HP-1365 tower located near Stanley, Gaston County, NC. The EBCI THPO concurs with the archaeologists recommendations that no archaeological sites eligible for inclusion on the National Register of Historic Places were encountered during the recent phase I archaeological field survey. It is the opinion of the EBCI THPO that no cultural resources important to the Cherokee people will be adversely affected by the proposed undertaking. As such, the proposed undertaking may proceed as planned. In the event that construction plans change, or cultural resources or human remains are encountered during the construction phase, all work should cease, and this office notified to continue consultation as mandated under Section 106 of the NHPA.” (Appendix B).

4.4.4.2 Tuscarora Nation

TEP provided no follow-up notification to the Tuscarora Nation as the TCNS states “If the Applicant/tower builder receives no response from the Tuscarora Nation within 30 days after notification through TCNS, the Tuscarora Nation has no interest in the participating in the pre-construction review for the site. The Applicant/tower builder, however, must IMMEDIATELY notify the Tuscarora Nation in the event archaeological properties or human remains are discovered. On 3/29/2013, the TCNS system notified all Tribes that indicated interest in Gaston County. The 30-day comment period ended on 4/28/2013. No response has been received by TEP personnel before issuance of this Draft EA and no additional consultation was required.

4.4.4.3 Cherokee Nation

TEP provided a follow-up notification letter to Dr. Richard Allen of the Cherokee Nation on 4/9/2013 by email. TEP received concurrence from the Cherokee Nation by email on 5/9/2013 that stated, “The Cherokee Nation has no knowledge of any historic, cultural or scared sites within the affected area. Should any ground disturbance reveal an archeological site of human remains, we ask that the all activity cease immediately and the Cherokee Nation and other appropriate agencies be contacted immediately.” (Appendix B).

4.4.4.4 United Keetoowah Band of Cherokee Indians

TEP provided a follow-up notification letter to Ms. Lisa Larue-Baker of the United Keetoowah Band of Cherokee Indians on 4/9/2013 by email. TEP received concurrence from the United Keetoowah Band of Cherokee Indians by email on 4/24/2013 that stated, “We have no interest in this site. However, if the Applicant discovers archaeological remains or resources during construction, the Applicant should immediately stop construction and notify the appropriate Federal Agency and the Tribe.” (Appendix B).

4.4.4.5 Eastern Shawnee Tribe of Oklahoma

TEP provided a follow-up notification to Ms. Rebecca Hawkins, Archaeologist, for Robin Dushane, THPO of the Eastern Shawnee Tribe of Oklahoma on 4/29/13 by email. TEP received concurrence from the Eastern Shawnee Tribe of Oklahoma by email on 5/28/13 that stated, “Based on our own information and that which you have provided, we are satisfied that it is unlikely that any significant cultural resources related to our own past occupation of the region will be affected by construction of this tower. We thus will not object to its construction.” (Appendix B).

4.4.4.6 Shawnee Tribe

TEP provided follow-up notification to Ms. Kim Jumper of the Shawnee Tribe on 4/9/2013, by standard U.S. mail. TEP received concurrence from the Shawnee Tribe on 4/25/2013, that stated; “The Shawnee Tribe’s Tribal Historic Preservation Officer concurs that no known historic properties will be negatively impacted by construction of this tower site (see memo line above for TCNS number/s). The Shawnee Tribe’s archives do not reveal any issues of concern at this tower location. In the event that archaeological materials are encountered later during construction, use, or maintenance of this tower location, please re-notify us at that time as we would like to resume consultation under such a circumstance...” (Appendix B).

4.4.4.7 Catawba Indian Nation

TEP provided a follow-up notification to Ms. Wenonah Haire of the Catawba Indian Nation Tribal Historic Preservation Office on 4/9/2013, by standard U.S. mail. TEP received concurrence from the Catawba Indian Nation on 5/2/2013 that stated, “The Catawba have no immediate concerns with regard to traditional cultural properties, scared sites, or Native American archaeological sites within the boundaries of the proposed project areas. However, the Catawba are to be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of this project.” (Appendix B).

4.4.4.8 Seminole Tribe of Florida

FEMA notified Dr. Paul N. Backhouse of the Seminole Tribe of Florida Tribal Historic Preservation Office on 8/15/2013, via email. No consultation response was received.

4.4.4.9 Seminole Nation of Oklahoma

FEMA notified Ms. Nancy Harjo of the Seminole Nation of Oklahoma Tribal Historic Preservation Office on 8/15/2013 via email. No consultation response was received.

4.4.5 Inadvertent Discovery

In the unlikely case that construction activities result in the inadvertent discovery of human remains, cultural, or archeological materials, all ground-disturbing work must immediately stop and all appropriate agencies, such as FEMA, NC SHPO, and American Indian Tribes with an expressed interest in Gaston County, NC will be contacted.

4.5 SOCIOECONOMIC CONCERNS

4.5.1 Environmental Justice

Presidential Executive Order (EO) 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations) requires federal agencies and those receiving federal funds to consider possible highly disproportionate and adverse environmental effects of their actions on minorities and low-income populations.

The Proposed Action would not adversely affect any low-income or minority populations. It would positively affect all segments of the population of Gaston County, by improving public safety and emergency services communications.

4.5.2 Noise

The Proposed Action site is located in a rural portion of Gaston County that has mostly undeveloped forest with low density residential land use. The ambient noise levels associated with rural residential areas are anticipated to reach up to between 35 and 45 dBA (FERC 2002, EPA 1978).

The Proposed Action would temporarily increase local noise. The amount and type of noise would vary depending on the type of machinery used, distance from the construction site and noise source, construction schedule and duration, and site specific, and area specific conditions. Heavy machinery use would have minor, temporary adverse impacts on nearby low-density residences. The nearest residence from the proposed tower site and noise source is about 0.05 miles to the northwest. Construction noise would typically occur during normal working hours of 7:00 a.m. to 5:00 p.m., when noise would be masked by ambient noise levels of the surrounding project area. Noise levels before and after construction would likely drop back to the project area's normal ambient noise levels.

Construction noise levels would be temporary (no more than eight hours during weekdays for a total of about five weeks). Noise levels at 50 feet or more from the Proposed Action site should be under 85 dBA. These noise levels would be partly masked by trees and other vegetation around the site. Ambient noise levels caused by traffic from nearby public roads should also partly mask the construction noise levels. Thus, construction noise levels would not be significant.

The project area's ambient noise levels would return to normal after the proposed construction is finished. Temporary operations-related noise increases would be caused by the Proposed Action's two air conditioning (A/C) and heating units and emergency generator. The A/C units regulate the equipment shelter's internal temperature and the diesel fueled emergency generator provides electric power to the facility, as needed, in emergency situations when normal electrical power supply is interrupted.

The Proposed Action would include use of a 40 to 80-kW diesel fueled emergency generator that produces noise levels of about 80 dBA at 23 feet from the source. This generator would not increase site ambient noise levels due to use only during power outages and routine maintenance

and tests. Federal regulations limit emergency generator use to 500 hours per year. Thus, the Proposed Action would not have significant long-term noise impacts.

4.5.3 Traffic

The Proposed Action will be accessed utilizing Dallas Stanley Highway (NC 275) before turning west onto Durham Road. Dallas Stanley Highway is a two-lane state highway that becomes Main Street approximately 0.10 miles north of its intersection with Durham Road. Durham Road is a two-lane asphalt road that is bordered by residential and commercial land uses.

The Proposed Action would have minor traffic impacts if appropriate planning and implementation actions are taken. Traffic would occasionally, moderately increase near the project site during construction. Existing roads would be used as much as possible during construction and during normal operations. No impacts to the current road conditions are anticipated with the Proposed Action. Additionally, traffic flow and control during construction would meet all local and State traffic requirements. Proposed Action construction and operations traffic would be occasional, temporary, and not significantly affect local traffic.

4.5.4 Public Service and Utilities

The Proposed Action area has electrical and communications utilities along Durham Road. Existing utilities along Durham Road would be used to provide electrical and telephone services for the Proposed Action.

Construction and operations would not cause major power shortages or require major system changes. Impacts on utilities would not be significant.

4.5.5 Public Health and Safety

The Proposed Action would be located in a forested portion of an approximately 12.29-acre parcel with controlled access. Based on the specified elevation of the proposed antennas specified elevation (>10 meters AGL) and because the site will be located in a restricted area with fencing and appropriate signage, the proposed facility is not expected to threaten public health or safety and has been determined to be categorically excluded from further assessment of radio frequency exposure per FCC NEPA regulations that can be found in 47 CFR Section 1.1307(b), 1.1307(b-Table 1), and 1.1310.

Also, implementation of worker safety rules, per Occupational Safety and Health Administration safety and health standards, would establish a uniform set of safety practices and procedures to protect workers. Construction related impacts to human health and safety would not be significant.

Under the authority of Section 311 (j)(1)(C) of the Federal Water Pollution Act (Clean Water Act) in Title 40, Code of Federal Regulations (CFR), Part 112 a facility is not regulated under the SPCC Spill Prevention Plan if the total aboveground storage tank capacity is under 1,320 gallons.

The Proposed Action operations would not have a significant adverse impact on human health and safety. Operations would have substantial positive impact on public health and safety from improved public safety and emergency communications for Gaston County and parts of surrounding counties.

4.6 CUMULATIVE IMPACTS

Cumulative impacts are an individual action's environmental impacts when combined with the environmental impacts of other actions in the past, present, and foreseeable future (about 20 years). Cumulative impacts result from less than significant impacts individually, but collectively significant impacts that occur over time and apply to a given resource type or area of concern.

Currently, the North Carolina Highway Patrol has built 63 of the proposed 119 new tower sites for the VIPER Network. According to FCC Antenna Structure Registration (ASR) System information, there are currently 4,620 registered towers in North Carolina, including the 63 "active" VIPER network towers. After VIPER network system completion, with construction of the last 56 new towers, the number of registered communications towers, if no other providers build new towers and no towers are damaged or destroyed, would be 4,676. The proposed 119 VIPER network towers, including the 56 towers still to be built would increase the number of communications towers in North Carolina about 1.2%. The Proposed Action's purpose is to meet the North Carolina Highway Patrol's current radio frequency coverage needs in Gaston County and parts of surrounding counties; and the need is to better protect the lives, property, environmental quality, and quality of life for over 206,000 people.

The Proposed Action would not have any significant, adverse cumulative impacts on any resource described in Section 4 of this Draft EA. Any construction or operation related impact on any resource would be minor and temporary.

5.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

TEP contacted the Gaston County Historic Preservation Commission, The Brevard Station Museum, Town of Stanley Planning and Zoning, and the Town of Stanley Mayor regarding the Proposed Action by USPS mail on 4/9/2013, inviting them to be a consulting party regarding any potential impact to historical or archaeological resources in the area. TEP received no response to those notices as of the issuance of this Draft EA. TEP also published a Public Notice in the "Gaston Gazette" newspaper on 4/11/2013, regarding any impacts the Proposed Action may have on historic resources within the APE. TEP received no responses to the Public Notice or letters requesting comments as of the issuance of this Draft EA.

6.0 CONCLUSIONS

The Proposed Action would require construction of a new radio transmitting and receiving, self-supporting tower over 200 feet AGL, thus this site specific FEMA HSGP NEPA EA was required. The Proposed Action would not involve any unusual risks or impacts to resources discussed in

Section 4 of this Draft EA. Under the No Action Alternative, there would not be complete interoperable communications capability in Gaston County, North Carolina and parts of surrounding counties. Existing public safety interoperable communications gaps would persist, and adversely impact public health and safety.

In accordance with 47 CFR Section 1.1307 (a)(1) through (8), an evaluation was made to determine if any of the listed FCC special interest items would be significantly affected if a tower and/or antenna and associated equipment control cabinets were constructed at the Proposed Action site. No FCC special interest items were identified that would require an FCC NEPA EA (Appendix B).

If there are no significant, validated negative Public Comments about this Proposed Action's impacts, as described in this Draft EA, by the end of this Draft EA's Public Comment Period, then this Draft EA will become the Final Environmental Assessment and FEMA Region IV will issue a "Finding of No Significant Impact" (FONSI) for this Proposed Action.

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