Environmental Assessment for the Bethune Elementary School Communications Facility, Bushwood, St. Mary's County, Maryland

Lead Agency:

Department of Commerce
National Telecommunications and Information Administration

Applicant:

Maryland Department of Information Technology (DoIT), Networks Division

June 2010

ENVIRONMENTAL ASSESSMENT (EA)

FOR THE BETHUNE ELEMENTARY SCHOOL COMMUNICATIONS FACILITY

BUSHWOOD, ST. MARY'S COUNTY, MARYLAND

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ABSTRACT:

This document constitutes an Environmental Assessment prepared pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. Probable environmental impacts and mitigation measures have been identified and comments addressed for alternatives to the Bethune Elementary School Site Communications Facility at 22975 Colton Point Road in Bushwood, St. Mary's County, Maryland. The project would consist of the construction of a 348-foot three-legged self-supporting lattice tower, and the installation of two 12 x 38-foot equipment shelters supported by a backup generator and associated liquid propane fuel tank contained within a 7,500 square foot fenced compound.

Construction of the proposed project is analyzed in this EA. In addition, as required by NEPA, the No-Action Alternative is studied in detail.

FINDING:

This Environmental Assessment (EA) concludes that the Bethune Elementary School Site Communications Facility in Bushwood, St. Mary's County, Maryland, is not a major Federal action significantly affecting the quality of the human environment. Therefore, an Environmental Impact Statement will not be prepared.

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1 INTRODUCTION

1.1 INTRODUCTION

An Environmental Assessment (EA) analyzing the environmental impacts from the construction of the Bethune Elementary School Site Communications Facility at 22975 Colton Point Road in Bushwood, St. Mary's County, Maryland was prepared for the Department of Commerce, National Telecommunications and Information Administration (NTIA). The project is funded by the Public Safety Interoperable Communications (PSIC) Grant Program. The goal of the PSIC Grant Program is to improve nationwide interoperable communications among public safety agencies.

In February of 2009, the NTIA prepared a Programmatic Environmental Assessment (PEA) for the PSIC Grant Program. The PEA examines the direct, indirect, and cumulative environmental impacts associated with the proposed implementation of the PSIC Grant Program. A programmatic environmental document is prepared when an agency is proposing to carry out a broad action, program, or policy. The PEA examined the project types proposed for funding under the PSIC Grant Program, which were organized into the following five groups:

Transmission and Receiving Sites. Upgrade existing transmission and receiving sites and construct new sites to address all voice, data, video, and interoperability requirements. Projects will include the upgrade or new construction and installation of communications towers, equipment shelters, generators and backup power systems, repeaters, gateways, voice over internet protocol, microwave backhauls, fiber optic cable, antennae, and access roads to sites. This will also include equipment and activities associated with channel assignments and shared and mutual aid channels. Coordinating antenna interference reviews is also part of this activity. The average site is approximately 0.5 acres. Sites using guyed towers require additional land. New or retrofitted transmitting and receiving sites would be constructed or retrofitted to: update equipment to new frequencies that would improve and expand voice coverage; add data and video capabilities; and facilitate reliable interoperable communications among first responder organizations.

Operations and Response Centers. Construct, remodel, or retrofit existing fixed-structure dispatch centers or first-responder facilities to take advantage of new communications infrastructure to increase responder capacity. Centers potentially would be incorporated within an existing building with interior space for radio, telephone, and internet communications equipment, dispatch computer consoles, gateways, the transmitting and receiving of equipment and channels, backup power generators, and fuel storage. The centers would be served by utility lines. Centers can vary substantially in average size on the basis of a number of factors, including collocation of functions (i.e., multiple emergency operations functions housed in a single facility versus a single agency) and planned capacity of the center. Most sites would be expected to be approximately 1 acre in size, with some as large as 5 acres. Most projects for operations and response centers are expected to be upgrades (renovations) or expansions to current centers in existing buildings, which would: utilize new frequencies and sources; increase the volume of calls

that can be handled; expand the coverage area of emergency responders connected through the system.

Mobile Infrastructure. Acquire and deploy nonfixed infrastructure equipment and incident
command equipment. This would include mobile command vehicles and trailers, cell-on-wheels (COW), cell-on-light-truck (COLT), and site-on-wheels (SOW) equipment, portable towers and antennae, mobile gateways, mobile data terminals, and very small aperture terminals (VSAT).

Mobile/Portable Equipment. Acquire and deploy subscriber units and similar equipment. This would include mobile and handheld radios and satellite phones, radio caches, and battery
packs.

Planning, Training, and Exercises. Conduct single- and multi-event activities, including both classroom-based and field-based training, to prepare first responders and support personnel to use interoperability communications equipment in a coordinated and efficient manner.

The PEA determined that transmitting and receiving sites involving new towers 200 or more feet above the ground, guyed towers, and ground disturbances of one acre or more all require that a site-specific Environmental Assessment (EA) be prepared. The proposed Bethune Elementary School Site Communications Facility falls within the category of Transmission and Receiving Sites involving a new tower of over 200 feet in height.

1.2 PURPOSE OF THE ACTION

The purpose of the proposed action is to construct a communications facility including a 348-foot, three-legged self-supporting lattice tower and two 12 x 38-foot equipment shelters supported by one backup generator and associated fuel tank contained within a fenced compound.

The proposed action is to strengthen the overall local and regional communications capabilities by providing adequate connectivity and duplicity of communications over the local, regional, and state-wide area. This project will improve existing voice, data, video, and interoperability requirements by constructing a new transmitting and receiving site to improve and expand voice coverage; add data and video capabilities,; and facilitate reliable interoperable communications among first responder organizations.

The planned action is part of a state-wide 700MHz communications system that will link several large state agency users (e.g., Maryland State Police, Maryland Department of Transportation, Maryland Transportation Authority and the Department of Natural Resources) as well as multiple smaller agencies (e.g., Maryland Department of the Environment, Department of Juvenile Services, and the Department of Public Safety and

Correctional Services). The infrastructure will also be available to local jurisdictions. Currently these agencies use a multiplicity of communications systems.

1.3 NEED FOR THE ACTION

Maryland is geographically diverse state with some high population density areas, which results in coverage and capacity challenges. As a result, Maryland's first responders are currently unable to use radio communications across all agencies and jurisdictions. The planned extension of the Public Safety Intranet (PSINET) will link first responders and local agencies to one another, and eliminate coverage gaps throughout the State. PSINET will allow local emergency management services (EMS) personnel to speak directly with physicians at emergency departments. The proposed facility will fill in local coverage gaps and to ensure PSINET connectivity in areas previously lacking adequate emergency communications coverage.

The project will serve the needs of several state and local agencies for emergency communication services, including the county police, county fire department and local Emergency Medical Services, as well as Maryland State Police, Statewide Emergency Medical Services Radio, Maryland State Highway Administration, and Department of Natural Resources Police.

1.4 SCOPING

The CEQ defines scoping as an early and open process for determining the significant issues related to the proposed action (40 CFR 1501.7). Scoping is usually the first direct contact between proponents of a proposed action and the public. It is an ongoing process that occurs during planning for preparation of an environmental document, which may consist of meetings, telephone conversations, and written comments. Scoping has the following specific, but limited objectives:

- to identify the affected public or agency concerns;
- to facilitate an efficient environmental document preparation process through assembling cooperating agencies, assigning data collection and analysis tasks, and scheduling appropriate reviews;
- to define the issues and alternatives that will be examined in detail in the environmental document while simultaneously devoting less attention and time to issues which cause no concern; and
- to save time in the overall process by helping to ensure that the environmental document adequately addresses relevant issues.

In accordance with NEPA, a scoping process was conducted to aid in determining the scope of issues to be addressed and to identify the significant issues related to this action.

Scoping for this project involved discussions between DoIT and the project team to identify the key issues that might prove to be of concern to DoIT and all potential interested parties. Preliminary input from environmental and planning agencies aided in the selection of potential sites and the eventual selection of the build alternative. Areas of concern included the selection of feasible sites for the proposed communications facility, availability of the sites, potential impacts involved at each site, and potential concerns of interested parties.

1.5 ENVIRONMENTAL ASSESSMENT PROCESS, PROCEDURES, AND SCHEDULE

NEPA is intended to help public officials make decisions based on an understanding of environmental consequences, and to take actions that protect, restore, and enhance the environment. Decisions should be made based on accurate scientific analysis, expert agency comments, and public scrutiny of readily available environmental information. Federal agencies are obligated to follow the provisions of NEPA to identify and assess reasonable alternatives to the proposed action that will avoid or minimize any adverse effects upon the quality of the human environment before proceeding with the proposed action.

The preparation of this EA is required as a result of PSIC Grant funding through the NTIA. Communications tower construction and the operation of communications systems are regulated by the Federal Communications Commission (FCC). Under FCC rules implementing NEPA (47CFR 1.1301-1.1311) the proposed action would normally be categorically excluded from further environmental processing. However, despite the exemption from the EA requirement under FCC rules, PSIC funding requires the preparation of this EA.

In order to determine the level of NEPA analysis to be performed for the PSIC-funded facility, NTIA examined potential impacts on the natural and human environment. The impacts considered were based on reasonably foreseeable changes resulting from implementation of the proposed action. Issues that could affect the environment and/or the proposed project were identified, including:

- potential impacts to visual and aesthetic resources due to the height and location of the tower;
- potential impacts to the natural environment;
- potential visual impacts to historic resources within the Area of Potential Effects (APE);
- availability and capacity of utilities;

Based on a review of these issues and because significant impacts are not anticipated, NTIA elected to prepare an EA for the proposed communications facility project. This EA takes a hard look at the probable impacts based on the reasonably foreseeable consequences of the proposed action and recommends measures to mitigate impacts, as appropriate.

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2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section describes alternatives for meeting the purpose and need of the proposed action. The existing environment associated with this site is described in **Chapter 3, Affected Environment,** and potential impacts associated with construction on the site are described in **Chapter 4, Environmental Consequences**.

2.1 DESCRIPTION OF THE PROPOSED ACTION

The location of the proposed communications facility is 22975 Colton Point Road in Bushwood, St. Mary's County, Maryland. The proposed facility will consist of a 348-foot three-legged self-supporting lattice tower and two 12 x 38-foot equipment shelters supported by one backup generator and associated LP fuel tank. Current plans indicate that the facility will be contained within an approximately 7,500 square foot fenced compound within the confines of property under the jurisdiction of the St. Mary's County Board of Education. The planned undertaking will involve construction of a gravel access road from of the existing driveway at the rear of the school to the telecommunications facility. The gravel road will be approximately 340 feet long and 12 feet wide. Utilities necessary for the operation of the facility will be extended from the school to a pad-mounted transformer at the entrance to the compound. No other construction-related activities are anticipated at this time (Appendix A: Site Plans).

The site location is on a property that contains the Bethune Elementary School. The subject property is located on the northwest side of Colton Point Road, northeast of Maddox Road, southeast of Bushwood Road and southwest of Sugar Hole Road. The location of the proposed telecommunications facility is in the southwestern portion of the subject property in the open field. The project area is located in a rural setting; with the exception of a small commercial area in the central part of Bushwood, the surrounding area is generally characterized by agricultural uses and undeveloped wooded land. The elevation for the proposed site location is at approximately 100 feet amsl. Topographically, the site location is on an upland area. The area surrounding the subject property contains a rolling topography. The property is currently developed land, and contains an education center, a parking lot, a large field, and a paved driveway that extends around the eastern portion of the property from Colton Point Road (Photos 1-6).

Total ground disturbance including utility connections for the project is estimated to be under 12,000 square feet, or 0.28 acres. The fenced-in area is estimated to be approximately 7,500 square feet, or about 0.17 acres. The planned utility connections will be made by direct burial cable and will consist of a trenched line about 450 feet in length. The generator will utilize LP fuel and will only be operated during power outages. Power requirements for the facility will be a maximum of 400 amps. Each equipment shelter will be supplied with a 200 amp service and the tower will consume a maximum of 20 amps for lighting. Radiated Radio Frequency Electromagnetic fields will be well within permissible limits as per FCC OET bulletin 65 of August 1997.

Photo 1: View of the proposed site location facing west.

Photo 2: View of the ground surface and existing staking at the site location.

Photo 3: View of the treeline facing north from the proposed site location.

Photo 4: View of the open field facing east from the proposed site location toward the school.

Photo 5: View along the proposed access road facing northeast from the proposed site location.

Photo 6: View of the front of the Bethune Elementary School on the property.

Construction activities at the site will include a crew of between five and ten construction workers. Project duration will be a maximum of 180 days, with a maximum of 40 days of heavy equipment use. Construction equipment used at the site will include an excavator, dump trucks, concrete trucks for concrete foundations, and a crane for erection of the tower after site work. There will be no staging area for this project. Contractors are required to store all equipment and materials off-site.

2.2 ALTERNATIVES GIVEN DETAILED CONSIDERATION

Two alternatives are analyzed in detail in this EA: the No-Action Alternative and the Build Alternative - the Preferred Alternative (Figure 2-1). Potential sites were initially located through a review of area planning documents, property tax maps, and aerial photographs. Sites initially investigated but dismissed from further consideration were dismissed due to a number reasons including the potential for extensive vegetation removal, the existence of nearby wetlands, and site access issues. The build alternative finally selected had the advantage of already being under County ownership.

2.2.1 ALTERNATIVE 1 - NO-ACTION ALTERNATIVE

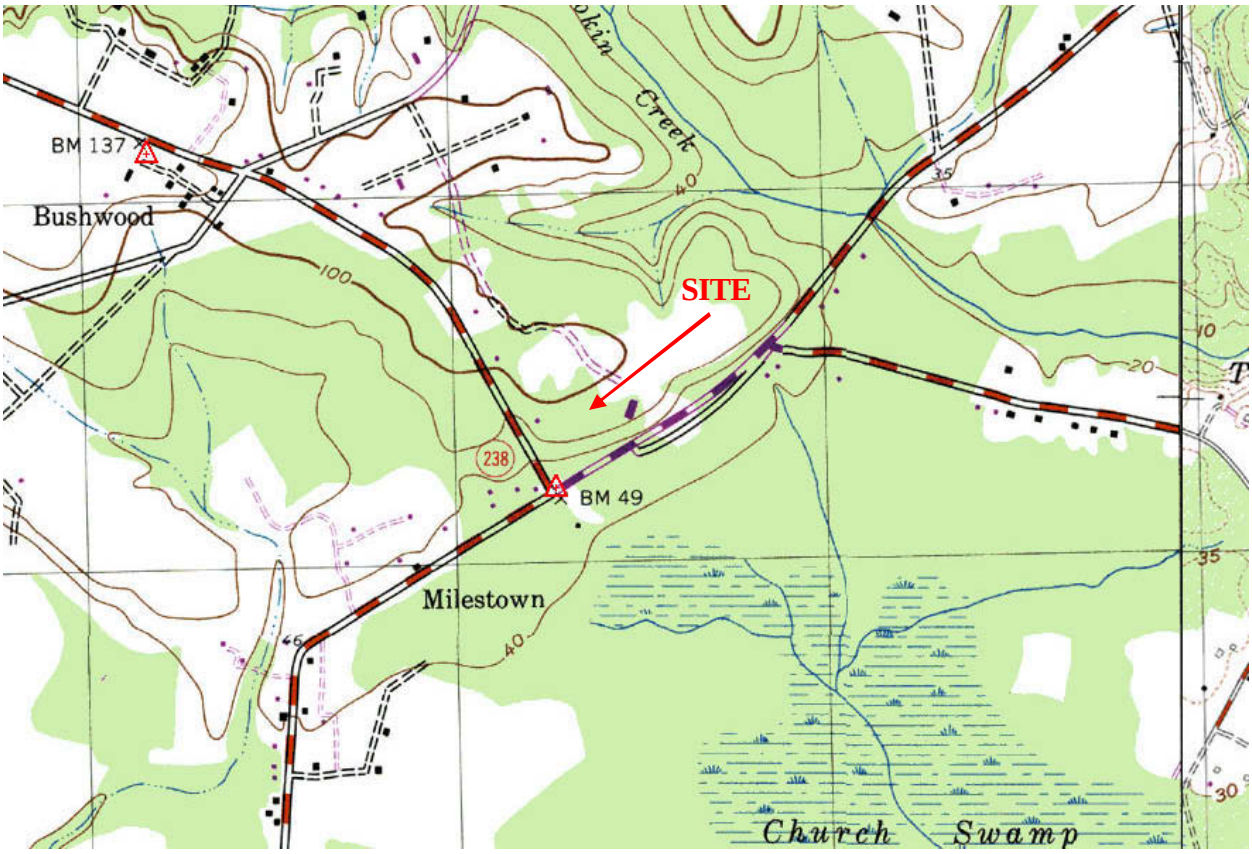
Under the No-Action Alternative, the State of Maryland would not utilize the site studied in this EA for the proposed communications facility. The existing Bethune Elementary School property would remain as it presently exists.

2.2.2 ALTERNATIVE 2 - PSIC-FUNDED COMMUNICATIONS FACILITY

Under Alternative 2, NTIA proposes to provide funding to the Maryland Department of Information Technology, Networks Division (DoIT) to construct a 348-foot three-legged self-supporting lattice tower, two 12 x 38-foot equipment shelters and one backup generator and associated LP fuel tank contained within a 7,500 square foot fenced compound.

The project site is located on an approximately 19.84-acre property under the jurisdiction of the St. Mary's County Board of Education that is used for administrative offices. The building does not regularly accommodate school children and is used for the school's Information Technologies (IT) Department and training center. The location of this proposed telecommunications facility is along the edge of a grassy field and tree line to the west of the Bethune School building. The access road will be constructed along the northern tree line on the property. The proposed access road will be approximately 12 feet wide and 340 feet long from the Bethune School main building.

The construction of a new tower is proposed as there is no potential for the co-location of antennas on existing towers or other structures. The distance to the nearest telecommunications tower is approximately 1.00 mile to the northeast. There is a need



SOURCE: USGS Bushwood, Maryland Quadrangle

Figure 2-1: Proposed Bethune Elementary School Communications Facility: Site Location Map

for a specifically state-owned facility to contain the variety of antennas and equipment proposed for the enhancement of state-wide communications systems.

The tower will be constructed with sufficient capacity to accommodate additional future co-locations of equipment serving public communications networks. The Build Alternative is the alternative that meets the Project Need by facilitating the planned extension of the Public Safety Intranet (PSINET) which will link first responders and local agencies to one another, and eliminate coverage gaps throughout the State. The proposed facility is an essential element of the PSINET and will fill in coverage gaps to allow first responders and local Emergency Medical Services (EMS) personnel to speak directly with physicians at emergency departments.

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Table 2-1: Comparison of Alternatives

Impact Topic	Alternative 1 - No Action Alternative	Alternative 2 - PSIC-Funded Communications Facility
Air Quality	No impacts would occur at the existing facility.	Construction on the site would have negligible short-term, long-term, and cumulative impacts.
Noise	No impacts would occur at the existing facility.	Construction on the site would result in minor, adverse, short-term, direct noise impacts. No indirect or cumulative impacts to noise levels would occur.
Threatened and Endangered Species	No impacts would occur at the existing facility.	The proposed action was reviewed by the USFWS and the Maryland DNR (see Appendix B: Agency Response Letters). The project reviews concluded that the proposed project is not anticipated to have any impact to threatened or endangered species. Therefore no, direct, indirect, or cumulative impacts would occur.
Geology, Topography and Soils	No impacts would occur at the existing facility.	Under the proposed action, erosion of soils during construction may lead to sedimentation in local streams. Because an erosion and sedimentation plan would be followed, direct and indirect adverse impacts from soil erosion are anticipated to be minor and short-term. No cumulative impacts are expected.
Human Health and Safety	Minor to moderate direct, indirect, or cumulative adverse impacts to human health and safety would occur.	Alternative 2 will fill in coverage gaps to allow local emergency management services (EMS) personnel to speak directly with physicians at emergency departments. This would result in long-term, direct, beneficial impacts to human health and safety. The cumulative effect of the combined PSIC Grant Program improvements will result in moderate, long-term, beneficial, cumulative impacts to human health and safety.
Community Facilities and Services	No impacts would occur at the existing facility.	The project will allow local Emergency Management Services (EMS) personnel to speak directly with physicians at emergency departments, therefore improving communications and response times for local emergency services. Therefore, moderate direct, short and long-term beneficial impacts to community facilities and services are expected. No indirect impacts are anticipated. The cumulative effect of the combined PSIC Grant Program improvements will result in moderate, long-term, beneficial, cumulative impacts to community facilities and services.

Impact Topic	Alternative 1 - No Action Alternative	Alternative 2 - PSIC-Funded Communications Facility
Land Use Planning and Zoning	No impacts would occur at the existing facility.	Construction of the communications facility would be consistent with land use plans and zoning. No direct, indirect, or cumulative impacts to land use planning or zoning would occur.
Economy and Employment	No impacts would occur at the existing facility.	Alternative 2 would have minor, short-term, beneficial, direct impact on economy and employment. No indirect or cumulative impacts would occur.
Taxes and Revenue	No impact would occur at the existing facility.	Increased sales transactions for the purchase of materials and supplies would generate some additional revenues for local and state governments, which would have a beneficial impact on taxes and revenue. Construction workers employed for the construction period are assumed to be currently employed, and residing and paying taxes in the local St. Mary's County area. This would result in short-term, minor, beneficial impacts to taxes and revenue. No indirect or cumulative impacts would occur.
Aesthetics and Visual Resources	No impacts would occur at the existing facility.	Moderate, adverse, long-term, direct impacts to aesthetics and visual resources would occur. No indirect or cumulative impacts would occur.
Archeological Resources	No impacts would occur at the existing facility.	The likelihood for archeological remains to exist within the proposed project APE is low. Therefore, no direct, indirect, or cumulative impacts will occur, resulting in a finding of "no historic properties affected" at the completion of the Section 106 review process (see Appendix B: Agency Response Letters).
Historic Resources	No impacts would occur at the existing facility.	Since there are no historic structures within the proposed project APE, no direct, indirect, or cumulative impacts will occur, resulting in a finding of "no historic properties affected" at the completion of the Section 106 review process (see Appendix B: Agency Response Letters).
Telecommuni-cations	No impacts would occur at the existing facility.	There will be moderate, beneficial, long-term, direct impacts to public communications service. There will be moderate to major, beneficial, long-term, cumulative impacts on public communications systems.
Electric Power and Gas	No impacts would occur at the existing facility.	Negligible, adverse, short–term, direct impacts to utilities are expected during construction. The increased demand for electrical power would have negligible, adverse, long-term, direct impacts.
Transportation	No impacts would occur at the existing facility.	No direct, indirect, or cumulative impacts to transportation will occur.

Impact Topic	**Alternative 1 - No Action Alternative**	**Alternative 2 - PSIC-Funded Communications Facility**
Waste Management	No impacts would occur at the existing facility.	A negligible, adverse, short-term, direct impact on county landfills would occur. No indirect impacts to waste management are anticipated. The proposed facility will not foster any new development and since it is unmanned, will not generate wastes. Therefore, no cumulative impacts are anticipated.

3 AFFECTED ENVIRONMENT

Chapter 3, Affected Environment, provides a description of the current natural, social, economic, and cultural environments at the proposed location of the communications facility. The purpose of this section is to provide sufficient information on the existing conditions to evaluate the potential impact to the human environment from the proposed action.

This section is divided into two sections: 1) Impact Topics Dismissed from Further Analysis, and 2) Impact Topics Analyzed in Detail. Impact topics that have been dismissed from further consideration are topics that would either not be affected or would be affected negligibly by the alternatives evaluated in this document. Therefore, these topics are briefly discussed in this section of the EA and then dismissed from further consideration or evaluation. Negligible effects are effects that are localized and immeasurable at the lowest level of detection.

Impact topics analyzed in detail are divided into four sections:

- Section 3.2.1, Natural and Physical Environment
- Section 3.2.2, Social Environment
- Section 3.2.3, Cultural Environment
- Section 3.2.4, Infrastructure and Waste Management

3.1 IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

The non-controversial topics listed below would have no effect, a negligible effect or in some specific cases, a minor effect for each alternative evaluated in this document. For specific definitions of negligible and minor, please refer to the Environmental Consequences Section; however, in general, negligible effects are effects that are localized and immeasurable. Topics that are readily apparent to have either no, negligible, or minor effect are briefly discussed in this section of the Environmental Assessment and then dismissed from further consideration or evaluation.

Water Resources

Water resources include groundwater and surface water. The proposed site is located on an open grassy field. According to the National Wetland Inventory (NWI) map and the U.S. Geological Survey (USGS) map there are no wetlands or water resources within or adjacent to the project area. Church Swamp is located approximately 1,200 feet to the southeast of the proposed facility location. A branch of Tomakokin Creek is located approximately 1,500 feet to the northeast of the proposed facility location (Figure 3-1). The project is small in nature and is not expected to impact water resources. Therefore, Water Resources was dismissed as an impact topic (USFWS 2009a).

Source: MERLIN Online GIS Mapping (http://www.mdmerlin.net/index.html)

Figure 3-1: Mapped Wetlands in the Site Vicinity

Floodplains

Executive Order 11988 requires federal agencies to evaluate the potential effects of any actions it may take in a floodplain and to ensure that plans consider flood hazards and floodplain management needs.

The floodplain of concern is usually the 100-year floodplain, which is defined as the area subject to a one percent or greater chance of flooding in any given year. For certain critical actions, which are those actions that even a slight chance of flooding would be too great, the 500-year floodplain is the area of concern. The 500-year floodplain is defined as an area subject to a 0.2 percent chance of flooding in a given year.

According to the FEMA Flood Insurance Rate Map (FIRM) for St. Mary's County, (Panel Number 2400640142E), the proposed communications facility is located entirely within Flood Zone C (Figure 3-2). Zone C refers to areas of minimal flooding (FEMA, 1985). Therefore, Floodplains was dismissed from further consideration.

Vegetation and Wildlife

The proposed communications facility is to be located entirely within a grassy field within the Bethune School property. The surrounding area contains rolling hills, undeveloped wooded lands, and agricultural parcels. The proposed project is less than one acre in scale, and therefore, is not subject to the Forest Conservation Act. No trees will be removed for the construction of the communications facility. The proposed tower meets the criteria established in the *Interim Guidelines for Recommendations on Communication Tower Siting, Construction, Operation, and Decommission* (USFWS 2000) and will not pose a threat to migratory birds or other wildlife. As there will be no impact to vegetation and wildlife, this topic was dismissed from further consideration.

Hazardous Waste

Waste generation is currently limited to waste produced by the Bethune Elementary School operations. The nature of the project, which is the construction and operation of an unmanned communications facility, will not generate any hazardous wastes. Such general wastes as those generated during construction of the project are not regulated or defined as hazardous, special, or potentially dangerous and do not require special handling and disposal due to potential hazards it possesses to either personnel or the environment. Therefore, Hazardous Waste was dismissed from further consideration.

Population and Housing

As of 2009, Bushwood, Maryland has a population of 1,079 people. Since 2000, it has had a population growth of 16.09 percent. The median home cost in Bushwood is $274,290. Home appreciation the last year has been -10.20 percent (http://www.bestplaces.net). The proposed communications facility will have no impact to populations or housing. Therefore, Population and Housing was dismissed from further consideration.

Source: MERLIN Online GIS Mapping (http://www.mdmerlin.net/index.html)

Figure 3-2: Floodplains in the Site Vicinity

Water & Sewer

The proposed project will have no impacts to Water and Sewer. This topic was dismissed from further consideration.

Meteorology/Climate

Draft guidelines provided by the Council on Environmental Quality (CEQ) suggest that the following two aspects of global climate change should be considered in the preparation of environmental documents:

- The potential for the federal actions that impact global climatic change, e.g., increased emissions of chlorofluorocarbons (CFCs), halons, or greenhouse gases; and

- The potential for global climatic change to affect federal actions, e.g., feasibility of coastal projects in light of projected sea level changes.

Based upon the design and utilization of the proposed project as addressed by this environmental document, the proposed action is not expected to result in the significant emission of CFCs, halons, or greenhouse gases.

The National Academy of Sciences estimates that a doubling of carbon dioxide concentration which could occur by the middle of this century, would lead to global warming of 1.5 to 4.5 degrees Celsius (3 to 8 degrees Fahrenheit). The proposed action is expected to be unaffected by a potential climatic change in this range. Studies by the U.S. Environmental Protection Agency and others have estimated that along the Gulf and Atlantic coasts, a one foot rise in sea level is likely by 2050 and could occur as soon as 2025. Within the next century, a two foot rise is most likely, but a four foot rise is possible. The proposed action would occur on land situated approximately 100 feet above mean sea level and would not be affected by sea level rise in this range.

The proposed action will have no measurable impacts on, and will not be affected by, the climatology of the area or have any significant impact on neighboring properties. Therefore, this topic was dismissed from further consideration.

3.2 IMPACT TOPICS ANALYZED IN DETAIL

3.2.1 NATURAL AND PHYSICAL ENVIRONMENT

3.2.1.1 Air Quality

Air quality became a national concern in the mid-1960s, leading to the passage of the Air Quality Act in 1967. The Act (now referred to as the Clean Air Act) and subsequent amendments have established procedures for improving conditions, including a set of National Ambient Air Quality Standards (NAAQS).

The U.S. Environmental Protection Agency is directed to set levels for pollutants in order to protect the public's health. The NAAQS have been adopted for six pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, ozone, particulate matter, and lead. A system of monitoring stations has been established across the country to measure progress in meeting these goals. If an area is found to exceed the allowable concentrations, local officials are required to develop a plan for achieving air quality that meets the standards. Impacts to air quality are expected to be primarily from construction activities related to the proposed project.

Federal actions, including the construction of the communications facility, must be in conformity with the provisions of the Clean Air Act. General conformity requirements are applied to certain Federal actions within air quality non-attainment and maintenance areas. The General Conformity rule can be considered to contain three major parts: applicability, procedure, and determination. Based on the following evaluation, it has been determined that the anticipated emissions would be sufficiently small that no further action is required.

In the case of ozone, the precursor emissions of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) are considered. Once these emissions have been evaluated, a determination can be made with respect to the applicability of the rules. If the total emissions are below *de minimis* levels, the rules are not applicable.

According to the Maryland Department of the Environment, the Washington DC Forecast Region of Maryland, (including St. Mary's County), has had no Unhealthy for Sensitive Groups (USG) days in October 2009. For all of 2009, USG Air Quality Index (AQI) levels or above occurred on 1.3 percent of the days (MDE 2009).

3.2.1.2 Noise

Noise is traditionally defined as any unwanted sound. Magnitudes of noise whether wanted or unwanted, are usually described by sound, i.e., a dynamic variation in atmospheric pressure. The human auditory system is sensitive to fluctuations in air pressure above and below the barometric static pressure. These fluctuations are defined as sound when the human ear is able to detect pressure changes within the audible frequency range.

Noise regulations have been established at all levels of government, from local municipalities to Federal agencies. Although, there is great variation in the controls established by different municipalities, the Federal guidelines provide widely accepted standards, which are reasonably consistent among the various agencies.

Congress passed the Noise Control Act in 1972, specifically authorizing EPA to promulgate regulations establishing maximum permissible noise characteristics for products manufactured for interstate commerce. In addition, EPA was directed to publish information about the kind and extent of effects of different qualities and quantities of noise, and to define acceptable levels under various conditions to

protect public health and welfare. This information was then used by other Federal agencies in establishing criteria applicable to their programs.

Sensitive receptors for noise impacts in the project area include the Bethune School, located approximately 300 feet east of the proposed site, and the 7th District Community Park, located about 600 feet north of the proposed project site. Currently the primary source of noise in the project area is from automobile and truck traffic on Colton Point Road. Impacts from noise are expected to be primarily from construction activities associated with the proposed project.

3.2.1.3 Threatened and Endangered Species

The footprint of the planned communications facility is on a graded grassy area west of the main building of the Bethune School. The proposed location for the communications facility at the Bethune Elementary School site was reviewed by the USFWS and the Maryland DNR (see Appendix B: Agency Response Letters). This review also addressed potential issues with migratory bird collisions. Additional telephone inquiries were made to the Maryland DNR in St. Mary's County. No species of concern were reported for the project area (DNR, 2009).

The project reviews concluded that the proposed project is not expected to have any impact to threatened or endangered species.

3.2.1.4 Geology, Topography, and Soils

Soils present at the proposed sites cut and fill land. No other information was provided in the United States Department of Agriculture web soil survey. The site location is on a cleared and graded grassy field. (Figure 3-3).

The Bethune School property contains approximately 10% (1.98 acres) paved asphalt area; 50% (9.92 acres) wooded land; and 40% (7.93 acres) grassy land. Soil disturbances are expected to be minor and minimal soil loss would occur from disturbance or indirectly via wind or water. Best management practices will be developed and implemented, such as implementing an erosion and sedimentation control plan using silt fences or hay bales, re-vegetating disturbed soils (e.g. part of proposed landscaping activities) to prevent soils from eroding and dispersing off-site.

3.2.1.5 Human Health and Safety

Human Health and Safety is closely related to all aspects of the environment and is the primary reason for any environmental study. This impact topic is intended to cover any impacts to the human health and safety that may not have been addressed or fully examined by other impact topics in this EA. It is expected that the proposed communications facility will have a beneficial impact on human health

Source: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Figure 3-3: USDA, Natural Resources Conservation Service Soils Map

and safety as it would increase communications and improve response times for emergency services.

3.2.2 SOCIAL ENVIRONMENT

3.2.2.1 Community Facilities and Services

The following section describes community facilities and services in the vicinity of the Bethune Elementary School site.

Parks, Recreation, Community Facilities, and Open Space

The Seventh District Community Park is located approximately 100 yards north of the Bethune School property. No other parks, recreational, or community facilities are located within 1/2-mile of the project area.

Churches

The nearest church is the All Saints Episcopal Church located at 21569 Oakley Road, approximately 1.5 miles from the project site.

Schools

The project is located on the site of the Bethune Elementary School.

Emergency Services

Fire and EMS Stations

Seventh District Volunteer Fire Department
P.O. Box 206
Avenue, MD 20609
(301) 769-3600

Police Stations

St. Mary's County Sheriff
23150 Leonard Hall Drive
Leonardtown, MD 20650
(301) 475-8008

Leonardtown Police
23200 Leonard Hall Drive
Leonardtown, MD 20650
(301) 475-8955

Medical Care Facilities

St. Mary's Hospital
25500 Point Lookout Road
Leonardtown, MD 20650
(301) 475-8981

Neighborhood Associations

There are no neighborhood associations within the vicinity of the project area.

3.2.2.2 Land Use Planning and Zoning

The project site is located on the grounds of the Bethune Elementary School, and is under the jurisdiction of the St. Mary's County Board of Education. The Bethune School is a parcel of 19.84 acres and is zoned "exempt commercial."

3.2.2.3 Economy and Employment

The Naval Air Station Patuxent River, employs 22,200 military, civilians and defense contractors. St. Mary's County's 2,020 businesses employ 27,800 workers; an estimated 40 of these businesses have 100 or more workers. Businesses include BAE Systems, Boeing, Lockheed Martin, L-3, Northrop Grumman, Wyle and many others. Non-defense employers include the Paul Hall Center for Maritime Training and Education, St. Mary's Hospital and St. Mary's College of Maryland. The Lexington Park area has been designated a State Enterprise Zone (http://www.co.saint-marys.md.us/decd/decdtemplate.asp?content=datacentercontent.asp).

The unemployment rate in St. Mary's County, MD was 3.7 percent in 2008 and 4.3 percent in 2009 (http://somd.com/news/headlines/2009/9305.shtml). Per capita income in 2007 was $35,120 for St. Mary's County. Median selling price for homes in 2007 was $321,200 (http://www.co.saint-marys.md.us/decd/decdtemplate.asp?content=datacentercontent.asp).

3.2.2.4 Taxes and Revenue

There is no County sales tax rate. The State of Maryland sales tax rate is 6.00%. In St. Mary's County, the real property tax is $0.857 per $100 of assessed value. The state's property tax rate is $0.112 per $100 of assessed value. Personal income tax in St. Mary's County is assessed at 3.00 percent (Maryland State Department of Assessments and Taxation; Comptroller of the Treasury http://www.dat.state.md.us/sdatweb/taxrate.html).

3.2.2.5 Aesthetics and Visual Resources

The proposed project would be located within the Bethune Elementary School property. The site is on relatively flat ground which is at the edge of a cleared field. The surrounding land is largely wooded. Sensitive receptors for visual and aesthetic resources in the project area include the Bethune School, located approximately 300 feet of the proposed site, and the 7th District Community Park, located about 600 feet north of the proposed project site.

3.2.3 CULTURAL ENVIRONMENT

Tower construction is regulated by the Federal Communications Commission. On October 5, 2004, the Federal Communications Commission released a Report and Order, FCC 04-222, adopting the Nationwide Programmatic Agreement (NPA) regarding the Section 106 National Historic Preservation Act Review Process, signed by the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (NCSHPO) and amending Section 1.1307(a)(4) of the Commission's rules, 47 C.F.R. §1.1307(a)(4).

3.2.3.1 Area of Potential Effects

Area of Potential Effects for Direct Effects

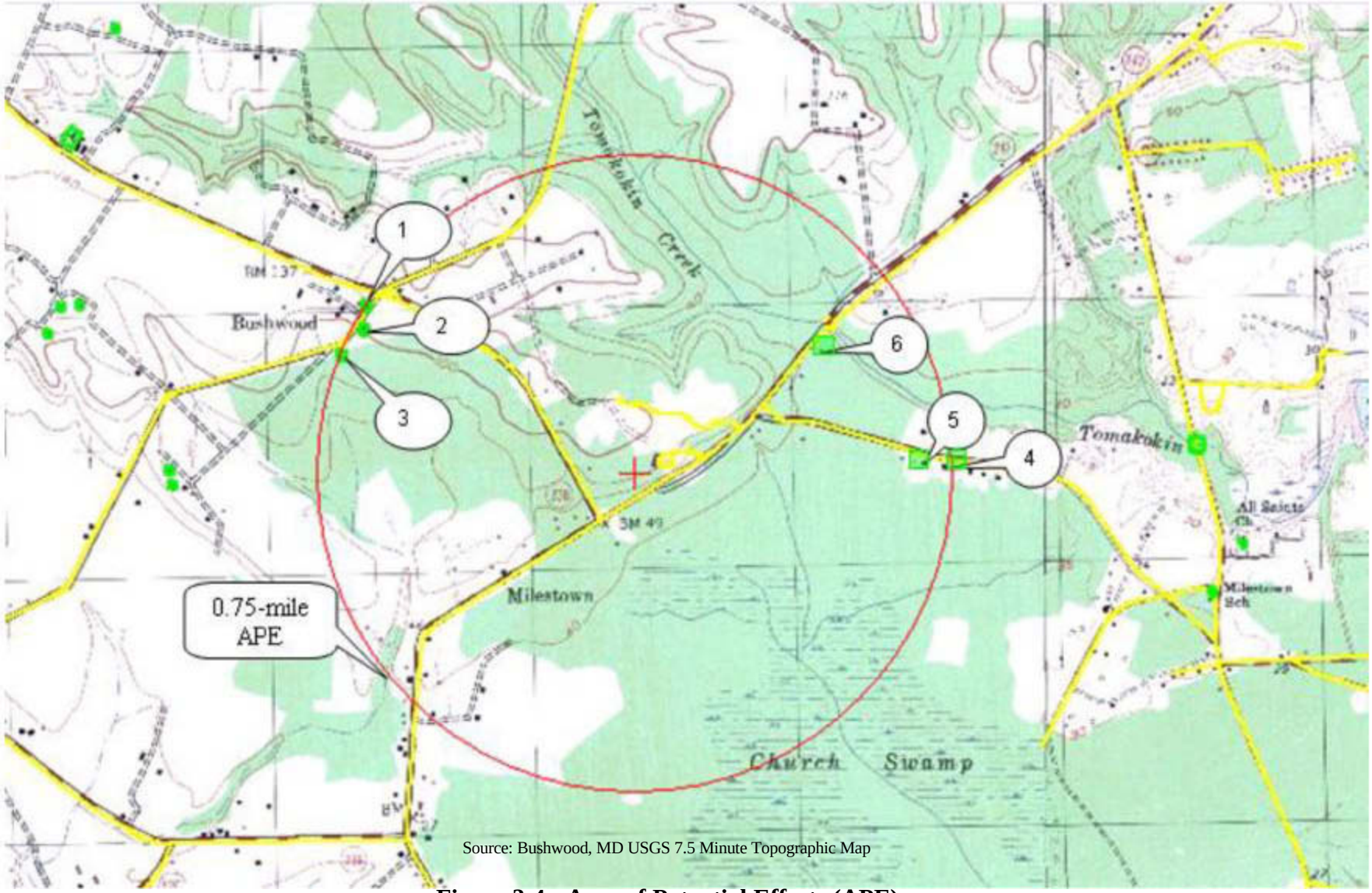
The APE for direct effects consists of the area directly impacted by the construction of the communications facility. The APE for direct effects is confined to the area(s) of ground disturbance (including the footprint of the facility, construction staging areas, utility connections and access easements) with respect to the potential impact to archeological resources, and to the subject property with respect to above-ground resources.

Area of Potential Effects for Visual Effects

The NPA governing new tower construction indicates that, unless otherwise established through consultation with the SHPO/THPO, the presumed APE for visual effects relative to the construction of new facilities is a) 0.5-mile radius for towers 200 feet or less in overall height, b) 0.75-mile radius for towers greater than 200 but no more than 400 feet in overall height; or, c) 1.5-mile radius for towers greater than 400 feet in overall height. Based on the proposed structure height of 348 feet above ground surface for the communications tower, a 0.75-mile radius was used for purposes of project review established by the NPA (Figure 3-4).

3.2.3.2 Archeological Resources

A review of the archeological site files on record at the Maryland Historical Trust indicates that no previously recorded archeological sites occur within the APE for



Source: Bushwood, MD USGS 7.5 Minute Topographic Map

Figure 3-4: Area of Potential Effects (APE)

Key

1: Bushwood Post Office (SM 608)
2: Ellis Butler Grist Mill (SM 609)
3: Ellis Butler Tennant House (SM 610)
4: Young House Ruins (SM 777)
5: House at 38189 Sugar Hole Road (SM 778)
6: House at 23192 Colton Point Road (SM830)

direct effects. The project area has not been previously subjected to archeological survey. The *Maryland Historical Trust Guidelines and Resources for FCC Applicants Section 106 Submittals, March 2005* notes that in general, the Trust holds the opinion that archeological field survey is not likely to be warranted for the majority of undertakings in Maryland covered by the NPA. Due to the project's scale, it is not considered to be a significant threat to archeological resources. Such sites are not generally reviewed by the Maryland Historical Trust. The proposed location for the communications facility was reviewed by the Maryland Historical Trust. The project review concluded that the proposed project will have no effect on archeological resources (Appendix B: Agency Response Letters).

3.2.3.3 Historic Resources

Section 101(b)(4) of the National Environmental Policy Act of 1969 (P.L. 91-190), as amended, requires the Federal government to coordinate and plan its actions to, among other goals, "preserve important historic, cultural and natural aspects of our national heritage..." Council of Environmental Quality (CEQ) implementing regulations require that Federal impacts to historic and cultural resources be included as part of the NEPA process.

The *Maryland Historical Trust Guidelines* and *Resources for FCC Applicants Section 106 Submittals, March 2005*, and the NPA define historic properties as:

- Properties listed in the National Register of Historic Places;
- Properties formally determined eligible for listing by the Keeper of the National Register;
- Properties that the SHPO certifies are in the process of being nominated to the National Register;
- Properties previously determined eligible for listing as part of a consensus determination of eligibility between the SHPO and the Federal Agency;
- Properties listed in the Maryland Inventory of Historic Properties that the Trust has previously evaluated and determined to be eligible for the National Register.

The methodology for the identification and evaluation of historic resources included a field survey of existing buildings and structures within the Area of Potential Effects (APE) that were previously inventoried by the Maryland Historical Trust. The file review at the Maryland Historical Trust identified no properties in the APE that have been listed in or formally determined eligible for listing in the National Register of Historic Places. Six inventoried properties were identified within the 0.75-mile APE for indirect (visual) effects. These were: Bushwood Post Office

(SM 608), Ellis Butler Tennant House (SM 610), Ellis Butler Grist Mill (SM 609), Young House (SM 777), House, 38189 Sugar Hole Road (SM 778) and House, 23192 Colton Point Road (SM 830).

The proposed undertaking was reviewed by the Maryland Historical Trust under the terms of the NPA. The project review concluded that the proposed project will have no effect on historic properties, and that no further consultation under Section 106 of the National Historic Preservation Act is required prior to project implementation (Appendix B: Agency Response Letters).

3.2.4 INFRASTRUCTURE AND WASTE MANAGEMENT

The following sections describe the infrastructure, including utilities, transportation, and waste management, at the site.

3.2.4.1 Transportation

The St. Mary's County Regional Airport, also known as Captain Walter Francis Duke Regional Airport, is a public airport located in St. Mary's County, Maryland, four miles northeast of the central business district of Leonardtown.

Highways in the vicinity include MD Route 238 and MD Route 242 which is adjacent to the project site. Rail service (CSX) is located adjacent to the site parallel to MD 135 within the project area.

3.2.4.2 Telecommunications

A wide variety of telecommunications companies provide wireless and land-line services to the area. The local telephone carrier is Verizon Communications-MD. Long distance carriers include AT&T, T-Mobile, Sprint and over 250 additional carriers and resellers of Wide Area Telephone Service (WATS) and Mobile Tele-Systems (MTS). There are multiple Internet service providers.

3.2.4.3 Electrical Power and Gas

Local electrical service is supplied by Southern Maryland Electric Cooperative. Gas is provided by Washington Gas.

3.2.4.4 Waste Management

No wastes are expected to be generated by the project except for those generated during construction activities associated with the project. The work will be performed by a contractor who will be required to comply with all waste management regulations. Wastes generated during construction will consist of general waste which are not regulated or defined as hazardous, special, or potentially dangerous and which do not require special handling and disposal due to

potential hazards to either personnel or the environment. General waste typically includes a varying, non-homogeneous mixture of paper goods, corrugated items, plastics, food scraps, glassware, metal waste, and other miscellaneous organics and inorganics.

All waste generated during construction will be managed in accordance with applicable Federal, state, and local regulations. General construction waste will be collected and transported by the contractors. The waste may or may not be disposed of locally. As the proposed communications facility is unmanned, no waste will be generated as a consequence of its operation.

The primary landfill for St. Mary's County is the St. Andrews Landfill. The County has recently acquired approval from the Maryland Department of the Environment to construct and operate a municipal solid waste processing facility & transfer station to serve as the primary means to manage solid waste generated in St. Mary's County. The transfer station will be located at the St. Andrews Landfill property and open to commercial waste haulers (http://www.co.saint-marys.md.us/dpw/).

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4 ENVIRONMENTAL CONSEQUENCES AND MITIGATION

This chapter contains a discussion of the environmental consequences, or impacts, associated with the No-Action Alternative and the Build Alternative of the proposed PSIC-funded communications facility.

Impact Assessment

This section includes an analysis of direct, indirect, and cumulative impacts. Direct impacts are caused by the action and occur at the same time and place. Indirect impacts are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Cumulative impacts are the impacts on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7 – 1508.8).

Potential impacts are described in terms of:

- *intensity*, the effects are negligible, minor, moderate, or major;
- *type*, the effects are beneficial or adverse;
- *duration*, the effects are short-term, lasting through construction or less than one year, or long-term, lasting more than one year; and
- *context*, the effects are site-specific, local, or even regional.

The thresholds of change for the intensity of impacts are defined as follows:

- *negligible*, the impact is localized and not measurable or at the lowest level of detection;
- *minor*, the impact is localized and slight but detectable;
- *moderate*, the impact is readily apparent and appreciable; or
- *major*, the impact is severely adverse and highly noticeable.

This section also includes information on measures to mitigate the impacts at the end of each impact topic.

4.1 NATURAL AND PHYSICAL ENVIRONMENT

4.1.1 AIR QUALITY

The following section discusses the impacts to air quality for the No-Action Alternative as well as the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts – Direct impacts from a project on ambient air quality can be caused by construction activities and the operation of the facility. Air quality pollutants can also be generated by the operation of stationary water and space heating equipment, and facility maintenance activities.

Indirect Impacts – Indirect impacts on air quality would occur from traffic generated by the facility.

4.1.1.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the proposed action would not be undertaken. Consequently, there would be no impact to the area's air quality. Therefore, no direct, indirect, or cumulative impacts to air quality would occur.

4.1.1.2 Alternative 2 - PSIC-Funded Communications Facility

Direct, Indirect, and Cumulative Impacts

Impacts to air quality are expected to be primarily from construction activities related to the proposed project An additional potential emission source from the communications facility includes emergency power generation equipment.

Construction Activities

Construction activities will include the use of an excavator, dump trucks, concrete trucks, and a crane for tower erection. Project duration will be a maximum of 180 days, with a maximum of 40 days of heavy equipment use. Construction activities are expected to have little impact, with emissions limited in both magnitude and duration. According to EPA, these operations are of greater significance in areas of non-attainment for particulates, which does not include St. Mary's County.

Emergency Power Generation Equipment

Power generation equipment would generate emissions. However, power will normally be provided from the electrical distribution system present at the site. Power generation equipment would only be used in the advent of a power outage to

the electrical grid and would not constitute a significant impact in either magnitude or duration.

Conclusions of General Conformity Review

This review has considered the precursors of ozone, VOCs, and oxides of nitrogen (NOx). It is estimated that emissions would fall below the *de minimis* levels established under General Conformity. Consequently, the General Conformity procedures are not applicable to the proposed action. Best management practices will be followed to minimize effects of the construction on air quality. Construction on the site would therefore have negligible short or long-term, direct, indirect, and cumulative impacts.

Mitigation Measures for Air Quality

As impacts to air quality would be negligible, no mitigation measures are proposed for Air Quality. Construction activities will be coordinated with the school in order to avoid construction and potential impacts to air quality when children are present.

4.1.2 NOISE

This section analyzes the potential for increased noise levels under the No-Action Alternative and the Build Alternative for the implementation of the proposed communications project. Noise modeling was not conducted as part of this study.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts can occur as a result of construction noise generated during site development and permanent site-induced noise during operations.

Indirect Impacts - Indirect impacts may result from the incremental noise from area roadways due to the additional traffic generated by the proposed action.

4.1.2.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, no construction would take place. No change in the site's noise levels would occur because of this alternative. Therefore, no direct, indirect, or cumulative noise impacts would occur.

4.1.2.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Temporary increases in noise levels within the immediate vicinity of the project area would occur during construction. The magnitude of the impact would depend on the specific types of equipment used, the construction methods employed. Construction activities will include the use of an excavator, dump trucks, concrete trucks, and a crane for tower erection. Project duration will be a maximum of 180 days, with a maximum of 40 days of heavy equipment use. The facility will be un-manned and will therefore generate negligible noise after construction. Forested area surrounds the site, which is in a sparsely populated area of the county. Sensitive receptors for noise impacts in the project area include the Bethune School, located approximately 300 feet east of the proposed site, and the 7th District Community Park, located about 600 feet north of the proposed project site. Noise impacts to these receptors will be short-term and would likely be minor in magnitude. Therefore, a minor, adverse, short-term, direct impact would occur.

Indirect Impacts

No indirect impacts are expected to affect noise levels as a result of the proposed project.

Cumulative Impacts

There are no other actions now or in the foreseeable future, which, combined with the construction of the communications facility, would have a cumulative impact on noise levels.

Mitigation Measures for Noise Impacts

As noise impacts would be short term and minor, no mitigation measures are proposed. Best management practices will be followed to minimize effects of the construction on noise levels Construction activities will be coordinated with the school in order to avoid construction and potential impacts to noise levels when children are present..

4.1.3 THREATENED AND ENDANGERED SPECIES

This section analyzes the potential impacts to threatened and endangered species for the No-Action Alternative and the Build Alternative for the implementation of the proposed communications project.

4.1.3.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, no construction would take place. Therefore, no direct, indirect, or cumulative impacts to threatened and endangered species would occur.

4.1.3.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts, Indirect and Cumulative Impacts

The footprint of the planned communications facility is on a graded grassy area west of the main building of the Bethune School. The proposed location for the communications facility at the Bethune Elementary School site was reviewed by the USFWS and the Maryland DNR (see Appendix B: Agency Response Letters). The response letter from the USFWS also addressed potential issues with migratory bird collisions. The proposed tower meets the conditions established in the *Interim Guidelines for Recommendations on Communication Tower Siting, Construction, Operation, and Decommission* (USFWS, 2000):

a. No towers are located in a nearby radius to allow for co-location.
b. The tower will be lighted with dual, medium intensity light systems, the minimum required to comply with FAA circular K1/7460.
c. No guy wires will be used in the construction of the tower.
d. The tower footprint and equipment compound are of a minimal size to prevent habitat fragmentation.
e. A significant number of breeding, feeding, or roosting birds are not known to habitually use the tower area.
f. The tower will be constructed to allow for additional co-locations.

Additional inquiries were made to the Maryland DNR in St. Mary's County. No species of concern were reported for the project area (DNR, 2009).

The project reviews concluded that the proposed project is not expected to have any impact to threatened or endangered species.

Mitigation Measures for Threatened and Endangered Species

In accordance with the recommendations of the USFWS, the following mitigation measures will be implemented. No conflicts between FAA and USFWS requirements are anticipated.

- The tower will be self-supporting and not require guy wires.
- The tower will not be located in or near wetlands or other known bird concentration areas, or in an area with a high incidence of fog, mist, and low ceilings.

- The tower will have the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA and only white strobe lights will be used at night. Lights will be the minimum number, minimum intensity, and minimum number of flashes per minute (*i.e.*, longest duration between flashes) allowable by the FAA.

- The tower and associated facilities will be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint".

- The tower will be designed structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users.

- Best management practices will be followed to minimize effects of the construction of the facility on Threatened and Endangered Species.

4.1.4 HUMAN HEALTH AND SAFETY

The following section discusses the impacts to Human Health and Safety for the No-Action Alternative and the Build Alternative.

4.1.4.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, no construction of the PSIC-funded communications facility would take place. This would result in continued lack of coverage in first response and emergency communications. This lack of coverage would have the potential to have minor to moderate direct, indirect, or cumulative adverse impacts to human health and safety.

4.1.4.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Alternative 2 will fill in coverage gaps to allow local emergency management services (EMS) personnel to speak directly with physicians at emergency departments. This would result in long-term, direct, beneficial impacts to human health and safety.

Indirect Impacts

No indirect impacts are expected to affect human health and safety as a result of the proposed project.

Cumulative Impacts

The construction of the proposed communications facility is part of a state-wide communications system for public services. The entire program includes upgrades to existing transmission and receiving sites, construction of new telecommunications towers, construction and remodeling of existing fixed-structure dispatch centers or first-responder facilities, improvement of a mobile infrastructure, planning, training, and exercises, and other activities. The cumulative effect of these projects will result in moderate, long-term, beneficial, cumulative impacts to human health and safety.

Mitigation Measures for Human Health and Safety

Mitigation measures are not warranted for impacts to human health and safety.

4.1.5 GEOLOGY, TOPOGRAPHY, AND SOILS

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts to geology, topography and soils occur when clearing, grading, and construction activities are conducted on a site.

Indirect Impacts - Indirect impacts to geology, topography and soils occur when erosion of soils, and other ground disturbances during construction leads to sedimentation in local streams.

4.1.5.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, no construction of the PSIC-funded communications facility would take place. Therefore, there would be no direct, indirect, or cumulative impacts to geology, topography, and soils at the site.

4.1.5.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

The scale of the project is minor, requiring minimal grading and excavating. Under Alternative 2, there would be direct, long-term, minor, adverse effects to soils from clearing, grading, and construction.

Indirect Impacts

Under the proposed action, erosion of soils during construction may lead to sedimentation in local streams. Because an erosion and sedimentation plan would be followed, indirect adverse impacts from soil erosion are anticipated to be minor and short-term.

Cumulative Impacts

The proposed action when added to past and future projects in the vicinity, would have a minor, adverse, cumulative impact on the geologic, soil, and topographic conditions in the project area. However, the PSIC-funded communications facility would contribute negligibly to these minor, adverse, cumulative impacts.

Mitigation Measures for Geology, Topography, and Soils

Although area soils would be disturbed during construction, disturbances are expected to be minor and minimal soil loss would occur from disturbance or indirectly via wind or water. Best management practices will be developed and implemented, such as implementing an erosion and sedimentation control plan using silt fences or hay bales, re-vegetating disturbed soils (e.g. part of proposed landscaping activities) to prevent soils from eroding and dispersing off-site.

4.2 SOCIAL ENVIRONMENT

4.2.1 COMMUNITY FACILITIES AND SERVICES

The following section discusses the impacts to Community Facilities and Services for the No-Action Alternative and the Build Alternative.

4.2.1.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, no changes in community facilities and services will occur, therefore, no direct, indirect or cumulative impacts will occur to community facilities and services under the No-Action Alternative.

4.2.1.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Construction of the communications facility would not result in adverse impacts to community facilities and services. The construction of the facility would have negligible short-term, minor impacts to the operation of the Bethune Elementary

School property as the project is small in scale. The project will allow local emergency management services (EMS) personnel to speak directly with physicians at emergency departments, therefore improving communications and response times for local emergency services. Therefore, moderate direct, short and long-term beneficial impacts to community facilities and services are expected.

Indirect Impacts

No indirect impacts are expected Community Facilities and Services as a consequence of the proposed project.

Cumulative Impacts

The construction of the proposed communications facility is part of a state-wide communications system for public services. The entire program includes upgrades to existing transmission and receiving sites, construction of new telecommunications towers, construction and remodeling of existing fixed-structure dispatch centers or first-responder facilities, improvement of a mobile infrastructure, planning, training, and exercises, and other activities. The cumulative effect of these projects will result in moderate, long-term, beneficial, cumulative impacts to community facilities and services.

Mitigation Measures for Community Facilities and Services

Mitigation measures are not warranted for impacts to community facilities and services.

4.2.2 LAND USE PLANNING AND ZONING

Land use planning and zoning impacts attributable to a project are determined by changes to the site and the surrounding area, including changes in density and use, induced development, spurred revitalization, or increased vacancy. Such changes are typically a function of the scale of the proposed development, proximity of other uses to the project site, existing zoning, the availability of vacant or underutilized land, the condition of surrounding buildings, and outside development forces.

The following section discusses the impacts to land use and zoning for the No-Action Alternative as well as the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts – Direct land use impacts associated with the proposed action are determined based on physical changes to the development site.

Indirect Impacts – Indirect land use impacts generally include commercial, retail, and residential land use changes within adjacent parcels or a larger study area that result from the proposed action.

4.2.2.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the proposed communications facility would not be constructed. Under this alternative, there would be no changes to land use or zoning at the existing site. Therefore, there would be no direct, indirect, or cumulative impacts to land use planning and zoning.

4.2.2.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

The site is presently under the jurisdiction of the St. Mary's Board of Education and is zoned "exempt commercial." Construction of the proposed facility would not be inconsistent with this zoning and will not represent a change in land use. Therefore, no direct impacts are anticipated to land use planning and zoning.

Indirect Impacts

The site will continue its current use and construction of the communications facility is not expected to lead to any indirect impacts to the current land uses.

Cumulative Impacts

The cumulative impact of development of the site, along with past and future development would not result in any changes in land uses at the site.

Mitigation Measures for Land Use and Zoning

Mitigation measures are not warranted for impacts to land use planning and zoning.

4.2.3 ECONOMY AND EMPLOYMENT

This section analyzes the potential for impacts to Economy and Employment for the No-Action Alternative and the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct economic and employment impacts occur when there is a change in the number of jobs in an area or a change in the number of businesses in an area.

Indirect Impacts - Indirect impacts occur when daily spending changes in an area due to the increase or decrease of jobs or businesses. These expenditures commonly include gasoline, automobile servicing, food and beverages, laundry, and other retail purchases

undertaken in the immediate area because of convenience and access during the course of the business day.

4.2.3.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility would not be constructed. Under this alternative, there would be no direct, indirect, or cumulative impacts to economic or employment conditions.

4.2.3.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Regional economic activity would increase as local construction contractors and construction firms are hired for the project. The purchase of building materials, construction supplies and construction equipment, as well as spending by the construction workers, would add income to the economy. The proposed action would have a minor, beneficial, short-term, direct impact on the regional economy.

Indirect Impacts

Due to the nature of the proposed facility, which is unmanned, negligible indirect impacts are expected.

Cumulative Impacts

No cumulative impacts are expected to economy and employment due to the proposed project.

Mitigation Measures for Economy and Employment

Mitigation measures are not warranted for impacts to economy and employment.

4.2.4 TAXES AND REVENUE

The following section discusses the impacts to taxes and revenue for the No-Action Alternative and the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts – Direct impacts to taxes and revenues occur when site improvements or new buildings increase a property's value and hence increase the taxes levied on it. Direct impacts may also occur if a property's ownership status changes from public to private or vice versa, as publicly owned properties are tax exempt. Finally, direct impacts can also occur from new job creation or relocation of employees to an area.

Indirect Impacts – Indirect impacts can occur if a development spurs additional development. Indirect impacts can also occur from spending by employees.

4.2.4.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility would not be constructed. Under this alternative, there would be no changes to state and local taxes and revenues. Therefore, there would be no direct, indirect, or cumulative impacts to taxes and revenues.

4.2.4.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Construction workers employed for the construction period are assumed to be currently employed, and residing and paying taxes in the local St. Mary's County area. Increased sales transactions for the purchase of materials and supplies would generate some additional revenues for local and state governments, which would have a positive effect on taxes and revenue. This would result in short-term, minor, beneficial impacts to taxes and revenue.

Indirect Impacts

As the communications facility, once operational, is unmanned, no indirect impacts are expected to taxes and revenue as a consequence of the proposed facility.

Cumulative Impacts

As the communications facility, once operational, is unmanned, the future operation of the communications facility is unlikely to create revenue for the state, county, or local governments. There will be no cumulative impacts as a result of the proposed action.

Mitigation Measures for Taxes and Revenue

Mitigation measures are not warranted for impacts to taxes and revenue.

4.2.5 AESTHETICS AND VISUAL RESOURCES

The area of visual influence or viewshed provides the context for assessing aesthetic and visual resource impacts. Impacts to identified views and vistas were determined based on an analysis of the existing quality of the landscape views, the sensitivity of the view, and the anticipated relationship of the scale and massing of the proposed buildings to the existing visual environment.

The following section discusses the impacts to aesthetics and visual resources for the No-Action Alternative and the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts occur when the proposed development is visible as a background element of a view that includes buildings of a similar mass and scale. Direct impacts occur when the proposed development is visible as a contrasting or dominant element that interferes with views from the representative viewpoint and substantially changes the existing view. Conversely, the development could improve a view or the visual appearance of an area.

Indirect Impact - Indirect impacts may occur if, because of the project, additional development occurs that affects viewsheds.

4.2.5.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the proposed facility would not be constructed. Under this alternative, there would be no direct, indirect, or cumulative impacts to aesthetics or visual resources.

4.2.5.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

The proposed site for the communications facility is presently occupied by offices of the Bethune Elementary School. The proposed communications facility would change the aesthetics of the site by adding a taller visual element to the site.

The project is rural residential in nature. The proposed site is adjacent to Colton Point Road. The surrounding area is largely forested land which will minimize visibility of the communications facility from the ground. The height of the tree canopy ranges from about 40 to 65 feet. Although the trees will help to screen the visibility of the tower, the 348 foot tower will still be visible above the canopy. Visual receptors, particularly the Bethune School, will be impacted by the visual intrusion of the proposed tower. The 7th District Community Park will also be impacted to a lesser degree as it is buffered by woodlands and distance. The nearest residence is a located approximately 900 feet to the west and will not be significantly impacted. There are no other potential receptors within the project area. Visual impacts to the Bethune School and the Community Park are expected to be moderate. Therefore, aesthetic and visual impacts would be moderate, adverse, long-term, and direct.

The surrounding area is largely forested land which will minimize visibility of the communications facility from the ground. There may be some visual impacts along

the roadway. Therefore, aesthetic and visual impacts would be minor, adverse, long-term, and direct.

Indirect Impacts

No indirect visual impacts are expected to result from the proposed project.

Cumulative Impacts

Continued development of the state-owned land surrounding the site is not likely to occur. Therefore, no cumulative impacts are anticipated.

Mitigation Measures for Aesthetics and Visual Resources

Mitigation measures will include the use of the lowest intensity lighting allowable by the FCC for tower lighting. Best management practices will be followed to minimize effects of the construction of the facility on Aesthetics and Visual Resources.

4.3 CULTURAL ENVIRONMENT

As described in Section 3.0, on October 5, 2004, the Federal Communications Commission released a Report and Order, FCC 04-222, adopting the Nationwide Programmatic Agreement (NPA) regarding the Section 106 National Historic Preservation Act Review Process. Based upon this NPA, The APE for direct effects consists of the area directly impacted by the construction of the communications facility. The presumed APE for visual effects relative to the construction of new facilities is a) 0.5-mile radius for towers 200 feet or less in overall height, b) 0.75-mile radius for towers greater than 200 but no more than 400 feet in overall height; or, c) 1.5-mile radius for towers greater than 400 feet in overall height. Based on the proposed structure height of 348 feet above ground surface for the communications tower, a 0.75-mile radius was used for purposes of project review established by the NPA.

Impacts to cultural resources are based upon the criterion of effect and criteria of adverse effect found in the Advisory Council on Historic Preservation's regulations (36 CFR 800.5, *Assessment of Adverse Effects*).

4.3.1 DEFINITION OF INTENSITY LEVELS

For purposes of analyzing potential impacts to historic structures/sites, the thresholds of change for the intensity of an impact are defined as follows:

- *negligible:* Impact(s) is at the lowest levels of detection - barely measurable with no perceptible consequences, either adverse or beneficial. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *minor:* Adverse impact - impact would alter a feature(s) of a structure or building, but would not diminish the overall integrity of the resource. For purposes of Section 106, the determination of effect would be *no adverse effect*. Beneficial impact - stabilization/ preservation of features in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *moderate*: Adverse impact - impact would alter a feature(s) of the structure or building, diminishing the overall integrity of the resource. For purposes of Section 106, the determination of effect would be *adverse effect*. A Memorandum of Agreement is executed among the lead agency and applicable state or tribal historic preservation officer and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). The mitigation measures identified in the Memorandum of Agreement reduce the intensity of impact from major to moderate. Beneficial impact - rehabilitation of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *major*: Adverse impact - impact would alter a feature(s) of the structure or building, diminishing the overall integrity of the resource. For purposes of Section 106, the determination of effect would be *adverse effect*. The lead agency and applicable state or tribal historic preservation officer are unable to negotiate and execute a Memorandum of Agreement in accordance with 36 CFR 800.6(b). Beneficial impact – restoration of a structure or building in accordance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. For purposes of Section 106, the determination of effect would be *no adverse effect*.

- *Duration*: Short-term – Effects lasting for the duration of the construction activities (less than 1 year); Long-term – Effects lasting longer than the duration of the construction (longer than 1 year).

4.3.2 ARCHEOLOGICAL RESOURCES

4.3.2.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility would not be built. The current conditions at site would remain. Under this alternative, there would be no direct, indirect, or cumulative impacts to archeological resources that may exist at the site.

4.3.2.2 Alternative 2 - PSIC-Funded Communications Facility

Direct, Indirect, and Cumulative Impacts

Under Alternative 2, the communications facility would be constructed within the Bethune Elementary School site. Ground disturbance at the site will be minimal. It has been determined that there are no previously-recorded archeological sites within the project limits; although no archeological survey was conducted to identify archeological resources in the project area, the *Maryland Historical Trust Guidelines and Resources for FCC Applicants Section 106 Submittals, March 2005* indicates that archeological resources are not likely to be significantly affected by the planned action. The proposed location for the communications facility was reviewed by the Maryland Historical Trust. The project review concluded that the proposed project will have no effect on archeological resources (see Appendix B: Agency Response Letters).

4.3.3 HISTORIC RESOURCES

The following section describes impacts to historic resources, for the No-Action Alternative and the Build Alternative.

4.3.3.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility would not be built. The current conditions would remain. Under this alternative, there would be no direct, indirect, or cumulative impacts to historic resources at the existing site.

4.3.3.2 Alternative 2 - PSIC-Funded Communications Facility

Under Alternative 2, the communications facility would be constructed. Any historic structures within the APE would have the potential to be visually impacted by the facility.

Direct Impacts

Under the terms of the NPA, documentation was sent to the Maryland Historical Trust requesting concurrence with the determination that there were no historic properties affected as a result of the proposed action. The project review concluded that the proposed project will have no effect on historic properties, and that no further consultation under Section 106 of the National Historic Preservation Act is required prior to project implementation. In a letter dated June 20, 2008, the Maryland Historical Trust concurred with this finding (Appendix B: Agency Response Letters).

Indirect Impacts

Since there are no historic properties within the APE for indirect effects, no indirect impacts will occur. In a letter dated June 20, 2008, the Maryland Historical Trust concurred with this finding (Appendix B: Agency Response Letters).

Cumulative Impacts.

Since there are no historic structures within the proposed project APE, no cumulative impacts to historic resources will occur.

Mitigation Measures for Historic Resources

As no impacts to historic resources are anticipated, no mitigation measures are proposed.

4.4 INFRASTRUCTURE

The following section describes impacts to infrastructure, including utilities, transportation, and waste management, for the No-Action Alternative and for the Build Alternative.

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts to utilities would occur when services are disrupted due to the relocation or extension of utility lines.

Indirect Impacts - Indirect impacts to utilities would occur when construction in rights of way of easements causes traffic delays or increased usage of utilities impacts the supply of these utilities.

4.4.1 TELECOMMUNICATIONS

4.4.1.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility will not be constructed. Gaps in the present Public Safety Intranet (PSINET) infrastructure would remain, presenting continued communication difficulties for public safety agencies and first responders. Therefore, the No-Action Alternative would have no direct, indirect, or cumulative impacts on communications services.

4.4.1.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

There will be no direct impacts to public telephone, wireless, or Internet telecommunications. The planned extension of the PSINET will improve communications for first responders, state and local agencies, and therefore, there will be moderate, beneficial, long-term, direct impacts to communications systems.

Indirect Impacts

No indirect impacts to communications services are anticipated.

Cumulative Impacts.

The presently proposed action, when combined with reasonably foreseeable actions in the future, will have moderate to major, beneficial, long-term, cumulative impacts on communications systems.

Mitigation Measures for Telecommunications

As no adverse impacts are expected to affect telecommunications, no mitigation measures are proposed.

4.4.2 ELECTRICAL POWER AND GAS

4.4.2.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility will not be constructed. Therefore, the No-Action Alternative would have no direct, indirect, or cumulative impacts on electrical power and gas.

4.4.2.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Electrical power for the facility will be provided from the present electrical service at the Bethune Elementary School site. Fuel for backup electrical power generation will be provided from the proposed fuel tank that will be installed within the compound area. Power requirements for the operation of the facility are expected to be easily accommodated from the present service. Power requirements for the site will consist of a 400-amp service at 240 volts which is a common residential sized service load. Each of the two equipment shelters will house a 200-amp service panel. The tower requires only a 20-amp circuit for lighting. Therefore, direct impacts to electrical power and gas utilities will be long-term and negligible.

Indirect Impacts

No indirect impacts to electrical power and gas are anticipated.

Cumulative Impacts.

The presently proposed action, when combined with reasonably foreseeable actions in the future, will not have any cumulative impacts on electrical power and gas utilities.

Mitigation Measures for Electrical Power and Gas

No mitigation measures are proposed for electrical power and gas.

4.4.3 TRANSPORTATION

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts to transportation would occur when traffic volumes increase and patterns change due to the construction of the project.

Indirect Impacts - Indirect impacts to transportation occur when a project spurs other development, which in turn increases traffic volumes.

4.4.3.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility will not be constructed. Therefore, the No-Action Alternative would have no direct, indirect, or cumulative impacts on transportation.

4.4.3.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Transportation via automobile or rail will not be impacted by the proposed action. On March 31, 2008, the Federal Aviation Administration, Air Traffic Airspace Branch, determined that the proposed communications tower would present no hazard to air navigation provided that the structure is marked and/or lighted in accordance with FAA rules (Appendix B: Agency Response Letters). In order to minimize hazards to migrating birds, the lighting will be the minimum number, intensity, and flashes per minute allowable by the FAA in accordance with USFWS recommendations (Appendix B: Agency Response Letters). This lightning will be white, and not red, as per the USFWS recommendations. No conflicts between FAA and USFWS requirements are anticipated. Therefore, no direct impacts to transportation are anticipated.

Indirect Impacts

No indirect impacts to transportation are anticipated.

Cumulative Impacts

The proposed action, when combined with reasonably foreseeable actions in the future, will not have any cumulative impacts on transportation.

Mitigation Measures for Transportation

No mitigation measures are recommended for impacts to transportation.

4.4.4 WASTE MANAGEMENT

Explanation of Impacts Affecting this Impact Topic

Direct Impacts - Direct impacts to waste management occur when there is an increase or decrease in waste generation.

Indirect Impacts - Indirect impacts to waste management occur when a project spurs other development, which in turn increases waste volumes.

4.4.4.1 Alternative 1 - No-Action Alternative

Direct, Indirect, and Cumulative Impacts

Under the No-Action Alternative, the communications facility would not be constructed. Under this alternative, there would be no changes in waste management at the Bethune Elementary School site. Therefore, no direct, indirect, or cumulative impacts to waste management would occur.

4.4.4.2 Alternative 2 - PSIC-Funded Communications Facility

Direct Impacts

Construction of the communications facility would generate construction waste. The size of the proposed facility is minimal and the project duration will be a maximum of 180 days, with a maximum of 40 days of heavy equipment use. Construction will generate little solid waste. General construction waste will be collected and transported by the contractors. The waste may or may not be disposed of locally. Disposal of this waste would result in negligible, adverse, short-term, direct impacts.

As the proposed communications tower is an unmanned facility, minimal general waste is expected to be generated following construction activities. Any general waste would be placed in receptacles at the site. Waste would be removed from

receptacles on a regular basis. A licensed hauler would transport the general waste to county landfills. A negligible, adverse, short-term, direct impact on county landfills from increased waste would occur.

Indirect Impacts

No indirect impacts to waste management are anticipated under the proposed action.

Cumulative Impacts

The proposed facility will not foster any new development and since it is unmanned, will not generate wastes. Therefore, no cumulative impacts are anticipated.

Mitigation Measures for Waste Management

Best management practices will be followed to minimize the generation of solid wastes during the construction of the facility, thus minimizing impacts to Waste Management.

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5 FINDINGS AND CONCLUSIONS

The Department of Commerce, National Telecommunications and Information Administration (NTIA) has prepared an Environmental Assessment (EA) analyzing the environmental impacts from the construction of the communications facility at the proposed Bethune Elementary School Site located at 22975 Colton Point Road in Bushwood, St. Mary's County, Maryland. The project is funded by the Public Safety Interoperable Communications (PSIC) Grant Program. The goal of the PSIC Grant Program is to improve nationwide interoperable communications among public safety agencies.

In February of 2009, the NTIA prepared a Programmatic Environmental Assessment (PEA) for the PSIC Grant Program. The PEA determined that transmitting and receiving sites involving new towers 200 or more feet above the ground, guyed towers, and ground disturbances of one acre or more all require that a site-specific Environmental Assessment (EA) be prepared. The proposed facility falls within the category of Transmission and Receiving Sites with a new tower of over 200 feet in height.

NEPA is intended to help public officials make decisions based on an understanding of environmental consequences, and to take actions that protect, restore, and enhance the environment. Communications tower construction and the operation of communications systems are regulated by the Federal Communications Commission (FCC). Under FCC rules implementing NEPA (47 C.F.R. 1.1301-1.1311) the proposed action would normally be categorically excluded from further environmental processing. The preparation of this EA is required as a result of PSIC Grant funding through the NTIA.

This Environmental Assessment (EA) assesses the impacts of two alternatives: The No Action Alternative, and build alternative. Alternative 2 proposes the construction of the tower within the existing cleared area within the Bethune School property.

This (EA) concludes that the proposed Bethune Communications Facility will have negligible adverse impacts to: air quality, electrical power and gas, and waste management; minor adverse impacts to: noise levels, geology, topography and soils, moderate adverse impacts to visual and aesthetic resources, and no impacts to archeological and historic resources, land use planning and zoning, threatened and endangered species, vegetation and wildlife, or transportation.

The proposed project would result in beneficial impacts to: human health and safety, community facilities and services, employment and economy, taxes and revenue, and communications systems.

This Environmental Assessment (EA) concludes that the proposed Bethune Elementary School Site Communications Facility, St. Mary's County Maryland, is not a major Federal action significantly affecting the quality of the human environment. Therefore, an Environmental Impact Statement will not be prepared.

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6 REFERENCES

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4. Maryland Department of Assessments and Taxation, St. Mary's County, Maryland Tax Rates (http://www.dat.state.md.us/sdatweb/taxrate.html). Printed copy available in project administrative record.

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12. USDA, 2009. US Department of Agriculture. St. Mary's County, Maryland Soil Survey Online Map (http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx). Printed copy available in project administrative record.

13. USGS 1986. Bushwood Quad. USGS 7.5 Minute Topographic Map.

7 LIST OF PREPARERS

LYLE C. TORP, RPA
Principal Investigator

Lyle C. Torp consults on issues related to compliance with Section 106 of the National Historic Preservation Act (NHPA), conducts environmental assessments under the National Environmental Policy Act (NEPA), and performs a variety of services related to archeological and historical assessments and historic preservation planning. He has extensive experience performing Phase I, Phase II and Phase III cultural resource investigations, and has served as Principal Investigator on numerous compliance-related projects throughout the United States. Mr. Torp is thoroughly familiar with all aspects of cultural resources/historic preservation legislation and regulation and he regularly consults on cultural resource issues under NEPA and NHPA. Lyle Torp holds a BA from Wake Forest University and an MA from the University of South Florida, and has completed doctoral work at The Catholic University of America. Mr. Torp is fully-qualified under the Secretary of the Interior's Standards for Archeology and Historic Preservation at 36 CFR 61, and is certified in archeology by ROPA.

Since 1998, Mr. Torp has directed the operations of a consulting firm with a staff of 17 cultural resource and environmental professionals. In this capacity, he has augmented his prior work experience in conducting Phase I and Phase II ESAs, natural resource planning, and other environmental services with a diverse professional staff serving clients throughout the eastern United States.

DAVID C. BERG
Senior Historic Preservation and NEPA Specialist

Mr. Berg is a Senior Historic Preservation Specialist with more than 20 years of professional experience managing historic preservation projects. Mr. Berg has worked as an Associate with The Ottery Group since 2007. He has prepared National Register of Historic Places Nomination Forms, cultural resource reports identifying historic sites and documenting National Register of Historic Places eligibility, and reports evaluating potential effects to historic architectural properties in and adjacent to proposed project areas. He has also contributed to numerous Environmental Assessment and Environmental Impact Statements, Categorical Exclusion Checklists, Section 4(f) reports, and other regulatory documents. Mr. Berg has experience preparing Historic Preservation Master Plans, and was previously employed as a Historic Preservation Planner in Montgomery County, Maryland.

Mr. Berg has excellent writing and speaking skills, and has been called upon many times to conduct public meetings during the planning stages of many projects. He has prepared plans for the protection and maintenance of historic properties, and has conducted mitigation efforts for buildings and structures, including the delineation of measured drawings in accordance with HABS-HAER standards and large-format photography to HABS-HAER standards. Mr. Berg has a BA from Wheaton College and an MA in US History from the University of Maryland.

AMY BOLASKY SKINNER
Architectural Historian

Ms. Skinner is a graduate of the Historic Preservation graduate program at the University of Maryland with three years experience in historic preservation and architectural history. Ms. Skinner has experience in historical research and documentation, as well as experience in federal preservation laws including the National Historic Preservation Act and the National Environmental Policy Act. Ms. Skinner's responsibilities include planning and conducting architectural surveys and field investigations, completion of evaluations and Determination of Eligibility forms for historic properties, performing archival research, the preparation of historic structure reports, master plans, and National Register nominations. Amy Skinner has a BA from Syracuse University and an MA in Architectural History from the University of Maryland. Ms. Skinner is fully-qualified under the Secretary of the Interior's Professional Qualifications in Architectural History (36 CFR 61).

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8 ENVIRONMENTAL ASSESSMENT DISTRIBUTION LIST

8.1 FEDERAL OFFICIALS AND AGENCIES

The Honorable Senator Ben Cardin
United States Senate
509 Hart Senate Office Building
Washington, DC 20510

The Honorable Barbara Mikulski
United States Senate
503 Hart Senate Office Building
Washington, D.C. 20510

The Honorable Congressman Steny H. Hoyer
1705 Longworth House Office Building
Washington, D.C. 20515

Regional Administrator Region 3
U.S. Environmental Protection Agency
841 Chestnut Street
Philadelphia, PA 19107

U.S Fish and Wildlife Service
Ecological Services
6669 Short Lane
Gloucester, VA 23061

US Department of Commerce
National Telecommunications and Informati
Administration (NTIA)
1401 Constitution Ave., NW
Washington, DC 20230

8.2 STATE OFFICIALS AND AGENCIES

The Honorable John F. Wood, Jr.
House Office Building, Room 422
6 Bladen Street
Annapolis, MD 21401

The Honorable Senator Roy P. Dyson
James Senate Office Building, Room 102
11 Bladen Street
Annapolis, MD 21401

Maryland State Highway Administration
District 5 Office
138 Defense Highway
Annapolis, MD 21401

Maryland Department of Planning
Maryland Historical Trust
100 Community Place, 3rd Floor
Crownsville, MD 21032

Denis McElligott
Director, Wireless Communications
Maryland Department of Information Technology
301 W. Preston Street, Room 1304
Baltimore, MD 21201

8.3 LOCAL OFFICIALS AND AGENCIES

Maryland Department of Natural Resources
6904 Hallowing Lane
Prince Frederick, MD 20678

St. Mary's County Land Use and Growth Management
PO Box 653
Leonardtown, MD 20650

St. Mary's County Commissioners
Chesapeake Building
PO Box 653
41770 Baldridge Street
Leonardtown, MD 20650

Appendix A

Site Plans

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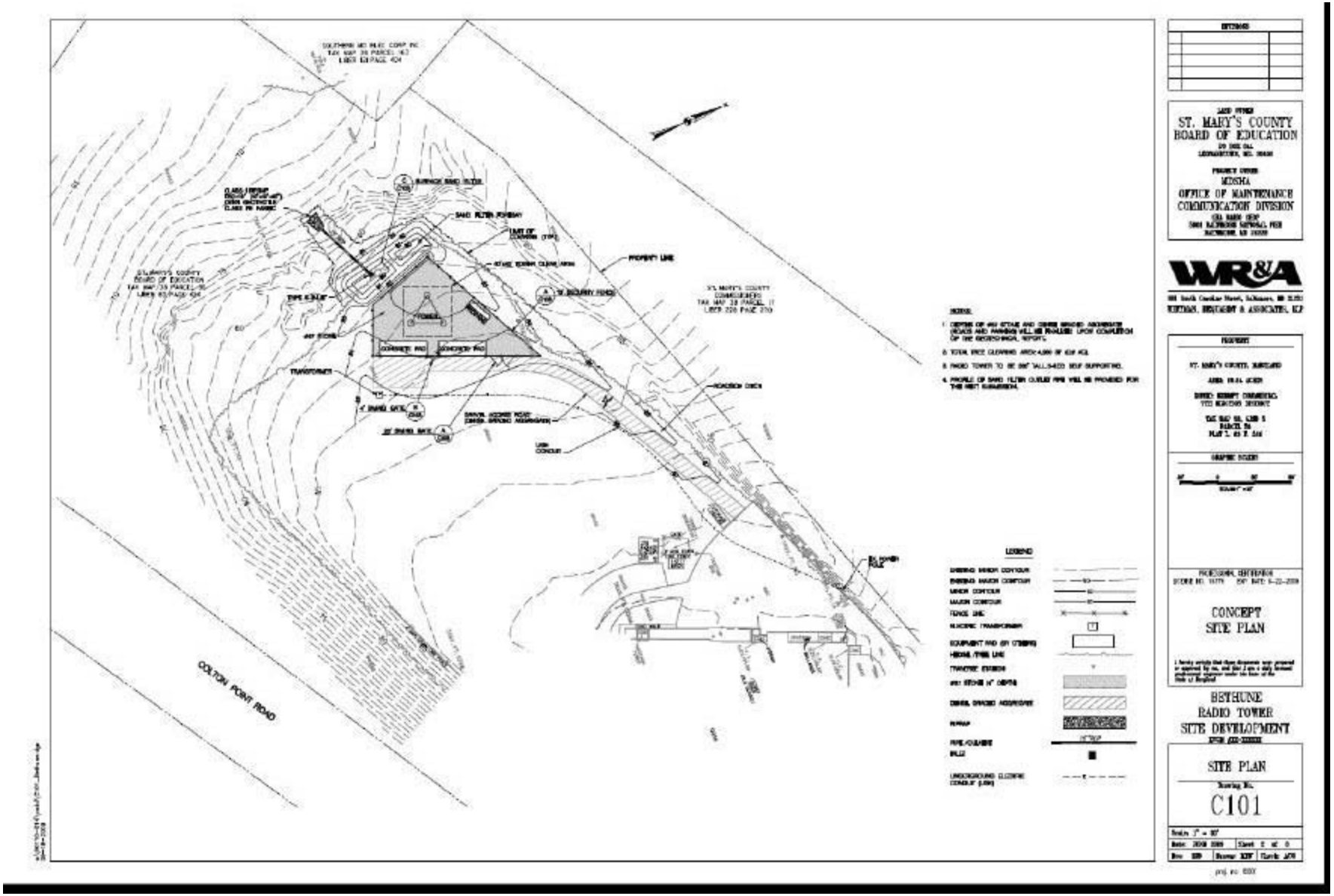
ST. MARY'S COUNTY
BOARD OF EDUCATION
MDSHA
OFFICE OF MAINTENANCE
COMMUNICATION DIVISION
WR&A
CONCEPT
SITE PLAN
BETHUNE
RADIO TOWER
SITE DEVELOPMENT
SITE PLAN
C101
COLTON POINT ROAD
LEGEND

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Appendix B

Agency Response Letters

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401
410/573-4575

July 16, 2009

The Ottery Group
1810 August Drive
Silver Spring, MD 20902

RE: Technology Telecommunications Facilities in St. Mary's, Allegany, and Garrett Counties (Bethune School Site, Mount Savage Middle School Site, and Route 135 Salt Dome Site)

Dear: Meaghan Fahey

This responds to your letter, received June 24, 2009, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further Section 7 coordination with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should

be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

A final concern of the Service is the potential impact of communications towers on migratory birds. Communications towers may not be visible to migrating birds in poor weather conditions (*e.g.*, low cloud ceiling, fog, rain, or poor visibility), and have caused massive bird kills when nocturnal migrating species are attracted by the lights of the towers. Wire strikes by diurnal species such as large wading birds, waterfowl, and raptors have also been documented. Communications towers with guy wires and/or lights are therefore known threats to migratory birds, which are Federal trust resources that the Service is authorized to protect. The "take" (i.e., killing) of migratory birds by any person without authorization may constitute a violation of the Migratory Bird Treaty Act of 1918.

The Service does have a migratory bird policy and offers recommendations on reducing migratory bird collisions with communications towers. Towers that are over 200 feet high and have lights or guy wires are more likely to cause death or injury to migratory birds than shorter structures. We encourage you to reference these materials at http://migratorybirds.fws.gov/issues/towers/comtow.html and incorporate as many of the design recommendations as possible. A hard copy of the policy and recommendations is also available upon request. Enclosed are the Chesapeake Bay Field Office Recommendations to Reduce Migratory Bird Collisions with Communications Towers, and a Migratory Bird Fact Sheet.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Devin Ray at (410) 573-4531.

Sincerely,

Leopoldo Miranda
Field Supervisor

Enclosures

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Martin O'Malley, Governor
Anthony G. Brown, Lt. Governor
John R. Griffin, Secretary
Eric Schwaab, Deputy Secretary

September 2, 2009

Ms. Meaghan Fahey
The Ottery Group, Inc.
1810 August Drive
Silver Spring, MD 20902

RE: Environmental Review for Proposed Maryland Department of Information Technology Telecommunications Facility at Bethune School Site, St. Mary's County, Maryland.

Dear Ms. Fahey:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. However, th Wildlife and Heritage Service's database indicates that the project site is located just across the road from Church Swamp which is designated in state regulations as a Nontidal Wetland of Special State Concern (NTWSSC). This NTWSSC is designated as such due to the presence of Slender Blue Flag (*Iris prismatica*), Buxbaum's Sedge (*Carex buxbaumii*), and Woolly Sedge (*Carex pellita*) occurring within this swamp habitat. These rare and listed species could be impacted by activities on nearby properties, such as this one. Therefore the WHS would encourage the applicant to strictly adhere to a appropriate best management practices for sediment and erosion control during all phases of work on these sites, in order to reduce the likelihood of adverse impacts to these important native species in Church Swamp.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,

Lori A. Byrne

Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER# 2009.1102.sm
Cc: K. McCarthy, DNR

Tawes State Office Building • 580 Taylor Avenue • Annapolis, Maryland 21401
410.260.8DNR or toll free in Maryland 877.620.8DNR • www.dnr.maryland.gov • TTY users call via Maryland Relay

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200801918

THE OTTERY GROUP

RECEIVED
JUN 16 2008
By

F
FCC
EJC

May 30, 2008

Elizabeth Cole, Administrator
Project Review and Compliance
Maryland Historical Trust
100 Community Place
Crownsville, MD 21032

Re: Section 106 review for the proposed Maryland Department of Information Technology "Bethune School Telecommunications Facility" – 22975 Colton Point Road, Bushwood, MD 20618 (St. Mary's County)

Ms. Cole:

At the request of the Maryland Department of Information Technology, The Ottery Group, Inc. is hereby initiating consultation with your office prior to the construction of a telecommunications facility in Bushwood, MD. As tower construction is regulated by the Federal Communications Commission (FCC), the Maryland Department of Information Technology is required to consider the effects of the proposed undertaking on historic properties under FCC requirements (47 CFR 1.1307) and Section 106 of the National Historic Preservation Act (36 CFR 800) as implemented by the Programmatic Agreements governing project review for telecommunications projects.

The following attachment regarding the proposed undertaking is provided in order to initiate consultation pursuant to 36 CFR 800.3. The report includes an identification of historic properties that are listed in or have been determined eligible for the National Register of Historic Places (NRHP) and an assessment of the effects of the planned undertaking.

I look forward to your comments regarding the effects of the proposed undertaking. If you have any questions or require more information please feel free to contact me by phone or email (lyle.torp@otterygroup.com). I appreciate your assistance with this project.

Sincerely,
THE OTTERY GROUP, INC.

Lyle C. Torp
Managing Director

Attachment – FCC Form 620, Parts 1 and 2

SC # MD 20080415-0348

The Maryland Historical Trust has reviewed the Submission Packet for **MHT Log No.** 200801918 and concurs with the FCC applicant's determination of no historic properties affected.

By: Elizabeth Cole Date: 7/10/08
MD State Historic Preservation Office/
Maryland Historical Trust

1810 AUGUST DRIVE · SILVER SPRING, MARYLAND 20902 · 301.562.1975 (MAIN) · 301.562.1976 (FAX)
www.otterygroup.com

#13 SC 7/10/08 @ elementary school, golf cart behind, ext. tree cover around

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Issued Date: 03/31/2008

Edward R. Macon
State of Md.DBM
301 W. Preston St.
Baltimore, MD 21201

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Antenna Tower Bethune
Location:	Bushwood, MD
Latitude:	38-17-27.99N NAD 83
Longitude:	76-46-05.15W
Heights:	348 feet above ground level (AGL) 424 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, a med-dual system - Chapters 4,8(M-Dual),&12.

It is required that the enclosed FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part I)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part II)

This determination expires on 10/01/2009 unless:

(a) extended, revised or terminated by the issuing office.
(b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

Page 1 of 3

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (781) 238-7522. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2008-AEA-1473-OE.

Signature Control No: 567009-101958024 (DNE)
Suzanne Dempsey
Technician

Attachment(s)
Frequency Data

7460-2 Attached

Page 2 of 3

Frequency Data for ASN 2008-AEA-1473-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
462.95	468.175	MHz	500	W
6	6.9	GHz	66	dBm

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