United States Department of Agriculture

Programmatic Environmental Assessment

USDA Rural Development Rural Utilities Service
Telecommunications Program

Broadband Deployment to Rural America

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Please send questions and comments to:

Mr. Richard Fristik
U.S. Department of Agriculture
Rural Development
Rural Utilities Service
1400 Independence Ave., SW Mail Stop 1571
Washington, DC 20250-1571
Phone: (202) 720-5093
Fax: (202) 690-0649
Email: richard.fristik@wdc.usda.gov

Abstract:

This Programmatic Environmental Assessment (PEA) of the broadband component of the Telecommunications Program facilitates agency compliance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other applicable environmental statutes, regulations, and Executive Orders. Use of the PEA is intended to expedite the deployment and expansion of broadband infrastructure, save processing time, ensure consistent and accurate environmental evaluations, and avoid unnecessary duplication and repetition in planning and evaluation commensurate with the potential environmental impacts of broadband telecommunications infrastructure projects financially supported by RUS. Direct, indirect, and cumulative impacts are described. Of the environmental topics evaluated, ten are shown to be comprehensively addressed at the program-level and pose no discernible effects and, if industry standards and mitigation are properly applied during planning and construction, would need no additional consideration during project-level evaluations.

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Executive Summary

The Rural Utilities Service (RUS), a U.S. Department of Agriculture (USDA) agency, provides financial assistance to rural cooperatives, nonprofit associations, public bodies, and other eligible applicants seeking development of telecommunications infrastructure in rural environments.

RUS prepared this Programmatic Environmental Assessment (PEA) of the broadband component of the Telecommunications Program to facilitate agency compliance with the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other applicable environmental statutes, regulations, and Executive Orders. The PEA describes the need for broadband telecommunications projects and the types of actions and technologies typically involved in RUS-supported broadband projects.

The PEA includes a detailed account of extensive interviews with federal government employees, applicants, applicant contractors, and industry organization representatives. These stakeholders expressed a common desire to reduce processing time and improve the consistency of agency reviews. Several sought improved response in the processing of requests to use federal land needed for all or a portion of a proposed project.

Monitoring and operational procedures are presented along with useful background information and description of regulatory processes. Direct, indirect, and cumulative impacts are described. Of the environmental topics evaluated, ten are shown to be comprehensively addressed at the program level and pose no discernible effects and, if industry standards and mitigation were properly applied, would need no additional consideration during project-level evaluations.

Programmatic-level recommendations for mitigation of site-specific projects are presented in addition to pertinent information regarding compliance with important laws and Executive Orders. Relevant summaries of RUS and other federal agency environmental and land use regulations are appended to the PEA to foster public understanding and aid agency staff and applicants in the development and evaluation of projects seeking RUS financial assistance.

Use of the PEA is intended to expedite the deployment and expansion of broadband infrastructure, save processing time, ensure consistent and accurate environmental evaluations, and avoid unnecessary duplication and repetition in planning and evaluation commensurate with the potential environmental impacts of broadband telecommunications infrastructure projects financially supported by the RUS.

As the PEA is used over time, environmental conditions and projected impacts will be considered and the PEA supplemented or revised as necessary.

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Acronyms

3G	Third generation of telephone technology
ARRA	American Recovery and Reinvestment Act
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
AGL	Above Ground Level
AM	Amplitude Modulation, the modulation of a wave by varying its amplitude, used chiefly as a means of radio broadcasting, in which an audio signal is combined with a carrier wave. Often contrasted with frequency modulation.
ANSI	American National Standards Institute
APE	Area of Potential Effect
APHIS	Animal and Plant Health Inspection Service
ARPANSA	Australian Radiation Protection and Nuclear Safety Agency
ASR	Antenna Structure Registration Program
ATV	All Terrain Vehicle
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BIR	*The Bioinitiative Report: A Rationale for biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation* (2012; http://www.bioinitiative.org/)
BLM	Bureau of Land Management
BMP	Best Management Practice (protective measures for reducing or avoiding adverse impacts)
BMUB	The German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
BPL	Broadband over Power Line
BOR	Bureau of Reclamation
CAA	Clean Air Act
CDE	Carbon Dioxide Equivalent
CEQ	President's Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalence
CPE	Customer Premise Equipment
CX	Categorical Exclusion
dBA	deciBel A weighted; a measurement of sound pressure (noise)
DECT	Digital Enhanced Cordless Telecommunications
DLT	Distance Learning and Telemedicine Grant Program
DNA	Deoxyribonucleic acid, a self-replicating material present in nearly all living organisms as the main constituent of chromosomes.
DOT	Department of Transportation

DSL	Digital Subscriber Line, a technology for the high-speed transmission of digital information over standard telephone lines.
EA	Environmental Assessment
EEG	Electroencephalography
EHS	Electromagnetic Hypersensitivity
EIRP	Equivalent (or, alternatively, "effective") isotropically radiated power, is the amount of power that a theoretical isotropic antenna (an antenna which emits radio waves equally in all directions) would emit to produce the peak power density observed in the direction of maximum antenna gain. "Maximum antenna gain" is a measure of antenna efficiency in terms of how well the antenna transforms the inputted power into radio waves emitted in a particular direction.
EIS	Environmental Impact Statement
EJ	Environmental Justice (short for Executive Order 12898 "*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*" 2/11/1994)
EMF	Electric and Magnetic Frequency, abbreviated to "Electromagnetic Frequency", both having the acronym "EMF"
ENG	Monograph published by the United Nations World Health Organization International Agency for Research on Cancer (IARC) Non-Ionizing Radiation Part 2: Radiofrequency Electromagnetic Fields Vol. 102. Published 2013, based on the working group meeting in Lyons France in 2011. (http://monographs.iarc.fr/ENG/Monographs/vol102/mono102-F01-F02.pdf).
EO	Executive Order of the President of the U.S.
EPA	Environmental Protection Agency
ER	RUS Environmental Report
ERP	Effective radiated power
ERR	RUS Environmental Review Report
ESA	Endangered Species Act
Ex U/G	Existing Underground
FAA	Federal Aviation Administration
FCC	Federal Communications Commission
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
FR	Federal Register
GHG	Greenhouse Gas
GHz	Gigahertz, a measure of frequency equivalent to one thousand million (10^9) cycles per second.
GIS	Geographic Information System
GSM	Global System (or Standard) for Mobile, a standardized international system for digital mobile telecommunication.

GWP	Global Warming Potential
HDPE	High Density Polyethylene
HF	High Frequency
IARC	International Radiation Protection Association
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IEEE	Institute of Electrical and Electronics Engineers
IMH	Israel Ministry of Health
IPaC	Information, Planning and Conservation, a USFWS data system website for conducting informal Section 7 consultation per the Endangered Species Act and obtaining information about listed species. The site is also integrating appropriate mitigation for specific types of actions.
IRPA	International Radiation Protection Association
IRU	Indefeasible Right to Use
L-810	A class of red obstruction lighting
LESA	Land Evaluation and Site Assessment
LRMP	Land and Resource Management Plan of the USDA Forest Service
LV	Low voltage
Mbps	Million bits per second, a term used in describing speed of computing operations.
MBTA	Migratory Bird Treaty Act
MHz	Megahertz, one million hertz, a measure of the frequency of radio transmissions or the clock speed of a computer.
MPE	Maximum permissible exposure
MV	Megavolt, a unit of electromotive force equal to one million volts.
N_20	Nitrous Oxide
NAGPRA	Native American Graves Protection and Repatriation Act
NCRP	National Council on Radiation Protection and Measurements
NEPA	National Environmental Policy Act
NESC	National Electric Safety Code
NHO	Native Hawaiian Organization
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NISC	National Invasive Species Council
NIR	Non-ionizing radiation
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NTIA	National Telecommunications and Information Administration
NWP	Nationwide Permit
NWR	National Wildlife Refuge (U.S. Fish and Wildlife Service)
NZMH	New Zealand Ministry of Health

OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement (NHPA)
PCCA	Power and Communication Contractors Association
PCS	Personal communications services
PEA	Programmatic Environmental Assessment
PEIS	Programmatic Environmental Impact Statement
PEL	OSHA's permissible exposure limit for noise
POC	Point of Contact
PVC	Polyvinyl chloride
RD	Rural Development, a mission area in the Department of Agriculture
RF	Radio frequency
RFR	Radiofrequency radiation
RFI	Request for Information
RHA	Rivers and Harbors Act
RLS	Restricted Lit Service, a restricted bandwidth lease
RMP	Resource Management Plan of the BLM
ROW	Right-of-way
RUS	Rural Utilities Service
SAH	Service Area Hubs
SBI	State Broadband Initiative of NTIA
SCN	Suprachiasmatic nucleus, a small group of brain cells located in the hypothalamus that controls the circadian cycles and influences many physiological and behavioral rhythms occurring over a 24-hour period, including the sleep/wake cycle.
SHPO	State Historic Preservation Officer
SO_2	Sulfur Dioxide
SOP	Standard Operating Procedures (protective measures routinely incorporated into design)
STL	Studio-to-transmitter broadcasting
STM	Finnish Ministry of Social Affairs and Health
SWPPP	Stormwater Pollution Prevention Plan (Clean Water Act)
TCNS	Tower Construction Notification System of the FCC
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
USA	U.S. Army
USACE	United States Army Corps of Engineers
USAF	U.S. Air Force
U.S.C.	U.S. Code of Laws of the United States of America
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
USN	U.S. Navy
WHO	World Health Organization, an agency of the United Nations,

	established in 1948 to promote health and control communicable diseases worldwide
WHSRN	Western Hemisphere Shorebird Reserve Network
Wi-Fi	A facility allowing computers, smartphones, or other devices to connect to the Internet or communicate with one another wirelessly within a particular area.
WLAN	Wireless Local Area Network
WoUS	Waters of the United States, as defined in the regulations implementing Section 404 of the Clean Water Act
WS	Abbreviation for the US Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services (USDA APHIS WS)
$\mu W/cm^2$	Micro watts per square centimeter

1 Purpose and Need

1.1 Why RUS is Preparing this Programmatic Environmental Assessment (PEA)

The Rural Utilities Service (RUS) is an agency within the Rural Development (RD) mission area of the US Department of Agriculture (USDA). The overall mission of RUS is to work with and provide financial assistance to rural cooperatives, nonprofit associations, public bodies, and other eligible applicants to expand and keep utility-related technology and facilities up-to-date, and to help establish new and vital services for water/wastewater, electricity, and telecommunications. The public-private partnership between RUS and these industries results in billions of dollars in rural infrastructure development and creates thousands of jobs for the American economy (RUS 2013).

Beginning with rural electrification in 1935, RUS has provided financial support for deployment and expansion of utility systems in rural America. Since the mid-2000s, the RUS mission has included support for broadband infrastructure in rural areas and is consistent with recent increases in the federal emphasis and funding for providing cost-effective and rapid broadband to rural communities, schools, hospitals, libraries, and for other purposes related to economic development and quality of life.

In accordance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), the Endangered Species Act (ESA) and other applicable environmental statutes, regulations, and Executive Orders (EO), RUS must evaluate the environmental impact of the approval of financial assistance to qualified applicants who submit project proposals within eligible service areas. RUS evaluates documentation prepared by applicants in the form of an environmental report (ER) or questionnaire and uses it to assist the agency in completing its NEPA requirements. RUS requires its applicants to comply with all pertinent laws and regulations and obtain necessary permits. Because the agency finds that these types of projects typically have few, if any, adverse impacts, RUS complies with NEPA procedures primarily through agency-wide categorical exclusions (CXs; Appendix B).

RUS finds that most projects submitted for financing through the agency's Telecommunications Program use similar construction technologies and methods. RUS reasons that a broad planning and environmental review in a program-level environmental assessment for these types of projects would provide consistent information and analyses for applicant project design and RUS decision-making and would greatly reduce processing time and costs for both the agency and its applicants seeking financial assistance for broadband projects in rural environments.

When projects are similar to each other in both actions and impacts, the regulations implementing NEPA at 40 CFR parts 1500-1508 (the Council on Environmental Quality (CEQ) regulations) encourage federal agencies to consider evaluating impacts of the common actions and project elements in a programmatic manner. The agencies can then use program-level analyses and decisions to establish the boundaries for the analyses and decisions of subsequent project-level decisions, thus avoiding repetition and delay. This step-wise process of analysis and decision-making is called tiering (40 CFR §§1500.4(i), 1502.4, 1502.20, and 1502.28; Chapter 4 of this PEA). RUS will use tiered decision-making to reduce the amount and types of information and analysis needed for project-level NEPA compliance prepared by applicants. Tiering and the PEA's relationship to project-level environmental review and decision-making are discussed in more detail in Chapter 4.

In addition to the evaluation of program impacts, especially cumulative impacts, and expediting environmental reviews and program coordination by the RUS Telecommunications Program, this PEA provides valuable information to aid RUS staff and applicants.

This PEA has four objectives:

- Expedite the deployment and expansion of broadband infrastructure in rural communities by the RUS Telecommunications Program consistent with EO 13604;
- Save RUS and applicants substantial time, resources, and funds;
- Ensure consistent and accurate environmental evaluation of broadband projects; and
- Avoid unnecessary duplication and repetition to ensure that broadband projects financially supported by RUS are consistently and efficiently planned and evaluated.

1.2 Contents of this PEA

This PEA describes the types of actions and technologies typically financed by the RUS Telecommunications Programs for broadband. Associated broadband technologies are described in Chapter 2 and their direct, indirect, and cumulative impacts appropriate for evaluation at the programmatic level are evaluated in Chapter 3. Examples of impacts evaluated in this PEA include greenhouse gas emissions and the impacts of communication towers on migratory birds. Although the PEA provides helpful background information for understanding resource impacts and regulatory processes, site-specific impacts particular to a specific project (such as impacts to protected species or cultural resources) are deferred to project-level evaluation. The process for tiering to this PEA for site-specific projects is discussed in Chapter 4.

This PEA:

- Provides discussion of the need for broadband infrastructure projects typically submitted to the RUS Telecommunications Program for financial support (Chapter 1);
- Describes the types of actions and technologies typically involved RUS-supported broadband projects (Chapter 2);
- Describes the monitoring and operational procedures pertinent to RUS-supported broadband projects (Chapter 2);
- Provides useful background information and regulatory processes for each applicable natural resource, and evaluates the direct, indirect, and cumulative impacts associated with those actions that can be readily evaluated at a programmatic (not site-specific) level (Chapter 3);
- Includes programmatic-level recommendations for mitigation measures for site-specific application to projects, and refinement, as appropriate, for conditions and resources evaluated in site-specific project reviews (Section 3.14);
- Summarizes pertinent information regarding compliance with important laws and Executive Orders that may be applicable to specific broadband proposals (Appendix A);
- Displays the relevant RUS NEPA regulations and categorical exclusions applicable to broadband projects (Appendix B);
- Displays applicable NEPA regulations, including relevant categorical exclusions, for US Forest Service (USFS), Bureau of Land Management (BLM), Federal Emergency Management Agency (FEMA), Bureau of Indian Affairs (BIA), National Park Service (NPS), US Fish and Wildlife Service (USFWS), National Telecommunications and Information Administration First Responder Authority (FirstNet), and the Bureau of Reclamation (BOR) (Appendix C). Presentation of these agency regulations is intended to help applicants understand the processes and requirements of these agencies and facilitate obtaining needed land use authorizations per EO 13604 (*Improving Performance of Federal Permitting and Review of Infrastructure Projects*);
- Identifies key portions of USFS, BLM, BIA, and USFWS regulations regarding processes for obtaining land use authorizations to help applicants understand the requirements of these agencies and to assist applicants in obtaining land use authorizations (Appendix D);

- Provides information about state environmental policy laws, and contact information for US territories and commonwealths within which the RUS Telecommunications Program operates (Appendix E);
- Includes a detailed report documenting the results of extensive interviews with stakeholders from the federal government, applicants, applicant contractors, and industry organizations (Appendix F);
- Presents links to and descriptions of helpful environmental databases (Appendix G);
- Provides guidelines issued by the U.S. Fish and Wildlife Service (USFWS) for minimizing adverse impacts of communications towers to migratory birds (Appendix H);
- Includes helpful documents for compliance with Section 106 of the National Historic Preservation Act (NHPA; Appendix I); and
- Provides RUS forms for tiering to this PEA and considering effects of projects (Appendix J).

1.3 Benefits of Broadband Services in Rural America

Broadband infrastructure consists of fiber, cable, and wire connections deployed underground or on poles, oftentimes existing poles, as well as wireless equipment mounted on or in towers, buildings, or other structures, including transmission and reception equipment and facilities. This infrastructure provides the backbone for connections to the internet, wireless telephone, smartphones, and other telecommunication equipment. Society's increasing reliance on web-based technologies has in turn increased capacity demands on the broadband network.

Nationwide, there is significant public and private interest and investment in the expansion of broadband networks and capabilities. From 1996 to 2011, overall spending by telecommunications companies on broadband networks was nearly $1.2 trillion. Public investment in expansion projects is evident in many states, local areas, and at the national level.

Due primarily to commercial enterprises and companies, the United States has become a global leader in the deployment of broadband services. Today, more than 95% of the U.S. population has access to robust and diverse wired broadband infrastructure, including fiber to the home, cable and DSL, capable of supporting average download speeds of 4 Mbps (megabytes per second).

Although progress in the expansion of broadband deployment is considerable, areas of the country continue to be underserved or even without service. These areas are primarily rural and may be seen as less profitable for service expansion and/or may be

economically depressed, with many households potentially unable to afford an internet connection.

A robust broadband infrastructure connects people, businesses, and institutions in underserved rural areas and provides a strong economic development incentive for quality public educational opportunities, professional medical care, efficient first responder communication, and business opportunities.

Expanding access and upgrading services into rural areas requires installation of new broadband infrastructure. Federal departments and agencies are critical to the deployment of broadband infrastructure and have a significant opportunity to help expand broadband infrastructure for supporting and improving the economic and social quality of life in rural America (USDOT FHWA August 2013).

1.4 Federal Support for Broadband for Rural America

The federal government has long recognized the importance of utilities such as electricity, telephone, and internet service to residents, companies, and public facilities in rural areas, especially when commercial companies may not be readily interested in providing such services.

The mission of RD is to improve the quality of life and the economies of rural America. RD provides financial support, through loans, grants, and loan guarantees to support essential services such as housing, economic development, health care, first responder services, and water, electric, and communications services, such as broadband telecommunications services (http://www.rd.usda.gov/about-rd/mission-history).

The Telecommunications Program of the Rural Utilities Service focuses on loans, grants, and loan guarantees for utilities, including deploying and expanding telecommunications services. These programs are intended to revitalize rural communities through a variety of infrastructure improvements, and create sustainable opportunities for wealth, new jobs, and increased economic activities in rural America (www.rurdev.gov).

The American Recovery and Reinvestment Act (ARRA) of 2009 directed $7.2 billion toward increasing broadband deployment in underserved and rural areas. A portion of this supported RUS in facilitating the deployment of broadband into rural areas.

In January 2015, the federal government began a further press for universal access to broadband high-speed internet across the U.S., especially in rural areas and small to moderate sized communities. In seeking to expand broadband networks, the federal government would provide financial and technical assistance to local governments seeking to improve internet services for their residents.

1.5 RUS Programs for Supporting Deployment of Broadband into Rural Areas

Since 1998, RUS has approved and obligated funds for 578 project loans in the Telecommunications Program, totaling approximately $8.21 billion (RUS 2009).

RUS has four programs within its Telecommunications Program that support deployment of rural broadband access. These programs are included in the scope of analyses of this PEA and are summarized below.

1.5.1 RUS Rural Broadband Access Loan and Loan Guarantee Program

This program furnishes loans and loan guarantees to provide funding for the costs of construction, improvement, or acquisition of facilities (not including acquisition of rights-of-way) and equipment to provide service at the broadband lending speed in eligible rural areas. The broadband lending speed is the minimum bandwidth requirement, as published by RUS in the *Federal Register*, by which an applicant must propose to deliver to every customer in order for RUS to consider a broadband loan. The goal of the Broadband Loan Program is to ensure that rural consumers enjoy the same quality and range of services that are available in urban and suburban communities. This Program aims to lend to entities capable of repaying its loans and that plan to offer service at a level that keeps pace with technological innovations while meeting the demands of customers in rural America.

1.5.2 Telecommunications Infrastructure Loan Program

The Telecommunications Infrastructure Loan Program, supported through appropriations and requirements provided in USDA Farm Bills (most recently, February 2014), makes long-term direct and guaranteed loans to qualified entities for the purpose of financing the improvement, expansion, construction, acquisition, and operation of telephone lines, facilities, or systems, including broadband, to furnish and improve telecommunications services in rural areas. All facilities financed must be capable of supporting broadband services at the lending speed.

The primary goal is to make adequate telephone and telecommunications service available to the widest practical number of subscribers during the life of the loan, with the borrower seeking to provide service to all interested potential subscribers in the service area. Both the nature of the service area and the cost per subscriber must be considered. However, borrowers are not required to extend service in situations where costs would be prohibitive (see 7 CFR part 1735).

Loan funds may be used to finance telecommunications services servicing rural areas for new construction, improvements, expansions, certain acquisitions, and refinancing of certain loans from non-RUS lenders.

1.5.3 Distance Learning and Telemedicine Grant Program (DLT)

The Distance Learning and Telemedicine Grant Program is specifically designed to assist rural communities in acquiring distance learning and telemedicine technologies so that local teachers and medical service providers can link to other teachers, medical professionals, and other needed expertise located at distances too far to access otherwise.

The intent of the DLT program is to benefit rural areas as defined by the number of residents. The definition of "end user" per the regulations (see 7 CFR part 1703 Subparts D through G) includes rural educational facilities and institutions such as schools, libraries, and training centers with direct real-live-time video connection between teacher and student. Also included are rural medical facilities such as hospitals, primary care centers, or other rural community facilities with direct real-time video connection between the medical provider/specialist and patient.

Distance learning, as defined by the regulations, emphasizes the connection of students and teachers at remote sites, implying that the project must incorporate a curriculum with measurable results delivered via telecommunications. Telemedicine is defined by the regulations as involving the delivery of medical care from medical professionals at one site to patients and their medical professionals at other sites via telecommunications, reflecting some benefit to rural residents either in reduced travel time or access to services not otherwise available locally.

1.5.4 Community-Oriented Connectivity Broadband Grant Program

The Community-Oriented Connectivity Broadband Grant Program (Community Connect Grant Program) is designed to provide financial assistance for telecommunications service at the RUS-specified internet speeds in rural, economically disadvantaged communities where broadband service does not currently exist. This program was initiated in 2002 as a Pilot Program for two years; it was formally implemented in 2004. The main purpose is the construction of broadband facilities in areas where no broadband exists, with a secondary benefit of providing for a community center that provides free broadband service to all critical community facilities in the proposed funded service area for a two-year period. This program is operated under the authority of 7 CFR part 1739 (RUS 2013).

Grants are awarded on a competitive basis for entities to serve all premises in eligible rural areas to ensure rural consumers enjoy the same quality and range of broadband services as is available in urban and suburban communities.

1.6 NEPA and RUS Decision-making in the Telecommunications Program for Broadband

1.6.1 Purposes of NEPA

NEPA requires federal agencies to incorporate environmental considerations into agency planning and decision-making, with appropriate public and agency involvement, and to make informed decisions that meet the agency need while investigating alternative ways to minimize or avoid predicted adverse environmental impacts.

NEPA is a procedural law - it does not require federal agencies to actually select the alternative with the fewest environmental impacts. It does require that federal agencies be informed of such alternatives or measures and consider them when making decisions, along with other factors such as cost, agency policy, decisions made previously, court decisions, and other preferences.

Ultimately, the intent of NEPA is that federal agencies make decisions that are fully informed with environmental and other information and analyses relevant to the decisions. Information may be provided by agencies and entities with scientific expertise or jurisdiction by law, and interested and/or affected agencies, entities, communities, and citizens. Agencies then seek to make decisions that effectively meet the need they are pursuing while minimizing or avoiding adverse impacts.

The purpose of NEPA documents (Environmental Impact Statements (EISs) and Environmental Assessments (EAs)) is to ensure that the results of agency planning, including alternative ways to meet the need, are presented clearly and in writing to the agency decision-maker and the public before the decisions are made.

The primary decision resulting from an EA is either the determination to prepare an EIS, if the analysis identifies the potential for significant impacts, or to not prepare an EIS because the analysis shows no significant impacts. The rationale for not preparing an EIS based on an EA is documented in a Finding of No Significant Impact (FONSI). The EA also contributes to decision-making for the project or program through considering and analyzing, when appropriate, alternative ways of meeting the need that would reduce or change the level of associated adverse impacts.

Actions that have been identified by the agency as having little risk for adverse impacts such that no EIS or EA is needed are called “categorically excluded actions” (categorical exclusions; CXs). A categorical exclusion documents the description of the proposed action and location, the agency’s category within which the proposed action is consistent, and the reasons why the proposed action would have minimal to no adverse impacts.

1.6.2 NEPA Documents and Public Involvement

To promote well-informed agency decision-making, NEPA procedures require federal agencies, consistent with applicable law and agency policy, to conduct their planning and decision-making processes with appropriate public involvement. Public and agency comments contribute to better planning and more informed decisions. The type of document (EIS, EA, or CX) the agency prepares depends on the potential level of impacts associated with the project or program. Projects or programs having the potential for significant impacts require the most robust and formalized opportunities for involvement and comment associated with EISs. The level of public involvement for EAs is discretionary to agency policy, as long as the Finding of No Significant Impact (FONSI) is made public. Those projects or programs with the potential for very few to no significant impacts (categorically excluded actions) typically have little to no public involvement and comment, depending on agency policy.

The NEPA procedures describing appropriate level of documentation, processes for each type of documentation, and commensurate public involvement are in the CEQ Regulations at 40 CFR parts 1500-1508 and are applicable to all federal agencies. However, each agency must develop and implement its own procedures or regulations to supplement and further define the procedures required by the CEQ Regulations, as described below.

1.6.3 RUS NEPA Procedures

The CEQ Regulations at 40 CFR §1507.3 recognize that agencies have different missions, decision-making processes, and types of actions. Therefore, the CEQ regulations require every agency to develop NEPA procedures that supplement and are consistent with the CEQ regulations so that NEPA "is an important contribution to the decision-making process" for each agency (40 CFR §§1507.3 and 1502.5).

The current RUS NEPA procedures are at 7 CFR part 1794, "*Environmental Policies and Procedures.*" The key sections pertinent to evaluating applications for broadband deployment are in Appendix B.

RD proposed a draft revision to its NEPA procedures at 7 CFR part 1794 in regulations that would apply to all Rural Development agencies (including RUS), located at 7 CFR part 1970 (also entitled "*Environmental Policies and Procedures*"). RD published these draft regulations for comment in the *Federal Register* on February 4, 2014 (79 FR 6739-6794; comment closed on May 7, 2014). RD anticipates finalizing the proposed regulations by publication of a final rulemaking in the *Federal Register*. These proposed regulations at 7 CFR part 1970 would replace those at 7 CFR part §1794 upon publication of the final rule in the *Federal Register*.

1.6.4 Programmatic Decision-making and Tiering

When a federal agency knows that projects within a program, including programs that provide funding to applicants, would have similar implementation, construction, and/or application and that many of the impacts may be similar considering the project's location and conditions, the agency may choose to combine the common elements of the projects into an evaluation of impacts at the program level. Programmatic planning and decision-making that uses a step-wise approach, called "tiering," is encouraged by the CEQ regulations (40 CFR §§1500.4(i), 1502.4, 1502.20, and 1502.28). Programmatic decision-making avoids repeating planning steps and documentation that can occur when decisions are made solely on a project-by-project basis, and provides the opportunity to evaluate the potential cumulative impacts of the program.

The CEQ regulations state:

> "When a PEA or PEIS has been prepared and an action is one anticipated in, consistent with, and sufficiently explored within the programmatic NEPA review, the agency need only summarize the issues explored in the broader statement and incorporate discussion from the broader statement by reference and concentrate on the issues specific to the subsequent tiered proposal" (40 CFR §1502.20)."

The CEQ issued final guidance on the use of programmatic NEPA documents and tiered decision-making on December 18, 2014, entitled "*Effective use of Programmatic NEPA Reviews*." The guidance states:

> "Programmatic NEPA reviews add value and efficiency to the decision-making process when they inform the scope of decisions and subsequent tiered NEPA reviews. Programmatic NEPA reviews can facilitate decisions on agency actions that precede site-specific or project-specific decisions and actions, such as mitigation alternatives or commitments for subsequent actions, or narrowing of future alternatives. They also provide information and analyses that can be incorporated by reference in future NEPA reviews. Programmatic NEPA review may help an agency look at a large or multi-faceted action without becoming immersed in all the details of future site- or project-specific proposals…Using programmatic and subsequent tiered NEPA reviews effectively allows for a focused review at the proper level…CEQ recommends agencies give particular consideration to preparing a PEA or PEIS when… (3) making decisions on 'common elements or aspects of a series or suite of closely related projects'."

RUS encourages the use of programmatic documents and tiered decision-making (see 7 CFR §1794.16):

> "It is the policy of RUS to prepare programmatic level analysis in order to tier an… EA where (a) it is practicable; and (b) there will be a reduction of delay and paperwork, or where better decision making will be fostered."

Projects typically funded by RUS within the Telecommunications Program have many similarities, including the environmental conditions where each project would be constructed. Almost all broadband projects use similar types of installation and implementation actions standard to the industry and RUS requirements, with the technologies selected based on the type of project and site-specific conditions. These technologies are described in detail in Chapter 2. Considering the impacts of these type*s* of technologies and projects at a program level rather than repeatedly at a project-by-project level is a logical and efficient approach for the RUS Telecommunications Program.

The process for using this PEA in support of project-level NEPA compliance is described in Chapter 4.

1.7 Scope of Analysis and Decisions

1.7.1 RUS Programmatic Decisions to be Made Based on this PEA

This PEA provides the analyses necessary for RUS to make the decision on whether or not the cumulative impacts associated with the Telecommunications Program deploying broadband to rural communities at the programmatic level would have the potential for significant impacts (40 CFR §1508.27). This analysis would also support RUS making certain preliminary decisions concerning the obligation of funds and approval of interim financing requests through a tiered NEPA process described in Chapter 4. The obligation of funds or approval of interim financing requests would occur prior to the completion of certain site-specific analyses for which complete data and design criteria are often unavailable at the time. The ability to make these obligations or approvals enables applicants to more readily move forward to fully complete planning and design and thus appropriately conduct the remaining environmental analyses. It should be noted that RUS possesses the ability to de-obligate funds if all environmental conditions are not met. Actual release of funds and any construction cannot proceed prior to all environmental review requirements having been met, thus avoiding an irreversible or irretrievable commitment of resources and comporting with the provisions of 40 CFR §1506.1.

RUS and its applicants may use the programmatic analyses, mitigation, and information within this PEA to frame project analyses, select applicable mitigation, and conduct the necessary compliance with laws such as the Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA) specific to the conditions of the proposed project area.

This PEA provides the basis for only RUS decision-making. Agencies such as the US Forest Service (USFS), Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA), and National Park Service (NPS) that may be requested to authorize land use under their authority are obligated to comply with all applicable laws and regulations, including NEPA (see Appendix C for their pertinent NEPA regulations including categorical exclusions and Appendix D for key sections of agency land use authorization regulations).

1.7.2 Scope of Actions included in this PEA

This PEA includes the analysis of various actions for deploying fiber optic cable for broadband, including in-ground and aerial installation, as well as cell and microwave towers for wireless broadband. It also includes ancillary actions, such as placement of small metal cabinets for holding associated electrical equipment and construction of handholes for accessing, maintaining, and replacing underground cable infrastructure. To the extent that the construction of buildings, such as headquarters, may be funded by RUS, these are included as appropriate, recognizing that site-specific analysis is necessary for associated parking and utilities, or other connected project elements.

1.7.3 Rationale Regarding Not Considering Alternative Technologies in this PEA

This section describes the rationale for eliminating the consideration of action alternatives other than the described industry-standard technologies used by applicants in the current RUS Telecommunications Program. These technologies are described in Chapter 2.

Per 40 CFR §§1501.4(b,c) and 1508.9, the primary purpose of an EA is to "briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact." The consideration of alternatives in environmental assessments is necessary only for a project or program "which involves unresolved conflicts regarding alternative uses of available resources" (Section 102(2)(E) of NEPA, 40 CFR §1508.9(b), and pertinent federal court precedent).

RUS regulations at 7 CFR §1794.12 state:

> "In determining what are reasonable alternatives, RUS considers a number of factors. These factors may include, but are not limited to, the proposed action's size and scope, state of the technology, economic considerations, legal and socioeconomic concerns, availability of resources, and the timeframe in which the identified need must be fulfilled."

The CEQ, in its 40 Most Asked Questions (1981; http://energy.gov/sites/prod/files/G-CEQ-40Questions.pdf) regarding the consideration of the "no action" alternative for project- and programmatic-level NEPA reviews states:

> "There are two distinct interpretations of "no action" that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases 'no action' is 'no change' from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the 'no action' alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the [NEPA document] to those impacts projected for the existing plan. In this case, alternatives would include management plans of both greater and lesser intensity, especially greater and lesser levels of resource development.
>
> "The second interpretation of 'no action' is illustrated in instances involving federal decisions on proposals for projects. 'No action' in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward...
>
> "In situations where there is an existing program, plan, or policy, CEQ expects that the no-action alternative …would typically be the continuation of the present course of action until a new program, plan or policy is developed and decided upon."

As this is a programmatic EA, the definition of the "no action" alternative falls under the first category, where the "no action" alternative is the current RUS Telecommunications Program as described in Chapter 2. As the RUS program has been in existence for many years, the no action alternative is the current program. RUS is continuing the current program using current industry-standard technologies; therefore, the current program is both the "no action" and the "proposed action" alternative.

The current Telecommunications Program is equivalent to the "no action" alternative and the proposed action per the CEQ regulations and "40 Questions" guidance and RUS regulations, considering that:

- The actions described in Chapter 2 are currently standard to the industry and are generally environmentally protective;
- RUS does not foresee applicants proposing actions other than those described, nor did any applicants indicate the use of other technologies during the stakeholder interviews (Section 1.10, Appendix F);

- The majority of RUS-supported telecommunications projects are categorically excluded from preparation of an EA or EIS, indicating that environmental impacts are typically not significant (see Section 1.9 below); and
- There are no known "unresolved conflicts regarding alternative uses of available resources" per NEPA Section 102(2)(E). Almost all program actions occur within already-disturbed rights-of-way and/or on existing infrastructure, resulting in a minimal risk of adverse impacts that could not be mitigated during project planning. The majority of towers are less than 200 feet tall. Most new buildings are also relatively small and/or sited within developed areas, such as business areas of a town. Any project-level actions that may have the potential for significant impacts would be evaluated as such during project evaluation.

RUS has, therefore, determined that additional alternatives are not necessary or useful for this PEA and that the current RUS Telecommunications Program and its associated technologies and methods of deployment as evaluated in this PEA serve as both the "no action" alternative and the proposed action.

1.7.4 Geographic Scope of this PEA

The PEA analyzes the potential impacts of proposed broadband projects that meet RUS Telecommunications Program requirements in all 50 states within the United States borders and the following U.S. territories and commonwealths likely to benefit from broadband services:

- Puerto Rico, a commonwealth in political union with the United States;
- U.S. Virgin Islands, an unincorporated territory of the United States;
- American Samoa, an unincorporated territory under the jurisdiction of the United States;
- Guam, an unincorporated territory of the United States; and;
- Northern Mariana Islands, a former trust territory and now a commonwealth in political union with the United States.

Appendix E identifies states with environmental policy laws and information regarding applicable environmental compliance requirements for the five U.S. commonwealths and territories.

1.7.5 Temporal Scope of this PEA

This PEA has no termination date. Program expansions and changes in technologies may require supplementing the PEA if the program or technology changes may result in changes to impacts as evaluated herein. As long as individual projects are conducted

as described in Chapter 2 and the potential impacts associated with implementation remain within the range of impacts as identified in Chapter 3, this PEA remains current.

1.8 Processes for Supplementing this PEA

The purpose of supplementing an existing NEPA document per 40 CFR §1502.9(c) is to make necessary revisions or corrections while retaining portions of the document that are still relevant, valid, and correct. The CEQ regulations state that a document only needs supplementation under the following conditions:

- The agency makes substantial changes in the proposed action that would cause different environmental impacts than those analyzed in the NEPA document; or
- There are significant new circumstances or information (including new technologies or mitigation) that would have different impacts or need different mitigation than those evaluated in the NEPA document.

RUS also may supplement the PEA when it determines that it would be helpful for its decision-making.

This PEA may need supplementation in the future for any of the following reasons in order to keep it valid and correct, recognizing that any specific changes or revisions in a supplement do not necessarily affect the remaining information and analyses unless specified:

- The RUS Telecommunications Program for broadband adds a new program(s), drops or substantially modifies an existing program(s), or makes other changes that would affect the analyses and decisions contained in the PEA;
- If one or more types of technologies proposed by the applicant are not described and analyzed in the PEA, and that new technology might have different environmental impacts than those analyzed. The new technology would be added to Chapter 2 and its associated impacts analyzed in Chapter 3; or
- If new information indicates that an impact analysis in Chapter 3 is not correct or valid so as to affect the decision that RUS made in the original PEA, including the decision to prepare a FONSI instead of an EIS.

RUS will periodically evaluate this PEA and its associated decision document to ensure that all legal requirements (statutes, regulations, executive orders, etc.), financing programs, descriptions, technologies, information, mitigation, and analyses remain current, complete, accurate, applicable, and valid. For any variations from this PEA, RUS will either document its determination not to supplement the PEA because the variations are not environmentally relevant and include its determination in the project record, or revise or supplement the PEA as needed using appropriate NEPA procedures.

1.9 Use of Categorical Exclusions for RUS Telecommunications Program Project-Level Environmental Review

A categorical exclusion is a type of action that has been found by an agency to not have significant impacts either for an individual project or cumulatively, unless site-specific conditions occur that would increase the potential for significant impacts on resources (extraordinary circumstances; 40 CFR §1508.4). Between 1999 and 2009, RUS has financed or been involved in as many as 900 telecommunications projects, of which RUS determined that three large underwater cable projects located in the Pacific Ocean required EAs, with the remaining projects meeting the criteria for a categorical exclusion per 7 CFR part 1794. EAs were also prepared for seven large land-based projects normally meeting the criteria for a categorical exclusion, but requiring land use authorizations in the formats requested by other federal agencies in Arizona and New Mexico (US Forest Service, Bureau of Land Management, National Park Service, and the Bureau of Indian Affairs; RUS 2009).

The majority of environmental issues raised by RUS broadband proposals are due to the presence of and potential effects to historic properties, mostly archaeological sites, and, to a lesser degree, listed plant and animal species. In many cases, project proponents are able to reroute their construction activities to avoid sites and habitat and therefore do not engender a finding of "adverse effect" under the NHPA Section 106 or ESA Section 7 review processes. Because most broadband projects involve underground placement or aerial attachment to existing structures located within already disturbed road or electric line rights-of-way, very low risk exists for encountering protected species or important historic properties.

Environmental review of construction of new towers for wireless broadband systems is coordinated with the Federal Communications Commission's (FCC) Wireless Telecommunications Bureau for projects licensed through FCC spectrum when appropriate. Applicants submit the FCC's New Tower Submission packet to a State Historic Preservation Officer (SHPO) or the Tribal Historic Preservation Officer (THPO), as appropriate, before any construction or other ground-disturbing activities begin for new towers.

With the enactment of ARRA, both NTIA and its FirstNet Program for First Responders required development and approval of agency-specific lists of categorical exclusions. NTIA based its list on that of RUS in 7 CFR part 1974, and FirstNet based its list on the approved NTIA list. Both NTIA and FirstNet determined that their categorically excluded actions would not have significant impacts (NTIA April 2014). These categorical exclusions are included in Appendix B.

The NTIA analysis substantiates and validates RUS' predicted environmental effects related to use of categorical exclusions and provides evidence that RUS' two-tiered approach to categorical exclusions (Appendix B) supports the integrity of RUS'

compliance with NEPA and its regulations. The two tiers of categorical exclusions that RUS (and some other agencies) use involve, first, those types of actions that have such a very low risk of adverse impacts that the use of that categorical exclusion does not need to be documented. The second tier involves those types of actions that have a higher potential of having some adverse impacts to some resources that RUS requires documentation of why there would not be "extraordinary circumstances" or adverse impacts.

RUS' requirements for categorical exclusions at 7 CFR §1794.21 (the first tier of categorical exclusion) and §1794.22 (the second tier) and its internal review process for applicants' submittals (including either an Environmental Report or a documented questionnaire; Appendix J) provides for a level of documentation and analysis that ensures that no extraordinary circumstances related to potential environmental effects exist for projects financially supported by RUS' Telecommunications Program (RUS 2009).

As the purpose of the RUS Telecommunication Program is to provide or guarantee financing to relatively smaller broadband projects in rural areas, a project with the potential for significant impacts that would require preparation of an EIS is very unlikely. Therefore, RUS expects that the majority of all proposed broadband projects submitted under the telecommunications program would be readily tiered to this PEA using categorically excluded actions.

To assist applicants when requesting land use authorizations from federal agencies, the following lists of relevant categorical exclusions, and key agency NEPA and other regulations pertinent to land use authorizations for broadband projects for the following agencies are found in Appendices C (NEPA) and D (land use authorization regulations):

- US Forest Service (USFS): NEPA and land use authorizations;
- Department of Interior: NEPA;
- Bureau of Land Management BLM): NEPA and land use authorizations;
- Bureau of Indian Affairs (BIA): NEPA and land use authorizations;
- National Park Service (NPS): NEPA;
- US Fish and Wildlife Service (USFWS) Refuges: NEPA and land use authorizations;
- Bureau of Reclamation (BOR): NEPA;
- US Army Corps of Engineers (Nationwide Permit 12): NEPA;
- Federal Emergency Management Agency (FEMA): NEPA;
- US Air Force (USAF): NEPA;
- US Navy (USN): NEPA;
- US Army (USA): NEPA;
- National Telecommunications and Information Agency (NTIA): NEPA; and

- FirstNet: NEPA.

1.10 Summary of PEA Scoping Comments

RUS published a Request for Information (RFI) in the *Federal Register* on November 28, 2014 for 60 days comment concerning the scoping of this PEA.

RUS received several letters in response to the RFI. In addition, RUS conducted detailed interviews of stakeholders, including representatives from eight agencies, two industry groups, seven current and former program applicants, and nine consultants and contractors working for program applicants, for a total of over 61 individual interviewees. The RFI and the detailed report of the letters and interviews are documented in Appendix F, and key findings are summarized here.

1.10.1 Summary of Comments

The primary comments expressed by RUS applicants involve federal/state agency and tribal government coordination. The comments did not focus on RUS environmental and cultural compliance of this PEA directly, but on delays in the processes caused by federal land management agencies responding to applications for land use authorizations, with some concerns expressed about RUS processes. Many stakeholders interviewed were pleased that RUS is preparing this PEA, and provided helpful and detailed comments in support of this effort.

Comments include:

- Long time periods needed for agencies to provide approvals and issue land use authorizations for projects within existing rights-of-way and on existing poles, or upgrades and maintenance of existing systems (typically from 2 to (in extreme cases) up to 8 years);
- Excessive studies required for projects with minimal potential for adverse environmental effects;
- Mitigation that does not add any additional level of environmental and cultural resource protection;
- Federal agencies requiring the preparation of Environmental Assessments (EAs) when a Categorical Exclusion (CX) could be appropriate; and, if a CX is used, agencies requiring the level of analysis, surveys, and studies typical of that for an EA;
- Agencies acting independently from each other on the same project, with a lack of a clearly-designated lead agency to assist applicants with the cross-agency permitting and consultation processes;
- Agencies adding requirements and changing project design or location at the last minute, even after the conclusion of pre-application meetings or after the

applicant has obtained approvals from others; these actions lead to delays, require modification to existing permits, and force program applicants to lose construction seasons and/or hire construction contractors at unreasonable rates; and

- Applicants and their consultants/contractors are also very concerned with RUS possibly requiring that all permits and authorizations be obtained prior to RUS approval of financial assistance. Most permitting agencies will not accept an application for consideration if financial support is not clear.

The costs of delays and unnecessary design and mitigation requirements can make a project no longer economically viable. Potential clients and customers may continue to be unserved or underserved.

1.10.2 Comments Regarding Issues

The USFWS' primary issues regarding installation of broadband infrastructure include: impacts of towers on migratory birds (mortality to migratory birds from attraction to lights causing collision with guy wires and potential ecological effects of electromagnetic frequency radiation); spread of invasive species; impacts on listed species; and tree removal during nesting season.

1.10.3 Comments Providing Recommendations

Commenters offered the following recommendations:

Design/Construction: Construction engineers request the opportunity to review of the entire length of a project to find "red flags" requiring design modification and to recommend effective and cost-effective mitigation measures.

Training: Almost all interviewed entities expressed much interest for interagency training in technologies and associated impacts, agency processes, ROW and land use authorization regulations and processes, RUS loan design and environmental review processes, and Section 106 processes.

Section 106 (NHPA):

- Identify opportunities for Programmatic Agreements for loan packages, regional infrastructure impacts, and the RUS nationwide telecommunications program to both identify standard mitigation and levels of survey for various conditions.
- Identify opportunities for access to FCC e106 database by agencies and applicants currently excluded, including just identifying that sites are present, not types of sites and locations, to facilitate consultation with tribes.
- Program applicants and their consultants request that RUS bring company representatives to tribal meetings for more positive and productive meetings.

RUS processes:

- Contractors request that RUS have contractor construction engineers conduct a "constructability review" for feasibility, red flags, and design recommendations early in the submittal process.
- Program applicants request RUS assistance in determining appropriate levels of surveys and NEPA documentation early, perhaps pre-application.
- RUS needs to identify intra-department and inter-agency procedures for managing environmental review, permitting, consultation, and approvals for the entire project, with an assigned RUS environmental staff person for each project to assist the applicant and provide early information on requirements and realistic schedule timelines.
- RUS needs to provide templates and examples of letters and documentation standards so that applicants can meet RUS expectations.
- RUS should allow loan package materials to be submitted digitally rather than by hard copy.
- RUS should conduct only one comprehensive review of the loan application package to determine if it is complete and, if not, what is needed to provide a completed loan application; sometimes RUS has several consecutive requests.
- RUS should provide a list of agency contacts for a particular state or region.

Pre-application Meetings, Surveys, Agency Coordination:

- NPS and BIA should not require all locations to be recorded in metes and bounds or township/range, but should allow for the use of GPS data. Surveyors are extremely expensive and such data cannot be readily submitted to GPS databases.
- RUS should waive the need for analysis of alternative routes and technologies for new installation in existing transmission, distribution lines, or other disturbed ROWs.
- RUS should accept existing environmental surveys, including environmental justice (EJ) and historic structures, conducted within 5 or 10 years within the same ROW/area. Require new surveys only for protected species, jurisdictional wetlands, and archaeological sites.
- Applicant's consultants often must set up pre-application meetings and develop streamlined processes with the agencies, or nothing will get done in a timely manner.
- RUS national office staff and appropriate field office of the land management agencies for a particular project should coordinate early so that the RUS

environmental documentation can be prepared as acceptable to all agencies, and information and resources can be expeditiously shared to reduce or eliminate duplication of effort.

- Applicants must often engage both the tribes and the BIA for project consultations and permits.
- RUS and NTIA should maintain close working relationships on this PEA and other related activities.

Permits:

- Agencies could issue 20 to 30-year terms for broadband project land use authorizations.

Supplementing Agency Personnel:

- Applicants should hire consultants to prepare NEPA documents and conduct surveys, if allowed by the agency field office; some field offices have experienced consultants working in the agency office for support for NEPA and special use permitting.

2 Broadband Infrastructure Descriptions

This chapter provides a detailed description of installation and construction methods and technologies for:

- Underground Placement - Fiber optic cables are placed in very strong and durable conduit in more developed areas to minimize potential for damage;
- Buried Placement - Fiber optic cables are placed underground but in less robust ductwork or conduit, or sometimes placed directly in the ground on a protective bed;
- Aerial Cable Placement- Cables are strung on existing telecommunications or electrical poles or transmission towers;
- Drops - Fiber optic cables are placed from the main line connecting to the user facility, such as a residence or a library;
- Cell Towers and Microwave Towers - Antennas installed on new and collocated on existing towers; and
- Ancillary Equipment and Support Buildings - Equipment necessary for supporting the use of fiber optic cable for broadband operation, such as electrical cabinets and buildings.

2.1 General Description of Broadband Technologies

Industry practice emphasizes locating new cable on suitable existing poles, on poles directly adjacent to existing poles, or in previously disturbed rights-of-way and/or construction easements. To ensure consistent quality of construction and minimal, if any, impact to the environment, industry standards follow state and local regulatory requirements and guidelines for permitting and construction practices.

Applicants seeking RUS support are encouraged to use approved RUS and industry construction and operation standards found in RUS Bulletins as listed below. The revisions to RUS bulletins and the alphabetical subject index and numerical index of current RUS telecommunications issuances are found in Informational Publication 300-3 (10/28/10).

The construction standards for broadband technologies are found in:

- RUS Bulletin 1753F-151: Specifications and Drawings for Construction of Underground Plant (09/2001). This specification provides contractors, engineers, and RUS borrowers with assembly unit descriptions, materials,

construction and installation, and drawings for underground plant associated with RUS Form 515, Telecommunications System Construction Contract.

- RUS Bulletin 1753F-152: Specifications and Drawings for Construction of Aerial Plant (09/2001). This specification provides contractors, engineers, and RUS borrowers with assembly unit descriptions, materials, construction and installation, and drawings for aerial plant associated with RUS Form 515, Telecommunications System Construction Contract.
- RUS Bulletin 1753F-153: Specifications and Drawings for Service Installation at Customer Access Locations (09/2001). This specification provides contractors, engineers, and RUS borrowers with assembly unit descriptions, materials, construction and installation, and drawings for service installations at customer access locations associated with RUS Form 515, Telecommunications System Construction Contract.

In addition, 7 CFR part 1753 defines the processes borrowers must use in applying for and implementing projects within the RUS Telecommunications program, including:

- General and specific construction requirements for major and minor construction, including building interiors and exteriors; and
- Standards for hiring architectural and engineering services.

RUS does not have a bulletin for tower construction. New fiber systems have an average useful life of approximately 30 years. Existing underground and older copper systems are generally not economically feasible to recover and therefore often abandoned in place when they are no longer serviceable. Removal of obsolete underground cables is generally only undertaken if required by the right-of-way agreement.

Construction and cable installation as described below follow RUS bulletins and regulations, industry standards, the National Electrical Safety Code, National Electrical Code, and applicable federal, state, and local guidelines and regulations. Installation of buried, underground, and aerial fiber optic cables typically occurs along existing roadways and electric rights-of-way or other utility corridor. To obtain authorization to use existing rights-of-way, applicants must secure the appropriate permits, land use authorizations, and/or agreements from the landowner and/or the federal, state, or local agency with jurisdiction. Prior to underground cable installation, utility companies must be notified to enable them to mark locations of their existing facilities and avoid damaging the cables or pipelines during underground installation of fiber optic cable. To avoid impacts to other utilities and sensitive environmental resources, installation of aerial and underground cable may require modifications to cable routes, cable depths, antenna heights, etc.

2.2 Detailed Description of Underground Fiber Optic Cable and Conduit Plant

Installation of new fiber optic cable or replacement of older copper wire or damaged fiber optic cable involves burying the cable, placing the cable underground in either conduit or protective bed, or attaching the cable to existing power or utility poles. Service providers for residential and commercial customers may have access to additional broadband capacity made available over rural broadband networks and infrastructure owned by others. Additional capacity provides consumers with more robust broadband services and maximizes consumer welfare, innovation, and investment.

2.2.1 General Technology Descriptions

The fiber optic cable may be directly plowed into the soil or placed in a conduit or duct to protect the cable from being damaged by future ground disturbance or by burrowing rodents. Conduits may be PVC pipes or concrete casings. To avoid additional ground disturbance, especially when other utility lines such as gas and electric are present in the construction corridor, an additional conduit may be installed alongside the first for future use.

The conduits are placed at a minimum depth of three to four feet throughout a project's alignment. Where the route crosses a drainage or intersects with a sensitive resource, the conduit(s) is typically placed using directional boring at a depth necessary to minimize surface disturbance (see Section 2.2.2.3 below for description of directional boring procedures).

Existing copper cables are frequently replaced with fiber cables at the time of installation of new cables. Vegetation clearing and minor grading is performed in areas of dense vegetation or where the topography makes it difficult for equipment to operate safely or effectively. However, this is often not necessary in or near maintained rights-of-way.

Most buried cable placement parallels existing roads within rights-of-way or in existing utility rights-of-way. Staging yards for project construction equipment and vehicles are often located in previously developed areas in such a way as to protect the equipment and vehicles from unauthorized use, damage, or theft. Frequently, existing roads are used for entrance to and exit from a right-of-way corridor. Vehicles when not in use are parked on the previously disturbed corridor or road shoulder and are often returned to the designated staging yard after work hours.

To ensure that traffic can pass with minimum delays and after coordination with the appropriate transportation agency(ies), necessary traffic control measures and traffic signaling are used for construction vehicles entering and exiting roads and for ensuring that traffic flow is minimally impeded.

RUS may require an independent project inspector. An inspector or monitor may be present during project construction activities to ensure that acceptable engineering standards and resource mitigation clauses are being met, especially for projects within areas with sensitive resources, such as listed species, wetlands, or archaeological sites. Such inspectors or monitors are retained by the applicant on the project site as required by the authorizing agencies.

The sequence of construction for underground cable systems typically involves:

- Flagging and staking the right-of-way;
- Clearing and grading if necessary;
- Mobilization of conduit/fiber placement crews;
- Installation of the fiber optic cable and conduit, including needed directional boring;
- Placement of right-of-way markers;
- Splice fiber optic cable system and test for functionality;
- Site cleanup and restoration concurrent with conduit and fiber placement;
- Place route markers;
- Operation and maintenance; and
- Ultimate replacement or abandonment.

Many types and models of equipment are used in placing underground fiber optic cable, depending on project needs and site conditions. The following table lists representative types of equipment designed to perform specific tasks. A particular project may use some or all of the types and models of equipment listed in Table 2-1.

Table 2-1. Equipment Typically Used for Placement of Cable Underground.

TYPE	QUANTITY
Typical Right-of-Way Preparation Equipment	
Standard Pickup Truck	2
Bulldozer with Ripper Shank	1
Two-ton Truck with Chip Box	1
Chipper/Shredder	1
Misc. Small Power Tools, such as chainsaws	Many
Typical Underground Fiber Optic Cable Placement	
Standard Pickup Truck	2
Semi-Truck with Lowboy Trailer	1
Backhoe/Loader	1
Excavator	1
Cable Plow	1

Heavy-Duty Flatbed Truck	1
Cable Trailer	1
Typical Directional Boring Equipment	
Standard Pickup Truck	1
Dump Truck/Trailer	1
Skid Steer Loader	1
Vacuum Locator System (ditch witch)	1
Compactor	1
Typical Clean-up/Restoration Equipment	
Standard Pickup Truck	1
Heavy Duty Dump Truck/Trailer	1
Skid-Steer Loader	1
Backhoe/Loader	1
Vacuum Locator (ditch witch) System	1
Compactor	1

2.2.2 Placement of Underground Cable and Conduits

Depending on existing conditions, underground cable is typically placed 36 to 48 inches deep within a utility corridor or public road right-of-way whenever possible. Four basic methods are used for placement of fiber optic cable below-ground, depending on existing conditions:

- Plowing;
- Trenching;
- Directional boring; and
- Rock trenching.

2.2.2.1 Tractor and Vibratory Plowing

The tractor plow or vibratory plow is the preferred and cost-effective method for burying line (Figures 2-1 through 2-4). Plowing uses tracked heavy equipment with a plow capable of maintaining the intended depth of the conduit while causing minimum displacement of the soil, although smaller vehicles may be used depending on local conditions, especially in rural areas with soil having few rocks and obstructions.

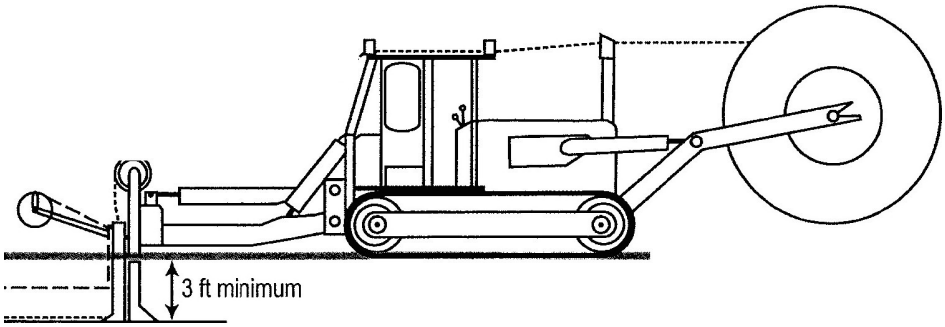


Figure 2-1. Diagram of a plow with attached reel for cable deployment.

The width of the plow point is two inches. Direct soil disturbance caused by the burial plow on the machine is six to twelve inches wide (Figure 2-1), in addition to light surface disturbance caused by the tracks of the equipment, which is approximately two to three wide on either side of the vehicle (Figures 2-2 and 2-3). All soil and vegetation disturbance is temporary, as the vegetation will either recover naturally or the site is seeded with species consistent with the existing vegetation, such as lawn grasses, or native species as appropriate (Section 3.14.1). The depth is typically three to four feet, and up to six feet in areas where more protection is desired, such as washes, high erosion areas, or areas with a particularly deep frost line.

The plowing method of installation requires no trench and does not create an excavated spoil pile; instead it lifts the soil and leaves a heaved-area on each side of the plow slot. There is no need for material excavation or imported soil to restore the slit.

A reel of conduit is either loaded onto the plow or onto a truck directly behind the plow, and as the plow moves forward, the conduit is fed into a chute, which directs the conduit into the bottom of the slot opened by the plow. As the plow continues forward, the excavated slot is immediately compacted back to ground level.

After the conduits and cables are placed, the disturbed ground is restored using a roller or by driving the equipment over each side of the plow rip to push it back to a level state and to compact the disturbed soil. The ground is restored by using either the cable plow itself, a second excavator used for pulling the plow, or a “cleanup” excavator working behind the cable plow.

Transport vehicles are required to accompany the track plow, including a cable reel truck, vehicles for transporting construction personnel, and a truck and trailer to transport other equipment and supplies.

Sometimes a vibratory plow (Figure 2-4) is used to break soil compaction, small rocks, and other resistance. Use of the vibratory plow supplements needed pulling power, allowing smaller placement equipment to be used.

Figure 2-2. Plowing Method of Installation Source: The Fiber Optic Association

Figure 2-3. Plowing along a roadside. Source: Power and Communication Contractors Association

Figure 2-4. Vibratory plowing along a roadway. Source: Power and Communication Contractors Association

2.2.2.2 Trenching, including Rock Trenching

Trenching is typically used in areas where the conduits cannot be placed to depth using the plow method, such as in areas with rocky soils having large loose boulders. Trenching also occurs at handholes and tie-in locations where the conduit is joined together or where conduit would need to be accessed in the future for maintenance or upgrade.

Open trenching involves excavating a trench eight to twelve inches wide and three to four feet deep using a backhoe or similar excavation equipment. The trench may approach five feet in width in very rocky areas. In addition to the direct ground disturbance from the trenching, the tracks on the vehicle also causes light disturbance. Typically, fiber optic cable is installed in conduits placed in the bottom of the trench or rarely directly into the trench itself. As the equipment excavates ahead, the side cast material is backfilled into the trench and the soil suitably compacted using an excavator and/or skid-steer loaders and compacted with the excavated material.

In developed areas with existing roads or buildings, conduit and/or cable may be installed by either directional boring (boring under the infrastructure rather than through it) or by micro-trenching, if the infrastructure is a paved roadway. Directional boring is described below. Micro-trenching uses special equipment to simultaneously cut a narrow trench through asphalt to minimize damage to existing roads, typically 12-18 inches deep, while at the same time removing spoil using a vacuum system. Ground disturbance when micro-trenching is limited to the width of the micro-trench in the roadbed, typically two- to four-inches in width. After conduits are placed in the trench,

the excavation is filled with an environmentally safe grout that is resistant to shrinkage, weathering, and erosion. After curing, asphalt mastic is applied on top of the grout-filled trench to repair the road.

Rock trenching is used in conjunction with trenching or plowing in areas where materials such as boulders or bedrock prevent the use of plowing or regular trenching, and is similar to a trenching process conducted in soils. After the conduit and cable are placed in the trench, the area is compacted to appropriate standards. If sawing through large boulders or bedrock is required, the trench could be up to 12 inches wide and 4 feet deep, depending on the extent of rock.

As is the case with the other construction techniques, trenching typically occurs within previously disturbed public rights-of-way.

2.2.2.3 Directional Boring and Bridge Attachment

Directional boring is a process where a hole is drilled under sensitive infrastructure or resources, such as roads, underground utilities, waterways, wetlands, and cultural resources. Directional boring uses guidance equipment to provide continuous and accurate monitoring of the drill bit position to avoid unnecessary adverse impacts or damage to the resource or infrastructure (Figures 2-5 through 2-7).

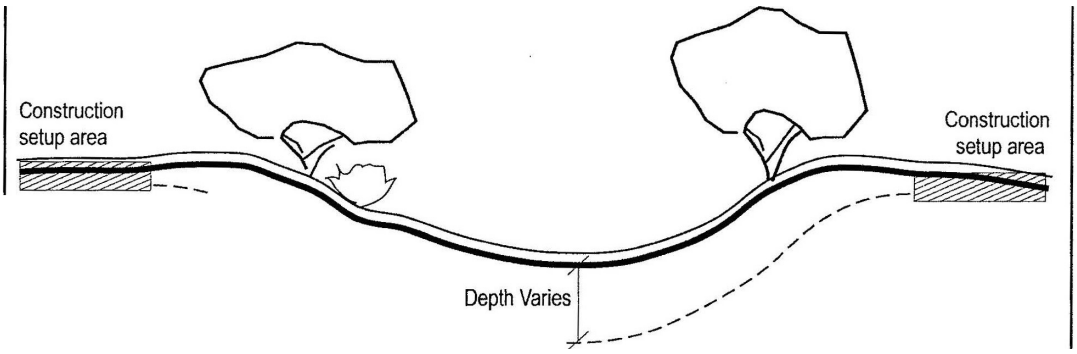


Figure 2-5. Directional Boring Method: Typical Waterway Cross-Section

Figure 2-6. Directional Boring Machine. Source: The Fiber Optic Association

To create a borehole, which is typically 4 to 6 inches in diameter, at the appropriate depth, directional-boring uses a boring rig set outside of the sensitive area (such as on the wash bank or edge of roadway) without disturbing the sensitive area or infrastructure. The typical direct ground disturbance width is several inches, with light ground disturbance caused by the tracks on the drill rig. Direct ground disturbance for directional boring is limited to areas of entrance and exit for the boring head and the location of the boring rig during the drilling.

As directional boring is used to avoid obstacles and sensitive areas, the depth of boreholes varies based on depth of the impediment or resource to be avoided. Although bore lengths are generally less than 100 feet, they may be as long as hundreds of feet depending on the length of the area to be avoided.

A bore is initiated with a bore pit, which allows the bore to occur at the proper depth. The operator who guides tunneling through the ground beneath the obstruction then directs the boring head forward. As the head moves forward, 10-foot rod sections are added to the boring rig to increase the length of the excavation as necessary. A watery slurry mixture is introduced through the rods and bore to reduce soil compaction around the boring head path.

After the obstruction or sensitive resource is cleared, the boring head is directed toward the ground surface on the other side of the impediment. When the boring head breaks

the surface on the other side, flexible High Density Polyethylene (HDPE) casing is attached to the bore head and the head is then pulled back through the excavation, pulling the casing into the excavation, creating a pathway through which the cable is installed.

Directional boring requires a boring rig, a cable reel truck, and transport vehicles for personnel and other equipment and supplies. Handholes are installed below-grade using small excavators to minimize soil disturbance. Bore pits are backfilled and, where appropriate, compacted using hand tamps such as mechanical whackers or a compaction attachment on a backhoe.

For crossings of existing buried pipelines, power lines, or telephone cables, if written permission from the existing facility owners is obtained, the fiber optic cable can be placed above the utility as long as the cable remains at least a 12 inches above the buried utility. Otherwise, the cable/conduit is placed under the existing utilities using directional boring to maintain a minimum 12-inch clearance.

Dry washes are plowed or bored as environmental factors allow and when determined to be a jurisdictional wetland per Section 404 of the Clean Water Act. Conduit is placed below culverts using directional boring, unless the existing facility owner requires the use of another technology as recorded in written authorization.

Attaching cables to existing bridges may also be used as an alternative to directional boring to avoid impacts to wetlands or streams. The number and locations where bridge attachment would be used are determined at final design stages of project development.

Figure 2-7. Directional Boring in a sensitive area. Source: Power and Communication Contractors Association

2.2.2.4 Buried Handholes

Handholes (Figure 2-8) are placed along new lines to provide future access to underground cables without further ground disturbance, where cables are spliced together and where cables separate from the main line, where cable slack for future access is needed, or where aerial cables transition to or from underground placement. Existing lines already have handholes in place. Additional handholes are placed in-line on existing conduit systems to facilitate cable pulling, to create additional access points for lateral connections, and/or where a physical obstruction/transition requires a modification in the cable string, such as a transition from buried conduit to a bridge or pole attachment.

Handholes are used for the following purposes and locations:

- Handholes are placed at fiber optic cable ends and/or intersections for splicing and storing the splice case and slack. Reel lengths are approximately 20,000 feet - a maximum distance between handholes in rural areas. Often, there are three to four handholes within these spans, averaging a handhole spacing of 5,000 feet;
- Handholes are placed at access points for future use. In more developed areas where conduit is placed and fiber optic cable is subsequently pulled through it, the spacing could be reduced to approximately 1,500 feet to provide more slack storage and access locations in these high traffic areas; and
- Handholes are placed as pull locations in conduit runs where either the distance, number of turns/bends, or a combination of both require a mid-assist point to pull fiber optic cable into the conduit without excessive splice points. These considerations may decrease the average spacing further in more developed areas due to numerous potential street intersections, required deviations around existing facilities, and changes in route direction to pass additional customer sites.

Installation of handholes requires excavation of an area varying from one foot by one foot to as large as three feet by five feet wide. A preformed polymer-concrete-metal box is buried at ground level or slightly below the surface by as much as 12 inches. Buried handholes are located using metal detectors. Installation is limited to digging directly above the existing conduit in previously disturbed soil, accessing the conduit by cutting out a section, and setting the new handhole directly over this access location.

Once the project is completed, the handholes are accessed periodically for maintenance or addition of new cable. Handholes are carefully located to avoid cultural and other sensitive resources.

Figure 2-8. A handhole in a suburban neighborhood. Source: Power and Communication Contractors Association

2.2.2.5 Flagging and Staking the ROW and Placing ROW Markers

Prior to placement, the fiber cable route is staked to ensure construction remains within the authorized limits of the long-term and temporary right-of-way areas by:

- Centerline staking to indicate the general area of placement for the proposed conduits;
- Border staking to mark the boundary of the authorized limits of the long-term and temporary right-of-way areas;
- Boring staking/flagging, if a directional bore is required;
- Staking/flagging to designate the limits of areas of concern that must be avoided; and
- Staking/flagging to identify the location of handholes.

After conduit and cable are placed, right-of-way marker signs are installed along the route near the centerline of the right-of-way. These markers are positioned at all handhole locations, at changes in route directions, at substantial points of interest such as changes in ROW widths, at route deviations to avoid sensitive resources, and at all road/highway intersections.

These markers are orange with black lettering, placed on a white post four to five feet tall that is pounded directly into the ground with no excavation, and printed with a warning indicating the presence of the buried fiber optic cable. The markers are spaced within line-of-sight of one another. A brightly colored plastic tape is buried over the cable and conduits in the trench with at least 12 inches of cover at the time of trench backfill to warn anyone digging in the area of the fiber optic cable.

2.2.2.6 Site Clean-up and Restoration

Upon completion of construction or more typically, concurrent with project progress, the soils in the right-of-way are immediately restored to reduce potential erosion and to the extent possible reflect the original condition and conformance with the surrounding landscape. All non-permanent materials and debris are removed from the site to approved disposal locations. Vegetative debris that is not removed is chipped, scattered, and left in place. Sensitive areas identified by the authorizing agencies are seeded with native seed mix as specified by the authorizing agency.

Existing roads are reclaimed to their original state, or as near to the original state as possible and as required by the appropriate transportation authority. Erosion control along the roads includes compaction of the disturbed soils, use of seed slurry, planting native seed, and/or the use of other best management practice and standard operating procedures that are deemed necessary (Section 3.14). The installation company or RUS awardee ensures that all gates and fences remain in their original condition, and are repaired as necessary. If construction breaks or destroys a natural barrier or existing fence used for livestock or wildlife control, gaps are temporarily fenced to prevent animal passage. Each wire fence crossed by the alignment is braced and secured to prevent slacking of the wire before cutting the wire for conduit installation.

2.3 Placement of Aerial Cable

2.3.1 General Description

Attaching fiber optic cable on poles (Figures 2-9 and 2-10) is done by either installing cables onto existing utility or telephone pole lines owned by a third party or, more rarely, installing new poles on which to hang cables. Both types of aerial installation are usually within existing rights-of-way.

Installation of cable on poles is often used where burying is cost-prohibitive, or in areas with unsuitable rocky or wet soil conditions, where corridor space is limited, or where the corridor is near a river, all of which may cause complications with burying cables.

When placing broadband cable on existing poles, proper clearance between the broadband cable and either existing power cables or height above the ground must be maintained to avoid interference and/or proper performance. If the existing poles are less than 45 feet in height, new poles may be required to maintain the appropriate

distance between the broadband cable and the ground. Fiber optic cable attached to a new or existing pole needs to be supported and stabilized by strong inactive cable to protect the fiber optic cable and avoid sagging (Figures 2-9 and 2-10).

The overhead fiber optic cable can be attached to the existing poles at an average of one-and-a-half to two miles per day once placement begins. About three days of preliminary work to prepare the poles and cable staging are necessary.

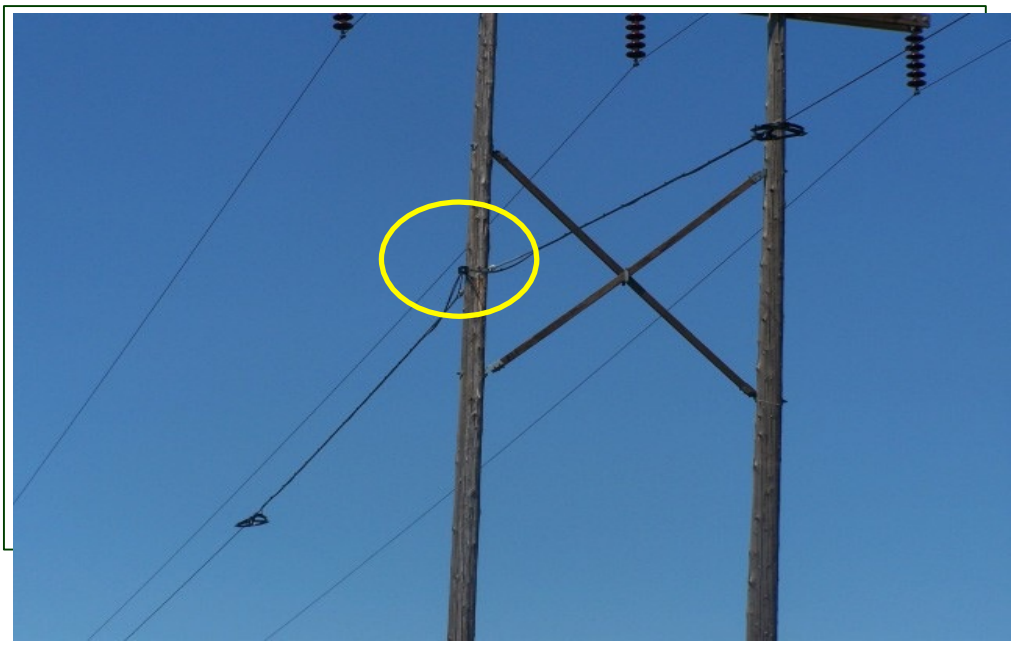


Figure 2-9. Fiber optic cable anchored by a strong cable and attached to an empty area on an existing utility pole. Source: NTIA 2012.

Figure 2-10. Cable placement on an existing pole along a stabilizing cable. Source: NTIA 2012.

The general sequence for constructing fiber optic cable systems to existing poles is:

- Order and staging of materials;
- Mobilization of advance/ROW preparation crews;
- Attaching temporary supports/rollers or permanent grips;
- Placing pull rope (stationary reel method only);
- Mobilization of fiber optic cable placing crews;
- Pulling of fiber optic cable through temporary rollers or hanging of the cable;
- Tensioning, sagging, and permanent attachment of cables;
- Mobilization of splicing/testing crews;
- Splice areas and slack for future access is mounted on poles;
- Splicing and testing of system;
- Placing of route markers; and
- Placing of anchors and down guys, if required by pole owner.

Many types and models of equipment are used in placing overhead fiber optic cable, depending on the project and site conditions. The following table lists representative types of equipment designed to perform specific tasks (Table 2-2). Equipment is only used as needed and a particular project may use some or all of these pieces of equipment.

Table 2-2. Typical Equipment for Aerial Plant Project

TYPE	QUANTITY
Typical Right-of-Way Preparation Equipment	
Standard Pickup Truck	1
Bucket Truck	2
Two-ton Truck with Chip Box	1
Chipper/Shredder	1
Misc. Small Power Tools	Many
Typical Fiber Optic Cable Placement / Tensioning Equipment	
Standard Pickup Truck	1
Bucket Truck	2
Reel Carrier Truck w/ winch	1
Misc. Small Power Tools	Many
Typical Clean-up/Restoration Equipment	
Standard Pickup Truck	1
Dump Truck/Trailer	1
Skid-Steer Loader	1
Backhoe/Loader	1
Vacuum Locator (ditch witch) System	1
Compactor	1

Typically, the owner of the poles, not the RUS awardee, performs annual and long-term maintenance of existing poles and vegetation and replaces poles in poor condition with new poles. The maintenance and monitoring protocol is specified in the pole attachment agreements between the cable company and the pole owners. Monitoring of the overhead fiber optic cable is through alarm circuits in the electronics attached to the cable at various points along the route.

The life of the fiber optic cable and regeneration station materials is approximately 30 years. Maintenance includes replacement or repair if the poles and/or cables are damaged by fire or physical destruction, typically by the pole owner. Project hardware (fiber optic cable, regeneration stations, and splice cases) is replaced by the RUS awardee as the hardware reaches the end of its productivity, according to the agreements with the pole and rights-of-way owners.

2.3.1.1 Poles for Aerial Placement of Fiber

Most fiber optic cable is placed on existing electric or telephone poles located in rights-of-way. A person physically climbing the pole or using a bucket truck to reach the appropriate height attaches the fiber cable to the communication space on the pole.

Typically, the fiber optic cable is lashed to an inert cable strung along the poles (Figures 2-9 and 2-10). Existing electrical lines are adjusted after obtaining approval from the power company to ensure appropriate ground and cable clearances from the electrical lines on the poles. To avoid disruptions of electrical service, the inert cable is usually attached to the pole while the electric system remains energized. If existing treated wood poles must be replaced due to deterioration or to meet National Electric Safety Code (NESC) requirements before attachment of the fiber optic cable, new poles replace existing poles in either the same pole holes or are installed immediately adjacent to existing poles to minimize impacts and ground disturbance. When a new pole is placed directly adjacent to an existing pole, the existing pole is removed and the pole hole is backfilled with soil from the new pole hole. The utility owner typically installs a new pole, or it may be done by the RUS awardee.

The majority of the poles used in rural areas are typically wood, though other materials are possible, including metal or concrete. In rare cases, a limited number of angle poles with additional ground anchors and guy wires are required to carry the weight of the new fiber optic cable. In these cases, a six-foot-long screw anchor is placed in the ground near the base of the pole and attached to the pole with a cable. When necessary and approved, cable may also be placed on existing high voltage electric transmission towers. To meet electric transmission requirements, these towers are taller than wooden poles and require special procedures for fiber cable installation.

Pole heights, distances between poles, and pole types vary, according to the practice of the owner of the existing poles. Poles are typically 45 feet tall with an additional 6 feet buried in the ground. Average spacing between poles ranges from 300 to 600 feet, with occasional spans of roughly 1,000 feet if needed to cross sensitive areas or areas with rough topography.

2.3.1.2 Cable Deployment

The cable is deployed either by using reels fixed in a nearby location, or by the drive-out method, where the reel is located on the back of a truck, depending on the accessibility of existing poles. Existing roadways or utility corridor rights-of-way and interior roads are used, depending on the method.

- **Drive-out Method**

The drive-out method for stringing cable is preferred and is used in areas where vehicular access to and along the corridor is available. The existing roadway generally needs to be 8 feet wide and passable by a standard four-wheel drive vehicle. In this method, one vehicle carrying the reel of fiber optic cable proceeds from pole to pole, paying out fiber optic cable as it moves forward. A bucket truck follows at a distance of approximately 50 feet so that a lineman may lash the fiber optic cable to the pole attachments.

In the drive-out method of placement, the equipment needed for placement of the fiber optic cable moves in tandem from the start point to the end of the reel. All equipment is generally moving within a 100-foot zone along the existing roads.

During the tensioning and sagging operation, a truck is positioned at one end of the span to be tensioned, while a second truck starts at the opposite end of the span and works back toward the first truck, securing the fiber optic cable that has been tensioned and sagged to the structures.

- **Stationary Reel Method**

The stationary reel method is used in areas where vehicular access to the construction corridor along a pole line is restricted by rough terrain. Using this method, the poles are accessed by ATV or on foot, and the technician either uses a ladder or directly climbs the pole. A pull rope is placed through a pulley system attached to the pole, which is then attached to the fiber optic cable on a stationary reel located at the nearest access point to the pole line. The fiber optic cable is pulled, preferably downhill, through the pulley system and attached to the pole. This method is slower than the drive-out method and creates the widest spread of equipment and manpower along the route. However, this method has the least impact to vegetation and soils. The staging area for the stationary reel method is restricted to existing roads and disturbed areas to avoid soil and vegetation compaction. In areas with sensitive resources, monitors check the area and identify suitable routes to minimize resource damage.

When using the stationary reel method for placing cables on existing poles, areas are required at opposite ends of a multiple-pole span for parking a reel carrier and a winch truck to pull back a rope and the attached fiber optic cable end. At multiple locations along the path between the reel and the winch, workers equipped with two-way radios are stationed to observe the progress of the pull and to stop the process should problems arise.

2.3.1.3 Site Clean-up and Restoration

Restoration of rights-of-way is generally concurrent with the progress of construction throughout the splicing operations, and continues until ground surfaces are restored to original or near-original condition.

The staged materials consist of fiber optic cable on six-foot by four-foot reels, splice cases and appurtenances, splice cases, high density polyethylene conduit (HDPE) on six-foot by four-foot reels, and aerial strand and pole line hardware. Items not in use are kept off the right-of-way at a contractor storage yard and/or warehouse location and transported as needed by crews or delivery. All packaging and other materials are removed when no longer needed and disposed of in the proper manner.

2.3.2 Broadband over Existing Powerlines

Broadband over Powerline (BPL) systems use existing electrical power lines as a transmission medium to provide high-speed communications capabilities by coupling radio frequency (RF) energy onto the power line, which is then distributed into the home. BPL systems operate on an unlicensed basis under Part 15 of the FCC rules. Because power lines reach virtually every community in the country, BPL has the potential to play an important role in providing broadband services to American homes and consumers.

There are two types of BPL systems:

- In-House BPL, which uses the electrical outlets available within a building to transfer information between computers and other home electronic appliances and has no impact outside of the building itself; and
- Access BPL systems, which carry high-speed communication signals outdoors over the medium voltage (MV) electrical lines from a point where there is a connection to the internet (backhaul point) to neighborhoods, where the signals are distributed to homes via the low voltage (LV) power lines or Wi-Fi links (http://wireless.fcc.gov/outreach/index.htm?job=bpl). The equipment is collocated on existing poles or within electrical facilities. Fiber is typically deployed to various nodes throughout the service area and the existing electric cable is used from that point forward to the end user.

2.4 Wireless Systems: Cell and Microwave Towers

2.4.1 General Description and Background Information

Wireless technology sends and/or receives radio frequency signals using antennas attached to new towers or collocated on existing towers, buildings, or other infrastructure; this may include accessory equipment such as equipment rooms and metal cabinets. Cell antennas are typically a series of vertical rectangular metal pieces configured in a circular array (Figure 2-11). Microwave antennas typically look like a round vertical drum (Figure 2-12).

A cellular base station may utilize several "omni-directional" antennas that look like poles, 10 to 15 feet in length, although these types of antennas are becoming less common in urban areas. In urban and suburban areas, cellular and PCS service providers now more commonly use "sector" antennas for their base stations. These antennas are rectangular panels, e.g., about 1 by 4 feet in dimension, typically mounted on a rooftop or other structure, but they are also mounted on towers or poles. The antennas are usually arranged in three groups of three each. One antenna in each group is used to transmit signals to mobile units (car phones or hand-held phones), and the other two antennas in each group are used to receive signals from mobile units.

Towers or antennas on buildings are generally no higher than 199 feet. Towers may be freestanding or supported by guy wires. In some situations, towers taller than 199 feet with or without guy wires may be used. Guy wires may be used for towers subjected to high winds, or for support for taller towers needed for point-to-point connection in difficult terrain.

Point-to-point microwave is used in locations where cable is too expensive to install, to bypass difficult terrain, to cross a river or large body of water, where right-of-way is not available or is too costly to obtain, or as data backhaul from cell towers. Cell towers are often installed for "last mile" needs, directly to the user.

2.4.2 Use of New Towers for Antenna Placement

The information in this section is from the Federal Communication Commission PEA for the Antenna Structure Registration Program (ASR; FCC 2012).

The number of towers constructed annually increased dramatically beginning in the early 1980s through about the year 2000. Since 2000, the annual number of registered towers constructed has decreased, but still remains at levels above those in the early 1990s.

Any wireless system using towers within the licensed spectrum must meet FCC requirements, when applicable. The FCC was established by the Communications Act of 1934, and is charged with regulating interstate and international communications by radio, television, wire, satellite, and cable. The FCC initiated the ASR in 1995. The ASR describes the process by which any antenna structure more than 200 feet above ground level (AGL) and certain antenna structures located within the landing slope of an airport runway per the Federal Aviation Administration (FAA) must be registered with the FCC by the owner of the tower. Towers for national defense and other systems operated by the federal government are not required to be registered unless they are also used for FCC-licensed services.

Although new communications antennas can often be collocated on or within existing structures, in some instances the deployment of services requires construction of a new tower. Several factors, such as construction costs, government regulations, the availability of a willing landowner, and the engineering requirements of the service provider can influence the decision whether to collocate a new antenna on an existing structure or construct a new tower. Using existing structures avoids additional impacts to soils, migratory birds, and visual quality associated with constructing a new tower.

New towers for wireless applications are generally constructed on a concrete foundation, with wireless and microwave antennas located on the tower. Communications towers may be straight towers supported by guy wires attached to the ground to anchor the tower, or can be self-supporting (monopole towers on one foundation, or three-sided lattice towers with a triangular base), depending on

engineering, economic, environmental, visual, wind loading, or historic preservation considerations. Typically, towers for wireless communications are less than 200 feet tall unless they are collocated on taller towers owned by others through space leased by the applicant. Tower sites must also support power modules and propane tanks if needed, with ancillary transmission piping and fencing. Fiber cable is sometimes necessary for connecting antenna to network systems.

For a 150-foot self-supporting tower, each face is about 15 feet at the base tapering toward the top, with a concrete pad footprint no larger than 20 feet x 20 feet. For a 150-foot guyed lattice structure, each face is about three feet all the way up the tower. If support guys are needed, guy wire anchors are typically located between 100 to 150 feet from each corner of the tower.

The FCC can prescribe painting and/or illumination of an antenna structure when there is a "reasonable possibility" that it may cause a hazard to aviation. Tower permittees, licensees, or owners are required to maintain the painting and lighting. Under current rules, each tower owner proposing to construct or alter an antenna structure that is more than 200 feet AGL or that may interfere with the approach or departure space of a nearby airport runway must notify the FAA of the proposed construction or alteration and register the tower with the FCC's ASR Program.

Current FAA guidelines ordinarily require lighting conforming to one of the six FAA Lighting Styles for communications towers over 200 feet AGL, as well as for towers in the approach or departure space of nearby airports. Towers typically use white flashing and/or strobe lights, and may also use red flashing lights. The FAA completed a study to determine if towers using only red flashing lights without the red steady-burning lights previously required are sufficiently conspicuous to pilots, and subsequently approved the following changes to tower lighting requirements:

- Systems with white strobe or strobe-like lights do not include non-flashing lights, including non-flashing red lights; and
- For towers less than 350 feet AGL, FAA is currently evaluating flashing red lights using synchronously-lighted LED lights.

The FAA (Patterson 2012) published a detailed memo authorizing lighting changes intended to protect both migrating songbirds and aviation safety as well as reduce costs, but the final changes have yet to be incorporated into the new FAA Obstruction and Marking Lighting Circular. The FCC is currently recommending that new towers 350 to 450 feet AGL have no steady red lights, and the FCC is working on recommending that existing towers less than 350 feet AGL replace non-flashing light to flashing lights synchronous with the other flashing beacons. Typically, towers less than 200 feet tall have no lighting requirements. See Section 3.11 for more details on the effects of towers on migratory birds.

Each site with FCC-regulated collocated antennas must also comply with requirements of the Nationwide Programmatic Agreement for Review of Effect on Historic Properties for Certain Undertakings Approved by the FCC for Section 106 (2004; see Section 3.4).

RUS generally requires an Environmental Report (ER) providing detailed information for new towers.

Figure 2-11. Cell tower. Source: Power and Communication Contractors Association

Figure 2-12. Final construction of a microwave tower. Source: Power and Communication Contractors Association

2.4.3 Collocation of Wireless Equipment on Existing Towers, Buildings, or Other Structures

Collocation of broadband facilities on existing telecommunications towers consists of installing a microwave antenna onto an existing tower in accordance with applicable FCC and industry guidelines and regulations (Figure 2-13). If the antenna is collocated on an existing tower that is either listed or eligible for listing on the National Register of Historic Places, the State Historic Preservation Officer should be consulted (Section 3.3.4).

Antenna collocations on existing buildings consist of attaching microwave antennas to the rooftops of existing buildings using standard antenna and roof mounts. Co-axial cable runs from the roof to additional network equipment located inside the buildings. Collocation to existing structures generally does not require ground disturbance. However, collocation on structures such as church steeples that have historical importance could have adverse impacts.

Leasing agreements are obtained from the existing owners of the tower, building, or other structure.

In addition to placement on the existing tower, collocation may include placing a three-foot by three-foot pre-cast concrete pad within the existing tower's fenced compound to support the new network equipment cabinet housing essential power and communication electronics such as batteries, power supplies, and microwave radios. Ground disturbance does not occur outside of the existing tower compound footprint. If the tower compound has existing buildings for the collocation of tenant's electronics, then an equipment cabinet is not placed at the site. If required, emergency generators are installed within the existing compound. Applicable zoning and permitting requirements must be met for these sites.

Each site with FCC-regulated collocated antennas must also comply with requirements of the Nationwide Programmatic Agreement for Collocation of Antennas for Section 106 (Nationwide Programmatic Agreement for the Collocation of Wireless Antennas (2001; http://wireless.fcc.gov/releases/da010691a.pdf; Section 3.3.4.3).

Several commercial enterprises have become skillful in designing freestanding towers and towers attached to existing buildings that are carefully camouflaged and visually pleasing.

Any associated underground or aerial installation of cable follows the descriptions in Sections 2.3 and 2.4.

Figure 2-13. Collocation of a cell tower on existing electric transmission infrastructure. Source: Power and Communication Contractors Association

2.5 Last Mile Service Drops

Construction of any type of fiber or wireless system includes service drops, defined as the final stretch of cable from the proponent's infrastructure to an end user building, such as in a residence, hospital, or library. Service drops often require either a simple 40-foot piece of fiber strung aerially from the nearest utility pole to a building's overhead mast for cable, or a wireless terminal for wireless transmission. Typically, the electric transformer on a pole is considered to be along the pathway for the backbone fiber network, with the transformer serving as the main point of entry or demarcation point for individual properties. The point of access is generally within 150 feet or less to the location of the Customer Premise Equipment (CPE), which is a small meter box mounted near the electric meter on the building being served. The CPE is typically connected to the existing electric meter for both access to power and future Smart Grid applications and communication. Wireless point of access may be within the end user's building.

2.6 Buildings and Electronic Equipment Housing Structures

2.6.1 General Description

Ancillary structures associated with broadband deployment generally consist of installing small pre-fabricated buildings, sheds, or cabinets that are used for housing electronic equipment in support of the broadband network infrastructure, often on previously disturbed or developed land. These small buildings are usually placed on concrete pads and generally require very minimal land disturbance.

RUS funds may also be used for constructing a headquarters and/or warehouse building. The amount of land disturbance resulting from this type of construction can vary depending on the size of the proposed building, but is typically less than 10 acres.

Activities associated with the construction of a new facility may include:

- Demolishing an existing facility and replacing it with a new facility on the same site;
- Site clearing and grubbing;
- Site grading;
- Excavation;
- Staging areas for equipment, building materials, fill, etc.;
- Delivery, installation, and connection of utilities;
- Installing supporting security measures;

- Use of construction equipment, such as backhoes, front-end loaders, compactors, trenchers, augers, trucks (concrete, delivery, and dump), and air compressors; and
- Traffic to and from the project site, including worker vehicles and delivery vehicles.

All associated needs for a new facility, including utility connections, fencing, lighting, access roads, equipment staging areas, parking and security measures, etc., are also addressed under the analysis of this project type, and are considered to contribute to the entire project footprint. In order to accurately assess the environmental impacts of this project type, all features of the proposed development must be analyzed.

2.6.2 Types of Buildings

2.6.2.1 Signal Regeneration Stations

As light travels down a fiber optic cable, it loses power. Regeneration stations or "regens" are used to amplify a weak incoming signal and send the amplified signal along the network toward the customer. Regeneration sites vary in size (400-2400 square feet) depending on the available space, and require minor ground disturbance for construction of the concrete support pad. The spacing of these stations is determined by many factors, but regeneration is generally necessary every 50 to 75 miles. One of the major determinants for a potential regeneration station site is the availability of commercial power, so signal regeneration systems are typically located at existing electric substations in already disturbed areas.

2.6.2.2 Service Area Hubs

Service Area Hubs (SAHs) are small structures installed in locations that provide the best access for utility workers while having the least impact on the environment, area aesthetics, and other critical infrastructure. In some instances, easements or property acquisitions are necessary to locate cabinetry and other needed facilities. The largest SAHs are standard sized at approximately four feet wide by two feet deep by five feet tall (Figure 2-14). Most cabinets are smaller and stake mounted, with the concrete base buried 12 inches deep in previously disturbed soil.

In developed areas such as towns and neighborhoods, these hubs can be located in very small areas so that sufficient access is available for maintenance. In rural areas, cabinetry is placed in rights-of-way either on the ground or sometimes on poles.

Figure 2-14. Service Area Hub Cabinet

2.6.2.3 Office and Headquarters Buildings, Including Data Centers

Not all RUS telecommunications programs allow financial support for office and headquarters buildings, and they are rarely included in applications. In the last 30 years, only 20 such buildings have been included. RUS typically evaluates the impacts associated with these buildings using a categorical exclusion, as long as the disturbed area is 10 acres or less and there are no extraordinary circumstances that prohibit the use of a categorical exclusion. Because applicants are often small businesses located in rural towns, office and headquarters buildings are often located in already developed areas or may be located in leased buildings.

Data centers, where staff monitor network operations, may be included in new or existing office buildings, usually in a nearby town or city. Data center equipment located inside an existing building does not require any new ground disturbance.

3 Environmental Consequences

3.1 Introduction

As discussed in Section 1.9, broadband deployment projects financially supported by RUS typically have few if any environmental impacts. Additionally, RUS typically concludes NEPA by applying categorical exclusions for financing decisions associated with broadband projects. Such projects also use standard construction and design operations, therefore not requiring the consideration of alternatives (Section 1.7.3 and Chapter 2). Also, as discussed in Section 1.7.3, continuing the current Broadband Telecommunications Program is both RUS' proposed action and the no action alternative for the purposes of this PEA. Therefore, the impact analyses included in Chapter 3 evaluate the impacts of the proposed action/no action, with no differentiation.

Each impact analysis considered in detail provides background information to help the reader understand the analyses and conclusions that follow. Some of the issues need to be deferred to project-level planning and subsequent tiering (Chapter 4). For issues that are deferred to project-level analysis, background information and impact analysis processes necessary for project-specific compliance are typically included in Chapter 3.

The CEQ regulations implementing NEPA provide the following guidance and definitions regarding impact analyses:

- [Impacts include] ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetics, historic, cultural, economic, social or health, whether direct, indirect, or cumulative (40 CFR §1508.8).
- Direct effects, which are caused by the action and occur at the same time and place (40 CFR §1508.8).
- Indirect effects, which are caused by the action and are later in time and farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems…Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial (40 CFR §1508.8).
- Cumulative impact is the impact 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).

Therefore, cumulative impacts are a combination of direct and/or indirect impacts, regardless of how those impacts are incurred and by whom, that either additively or synergistically (or both) create broader impacts on a particular resource.

This PEA provides an excellent opportunity to review and analyze the types of broadband technologies included in projects that RUS supports financially from the broader point of view of cumulative impacts on resources as recommended by the CEQ in 40 CFR §1508.25. RUS can be confident that the program as a whole would not have significant impacts, if that is found to be the case based on this PEA, and these impact analyses can then be used to frame project-level analyses as appropriate, without unnecessary duplication of effort and documentation.

This chapter also provides best management practices (BMPs) to reduce impacts to resources included in this chapter, and standard operating procedures (SOPs) for resources that do not rise to the level of needing impact analysis, but still should be protected to the maximum degree practicable (Section 3.14).

Many of the issues analyzed in this chapter state “No Further Analysis for Project Level Planning.” This does not mean that these issues do not need to be considered for a project. It means that, with commitment to appropriate BMPs and SOPs, including those in Section 3.14, the risk is very low that any impact beyond that analyzed in this PEA would occur. The use of the tiering process described in Chapter 4 will assist in making the determination if a particular project has extraordinary circumstances that are beyond the routine types of projects and environmental conditions considered in this PEA.

RUS’ intent is to make this PEA as useful as possible for Agency staff, applicants, and government entities, with the intent to increase efficiencies per EOs 13604 and 13616 and Congressional goals as expressed through the RUS Telecommunications Program.

3.2 Potential Impacts to Water-Related Resources

3.2.1 Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act (RHA): Site Specific Analysis if an Individual Permit is Required

3.2.1.1 Background Section 404 CWA

Section 404 (see 33 USC 1344) of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States without a permit from the United States Army Corps of Engineers (USACE) unless the specific activity is exempted in 33 CFR part 323 or covered by a nationwide permit in 33 CFR part 330.

Considering applicable law, science, and three Supreme Court decisions, as well as the agencies' administrative and technical expertise, the United States Environmental Protection Agency (EPA) and the USACE published a final rule defining the scope of waters protected under Section 404 of the Clean Water Act (CWA) ("waters of the U.S."; WoUS; 80 FR (124):37054-37127; https://www.federalregister.gov/articles/2015/06/29/2015-13435/clean-water-rule-definition-of-waters-of-the-united-states; viewed 7/9/2015). The following information is summarized from the referenced *Federal Register* notice as relevant to this PEA. This rule is currently under court-ordered stay. Until the time that the rule is either supported by the court or revised, the existing case-by-case determination of jurisdictional WoUs still is applicable. However, 33 CFR part 330 describing Nationwide Permits (NWP) and the NWPs approved 2012 (77 FR 10184, February 21, 2012) described below are still applicable.

The intent of the EPA/USACE final rule is to make the process of identifying CWA-protected WoUS easier to understand, more predictable, and consistent with the statute and peer-reviewed science, while protecting the streams and wetlands that form the foundation of U.S. water resources. Upstream waters, including headwaters, tributaries (including perennial, intermittent, and ephemeral streams), riparian areas, and wetlands, significantly affect the chemical, physical, and biological integrity of downstream waters. These areas play a critical role in controlling sediment, filtering pollutants, reducing flooding, providing habitat for fish and other aquatic wildlife, and promoting many vital chemical, physical, and biological processes.

To ensure that projects offering significant social benefit can proceed with the necessary environmental safeguards while minimizing permitting delays, permitting under the purview of the CWA and streamlined regulatory requirements, such as those of the USACE NWPs, will continue permit simplification. The final rule maintains current statutory exclusions regarding the regulation of shallow subsurface water connections, groundwater, erosional features, and land uses. The provisions of the final rule are particularly applicable to projects that may affect the crossings of ephemeral or intermittent tributaries deemed jurisdictional under the final rule.

The final rule clearly defines three categories of water:

- Waters that are jurisdictional in all cases by rule, including traditional navigable waters, interstate waters (including interstate wetlands; they do not have to be navigable), and territorial seas; tributaries and adjacent waters, because they have a significant nexus to the jurisdictional waters, and impoundments of WoUS because they remain WoUS after impoundment (and, conversely, non-WoUS can become WoUS after impoundment if they become navigable);

- A narrow category of waters subject to case-specific analysis to determine whether they are jurisdictional, including determining a significant nexus to waters identified above, either alone or in combination with similarly situated waters in the region (including waters within the 100-year floodplain of a traditional navigable water, interstate water, or territorial seas, and waters within 4,000 feet of the ordinary high water mark of such waters, impoundments, or covered tributaries; and
- Waters that are excluded from jurisdiction, such as groundwater and erosional features, such as gullies and rills.

Under 33 CFR part 330, the USACE identified specific management activities that can take place nationwide without the need for a site-specific or regional permit per Section 404 of the CWA when appropriate terms and conditions are met. These NWPs are designed to regulate minimally impacting projects with little if any delay or paperwork. An activity may be authorized only if all of the NWP's terms and conditions are met. Alternatives to proposals for discharge of dredged or fill materials must be considered unless there are no practicable ways to meet the goals of the project. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes (40 CFR §230.10(a)(1)). Also, it is assumed that any action that does not depend on use of a WoUS has practicable alternatives that do not involve discharge of dredged or fill material into WoUS.

The deployment of broadband with currently available technologies is not considered a "water-dependent" activity per 40 CFR §230.40. However, if construction activities for the deployment of underground or pole-mounted cable within jurisdictional WoUS are determined to be necessary to meet the project goals and the site cannot be directionally bored, then the applicant may consider using NWP 12 for Utility Line Activities. NWP 12 applies to linear projects and their associated facilities and activities, and is not limited to discharges of dredged or fill material. The USACE's long-standing practice is to generally calculate impacts for purposes of satisfying its 0.5-acre threshold for each water crossing, rather than for a project as a whole, unless the crossings are very close together. NWP 12 covers activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in WoUS, provided the activity does not result in the loss of greater than 0.5-acre of WoUS for each project. Relevant to telecommunication projects, a ''utility line'' is defined as any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication.

This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all WoUS, provided the foundations are of the minimum size necessary and separate footings for each tower leg (rather than a larger

single pad) are used where feasible. This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322).

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites.

For deployment activities that would involve minor discharges into WoUS, NWP 18 may be appropriate. This NWP authorizes minor discharges of dredged or fill material into WoUS as long as 1) the quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line; 2) the discharge will not cause the loss of more than 0.1-acre of WoUS; and 3) the discharge is not placed for the purpose of a stream diversion. In order to use this NWP, the permittee must submit a pre-construction notification to the USACE District Engineer prior to beginning the activity if 1) the discharge or the volume of the area excavated exceeds 10 cubic yards below the plane of the high water mark or the high tide line; or 2) the discharge is in a special aquatic site, including wetlands.

For construction of buildings involving WoUS, NWP 39 may be appropriate. This NWP authorizes discharges of dredged or fill material into non-tidal WoUS for the construction or expansion of commercial and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures, including roads, parking lots, garages, yards, utility lines, and storm water management facilities. The discharge may not cause the loss of greater than 0.5-acre of non-tidal WoUS, including the loss of no more than 300 linear feet of stream bed, unless for intermittent and ephemeral stream bed, the district engineer waives the 300 linear foot limit by making a written determination concluding that the discharge will result in minimal adverse effects. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters. The permittee must submit a pre-construction notification to the USACE District Engineer prior to beginning the activity.

For temporary structures, work and discharges necessary for construction activities or access fills or dewatering of construction sites, whether authorized or not authorized by the USACE, NWP 33 may be appropriate. Appropriate measures must be taken to maintain near normal downstream flows and to minimize flooding. Fill must be of such material and placed in such a way that it would not be eroded by expected high flows. The use of dredged material may be used if the District Engineer determines that it will not cause more than minimal adverse effects on aquatic resources. Following completion of construction, temporary fill must be entirely removed to an area that has no WoUS, dredged material must be returned to its original location, and the affected

areas must be restored to pre-construction elevations. The affected areas must be revegetated, as appropriate. This permit does not allow the use of cofferdams to dewater wetlands or other aquatic areas to change their use. Structures left in place after construction is completed require a Section 10 permit per the Rivers and Harbors Act of 1899 if located in navigable waters of the US. The permittee must submit a pre-construction notification to the USACE District Engineer prior to beginning the activity, which must include a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.

To qualify for use of any NWP, the prospective permittee must comply with the 31 general conditions identified in Section C, as applicable, as well as any additional regional or case-specific conditions imposed by the District Engineer. The prospective permittee should contact the USACE district office to determine the status of CWA Section 401 water quality certification and/or Coastal Zone Management Act consistency for use of an NWP.

3.2.1.2 Background Section 10 Rivers and Harbors Act

This law prohibits:

- The construction of bridges, causeways, dams or dikes generally; or the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States;
- The building or commencement of building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the USACE;
- The excavation or fill, or in any manner that alters or modifies the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the USACE prior to beginning the same.

The concern is avoiding any obstructions or changes to navigation. This can include overhead utility lines constructed over waters classified in Section 10 of the RHA (in other words, navigable waters) that might be low enough or have poles located in such a way that they would potentially obstruct or change navigation. NWPs 18, 33, and 39 also apply to Section 10 of the RHA.

3.2.2 Impacts and Conclusion: Section 404 CWA, Section 10 RHA

It is clear that avoiding discharge of dredged or fill materials to WoUS or constructing in navigable water for any reason, avoiding the need for a permit from the USACE per

Section 404 of the CWA or per Section 10 of the RHA, is the most effective mitigation and most cost-effective manner for planning and constructing the deployment of broadband infrastructure.

By using certain technologies (such as directional drilling) or through avoidance measures (such as relocating a project or spanning the area of a water resource), it is likely the RUS applicant can minimize effects of construction in USACE jurisdictional WoUS and navigable waters. These common practices both reduce impacts to water-related physical structure, functions, and chemical and biological relationships (which are considered as conditions that must be met to be approved for a NWP), and avoid the need for use of an NWP altogether.

Despite somewhat higher costs, RUS applicants report that they typically use directional boring or spanning to avoid adverse impacts to USACE jurisdictional WoUS and navigable waters (Appendix G). With these routine measures in place, the potential for need of a NWP is negligible, and, if an NWP is used, impacts to WoUS would be negligible per findings of the USACE. The same conclusion is appropriate under Section 10 RHA.

If a RUS applicant's actions cannot be completed following these common practices and a CWA Section 404 or Section 10 individual permit is required, additional site-specific review is required as described in Chapter 4.

3.2.3 Potential Impacts to Floodplains and Compliance with EO 11988, as revised by EO 13690: Site Specific Analysis for Construction in a Floodplain

3.2.3.1 Background

Protecting the functions of floodplains is addressed by an Executive Order, "Floodplain Management" (EO 11988, originally signed in 1977 and amended 1/29/2015; https://www.whitehouse.gov/the-press-office/2015/01/30/executive-order-establishing-federal-flood-risk-management-standard-and-; viewed 7/6/2015). FEMA has published draft guidelines for implementing the EO as amended (FR 80(24): 6530-6531; http://regulations.justia.com/regulations/fedreg/2015/02/05/2015-02284.html; viewed 7/6/2015). The proposed guidelines further describe approaches to delineate a floodplain by considering climate change effects, adding height to the estimated 100-year floodplain elevation, and/or reliance on the 500-year floodplain in project planning.

The original and amended EOs are intended to supplement the National Flood Insurance Act of 1968 (https://www.fema.gov/media-library/assets/documents/7277; viewed 7/11/2015) as amended by the Flood Disaster Protection Act of 1973 "in order to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development where there is a practicable alternative." The EOs apply to

federal undertakings, including actions financed by the federal government. The analysis of potential impacts to floodplains is to be included as part of NEPA compliance.

RUS applicants may propose to construct buildings, access roads, or towers in floodplains. These may change the hydrological conditions and increase the risk of flooding. RUS has determined that the EO does not apply to utility lines.

3.2.3.2 Impacts and Conclusion: Floodplains and EO 11988, as revised by EO 13690

Applicants should avoid construction in floodplains as defined by the EOs whenever practicable for such actions as towers for wireless broadband, buildings, and other activities (excluding utility lines) that could affect floodplains. If there are no practicable alternatives to constructing these kinds of activities in a floodplain, the applicant must provide the appropriate public notice and opportunity for comment, and minimize impacts when practicable per the EOs. The RUS applicant and its construction contractor must implement best management practices included in federal, state, and/or local permits regarding the construction in floodplains (Section 3.14). Also, RUS requires applicants to obtain flood insurance for all insurable buildings supported by RUS funding. With these routine measures in place, the potential for adverse impacts to floodplains is negligible.

However, if a RUS applicant's actions cannot be completed following these common practices and if construction is necessary in a floodplain, additional site-specific review is required as described in Section 3.2.1.1 and Chapter 4.

3.2.4 Potential Impacts to Wetlands and Compliance with EO 11990: Site-Specific Analysis if a Wetland Would be Impacted

3.2.4.1 Background

EO 11990, "Protection of Wetlands" (http://www.fws.gov/r9esnepa/NEPA_Handbook/EO_11990.pdf; viewed 7/6/2015) was signed in 1977 to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." The EO applies to federal undertakings, including actions financed by the federal government. The analysis of potential impacts should be included as part of the NEPA compliance process. The EO requires that federal agencies "avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use." The agency may consider economic, environmental, and

other pertinent factors in the determination. Public notice and opportunity to comment must be made available, including for projects that would not have significant impacts.

The following factors relevant to a proposal's effects on wetlands must be considered:

- Public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards, and sediment and erosion;
- Maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and
- Other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

These factors are similar to those required for consideration per Section 404 of the Clean Water Act (Section 404(b)(3) Guidelines) and it is possible that the wetland may be a jurisdictional WoUS per that law; however, the effects analysis covered under the EO includes waters and wetlands not within the jurisdiction of the USACE per Section 404 of the CWA.

Any modification of a wetland must follow the requirements of the EO, and, if the wetland is determined to be jurisdictional under Section 404 of the CWA, then Section 404 processes as described in Section 3.2.1.1 must be followed.

3.2.4.2 Impacts and Conclusion: Wetlands and EO 11990

RUS applicants should avoid construction in wetlands as defined by the EO whenever practicable for such actions as towers for wireless antennas. Whenever practicable, directional boring under wetlands should be used to avoid impacting the wetlands. In the very rare case that there is no practicable alternative, the applicant must work with RUS to provide the appropriate public notice and opportunity for comment, minimizing impacts when practicable.

If the wetland is considered a "WoUS" per Section 404 of the Clean Water Act, then Section 404 processes must also be followed (Section 3.2.1.1). The RUS applicant and its construction contractor must implement best management practices included in federal, state, and/or local permits regarding the control of storm water runoff and spills of petroleum and chemicals (Section 3.14). With these routine measures in place, the potential for adverse impacts to wetlands is negligible.

However, if a RUS applicant's actions cannot be completed following these common practices and a wetland could be adversely impacted or a Section 404 permit is required (Section 3.2.1.1), additional site-specific review is required as described in Chapter 4.

3.2.5 Potential Impacts to Groundwater: No Further Analysis for Project Level Planning

As no chemicals or other discharges into groundwater are likely involved in deployment of fiber cable or construction of towers and associated facilities. Any hazardous or toxic chemicals stored in buildings funded by RUS must be stored in accordance with federal, state, and/or local laws and regulations. Therefore, there is no potential for adversely impacting groundwater. Therefore, potential impacts to groundwater will not be considered further in this PEA, nor must it be considered at project-level planning.

3.2.6 Potential Impacts to Surface Water Quality: No Further Analysis for Project Level Planning

The RUS applicant and its construction contractor must implement best management practices included in federal, state, and/or local permits regarding the control of storm water runoff and spills of petroleum and chemicals (Section 3.14). With these routine measures in place, the potential for adverse impacts to surface water quality is negligible. Therefore, potential impacts to surface water quality will not be considered further in this PEA, nor must it be considered at project-level planning.

3.3 Potential Impacts to Terrestrial-Related Resources (Soil and Vegetation)

3.3.1 Potential for Soil Erosion: No Further Analysis for Project Level Planning

As the technologies for cable burial involve very little soil disturbance, soil restoration is conducted immediately upon completing the underground cable deployment (Section 2.2), and best management practices are used (Section 3.14), the potential for soil erosion is negligible. As described in Chapter 2, heavy construction equipment that is used off-road typically uses tracks, not tires, further minimizing the potential for soil compaction and storm water runoff. Construction of towers and placement of new poles also displaces little soil and soil restoration is conducted immediately. Even building construction would involve use of BMPs (Section 3.14) to minimize the risk of soil erosion. With these routine measures in place, the potential for adverse impacts to soils and surface water quality is negligible. Therefore, potential impacts to soils and risk of soil erosion will not be considered further in this PEA, nor must it be considered at project-level planning.

3.3.2 Potential Impacts to Native Vegetation: No Further Analysis for Project Level Planning

Most underground or aerial deployment of cable occurs in existing rights-of-way in which existing vegetation is either already disturbed through regular maintenance or the use of heavy equipment with tracks rather than tires results in minimal disturbance to vegetation. Best management practices involving, for example, immediate restoration

using native seeds and plants (Section 3.14) further minimizes the potential for adverse impacts to vegetation. With these routine measures in place, the potential for adverse impacts to vegetation is negligible. Therefore, potential impacts to native vegetation will not be considered further in this PEA, nor must it be considered at project-level planning unless vegetation species that are listed per the Endangered Species Act are present and would be potentially impacted (Section 3.8).

3.3.3 Potential Impacts to Prime and Unique Farmlands: Site-Specific Analysis for Construction of Towers and Buildings

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent practicable federal programs are administered to be compatible with state/local units of government, and private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed or assisted by a federal agency, including providing financing or loans (http://www.nrcs.usda.gov/wps/portal/nrcs/detail).

Most underground or aerial deployment of cable occurs in existing rights-of-way. Applicants typically avoid the use of farmland whenever possible as this complicates the project by the need for obtaining easements from private landowners. Areas that are zoned for industrial use, previously developed land, existing utility and road easements, and lands requiring federal licensing and permitting are not subject to FPPA. Use of existing poles for aerial plant in a farm field would not require compliance with the FPPA for collocation of cable.

In instances where important farmland may be used to construct a building or tower, the applicant, representing the federal agency, would need to contact the local office of the Natural Resources Conservation Service (NRCS) or USDA Service Center. NRCS uses its Land Evaluation and Site Assessment (LESA) system (Form AD-1006) to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. Because of the small amount of land required for construction of a tower, pole, or hub cabinet, the risk of exceeding this score is negligible.

Construction of a building on farmland for a specific project may require the evaluation using Form AD-1006 but, because of the small amount of land (5 acres is a good rule of thumb) required for construction of a building, the risk of exceeding this score is negligible.

Therefore, potential impacts to farmland will be evaluated only for the construction of towers and buildings at project-level planning.

3.4 Potential Impacts to Historic and Cultural Resources (S106 NHPA): Deferred to Project Level Planning

3.4.1 Background

The National Environmental Policy Act (NEPA) requires that federal agencies, including the Rural Utilities Service (RUS), consider the effects of their actions on the human environment prior to making a decision. Pursuant to 40 CFR §1508.4, the human environment is interpreted comprehensively to include the natural and physical environment, and the relationship of people with that environment. A NEPA analysis, therefore, should systematically address the social and cultural (human) aspects of the environment as well as those that are natural, and the relationships between them.

RUS must consider the impact of its actions on “cultural resources” as a component of the human environment. Although no legal or generally accepted definition exists within the federal government, the term “cultural resources” typically is used to refer to historic, aesthetic, and cultural aspects of the human environment, such as archeological sites, buildings, and traditional resources and use areas.

Historic properties are that subset of cultural resources which have been listed in or are considered eligible for listing in the National Register of Historic Places (NRHP), which is a commemorative listing of those resources significant to the American past at the national, state or local level that is managed by the National Park Service. Historic properties are defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the NRHP, including artifacts, records, and material remains related to such a property or resource (16 U.S.C. 470w).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess all or some of the following aspects of integrity - location, design, setting, materials, workmanship, feeling and association – and meet one or more of the following criteria:

A. Associated with events that have made a significant contribution to the broad patterns of our history; or

B. Associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in history or prehistory (NPS, 1997).

Pursuant to 54 U.S.C. §302706 [formerly Section 101(d)(6) of NHPA], resources of traditional religious and cultural importance to federally recognized Indian tribes or Native Hawaiian organizations (NHO) may be determined to be eligible for listing in the NRHP.

3.4.1.1 Section 106 Process

In accordance with S.106 of the National Historic Preservation Act (NHPA), 54 U.S.C. §306108, Federal agencies, such as RUS, are required to take into account the effect of their undertakings on historic properties and provide the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on those effects. Pursuant to 36 CFR §800.16(y), an "undertaking" is defined as a "project, activity or program funded in whole or part under the direct or indirect jurisdiction of a federal agency". RUS has determined that the provision of Federal financial assistance for the development, expansion and improvement of telecommunications infrastructure, including broadband, is an undertaking subject to S. 106 and its implementing regulations, "Protection of Historic Properties" (36 CFR part 800).

The implementing regulations establish a standard process through which RUS and other federal agencies comply with their statutory obligations to consider effects to historic properties prior to decision-making. The legal requirements of both NEPA and S. 106 must be completed by RUS prior to the obligation of federal funding by the agency. This timing requirement under 36 CFR §800.1(c), however, does not prevent RUS from authorizing nondestructive project planning activities.

As it is encouraged to do so, pursuant to 36 CFR §800.8(a)(1), RUS coordinates its compliance with the statutory and regulatory requirements of S. 106 with the agency's procedures for compliance with NEPA, 7 CFR 1794. Accordingly, studies required by RUS to identify historic properties also provide needed information for the identification of other types of cultural resources eligible for consideration under NEPA which might be impacted by the agency's proposed action. The CEQ and ACHP have issued guidance to explain how best to coordinate NEPA and S.106 review titled, "NEPA and NHPA: A Handbook for Integrating NEPA and S. 106 (2013; http://energy.gov/sites/prod/files/G-CEQ-NEPA_NHPA_Section_106_Handbook_Mar2013.pdf).

3.4.1.2 Undertakings for which S106 Review is Not Applicable

In accordance with 36 CFR § 800.3(a)(1), RUS possesses sole authority to determine whether an undertaking is a type of activity that does not have the potential to cause effects to historic properties, assuming such properties were present. When RUS

makes such a determination, the agency has no further obligation under 36 CFR part 800. RUS is developing a list of undertakings, including those funded through its Telecommunications Program, for which RUS has determined S.106 review is not applicable. To the maximum extent possible, RUS will coordinate these undertakings with its NEPA Categorical Exclusions. RUS will make this list available to its applicants so that they can determine how to proceed in S.106 review.

3.4.1.3 Undertakings for which S.106 Review is Applicable

For undertakings for which S.106 is applicable, RUS must complete the following four steps established by 36 CFR part 800 in order to comply with statutory requirements:

1. Initiate consultation – The first step in S.106 review is to identify the applicable State Historic Preservation Office (SHPO) and other consulting parties. In completing the four regulatory steps, RUS must consult (i.e. share information with, consider the views of, and seek agreement with) nonfederal parties such as the SHPO, federally recognized Indian tribes, local governments and others with an interest in the effects of the undertaking on historic properties. While RUS is obliged to consult with these parties, completing each of the steps of S.106 review is based on federal decision-making.

In addition to identifying consulting parties, the federal agency should plan for involving the public in S.106 review. Pursuant to 36 CFR §800.2(d)(3), RUS uses its NEPA procedures to satisfy the requirement for public involvement.

2. Identify and evaluate historic properties – In the next step of S.106 review, the federal agency gathers information from consulting parties and conducts the studies necessary to identify and evaluate historic properties. No specific studies are required under the regulations, and there is no regulatory requirement for the identification of “all” historic properties or study of the entire area of potential effects (APE). Rather, RUS, as the responsible federal agency, applies the reasonable and good faith effort regulatory standard, defined at 36 CFR §800.4(b)(1), to determine what if any studies need to be performed. In order to conclude this step, the federal agency applies the NRHP criteria to those buildings, structures, sites, districts and objects identified in the APE to determine if any are eligible for listing in the NRHP.

3. Assess effects - If no historic properties are identified in step #2, then S.106 review is concluded. If historic properties are identified, then RUS applies the criteria of adverse effect in accordance with 36 CFR §800.5(a)(1). Concurrence between RUS and consulting parties in either a finding of no historic properties affected or no adverse effect concludes S.106 review.

Construction of communications towers and ancillary compound facilities, access roads, and work staging areas for wireless telecommunications undertakings cause ground disturbance which can have direct effects on historic properties. Similarly the installation of wireless equipment, such as antennas and small cells, on existing

buildings or structures that are listed or considered eligible for listing on the NRHP may alter the qualifying characteristics of that historic property. The construction of new communications towers and, to a lesser extent, the collocation of wireless equipment introduces a new visual element that could diminish the setting and feeling of a historic property, in those cases in which these aspects of integrity apply. As such, this wireless construction could have an effect on historic properties. In the absence of a legal standard for the geographic scope of such visual (indirect) effects, RUS relies on the thresholds established by Stipulation VI.C.3 and 4 of the Federal Communications Commission's (FCC) nationwide Programmatic Agreement (PA) titled, Nationwide Programmatic Agreement for Review of Effect on Historic Properties for Certain Undertakings Approved by the FCC, which was executed October 4, 2004.

Construction of buried or aerial fiber optic cable mainline and service lines, and the connections between them using handholes, pedestals or vaults for wired telecommunications undertakings can cause ground disturbance, and as such could affect NRHP listed or eligible archeological sites, and properties of religious and cultural significance to federally recognized Indian tribes. Aerial or buried fiber optic cable service line is typically used to connect wireless equipment to the mainline. Occasionally fixed wireless connections are used in place of cable, but this is often a suboptimal alternative. Therefore, even wireless telecommunications may have a wired component. However, for mainline buried fiber optic cable the use of a vibratory plow for the construction and the deployment of this infrastructure in existing road right-of-way (ROW) significantly diminishes the potential for adverse effects. The same limited potential for adverse effects does not apply to the construction of buried fiber optic cable outside of existing road ROW or utility easement.

The same limited potential to affect historic properties applies for the construction of service lines which are typically placed adjacent to existing driveways or in utility easements typically using a vibratory plow or smaller equipment. Furthermore, the location of a buried fiber optic cable mainline usually can be adjusted, either horizontally (other side of the road) or vertically (using directional bore) to avoid adverse effects to historic properties.

The most extensive ground disturbance caused by buried fiber optic cable projects usually is associated with the construction of the connections between the main line and service lines, and the entry and exit holes for directional bores, which may be as much as four feet wide, long and deep. However, these connections, just like the customers they serve, are not densely distributed across the rural landscape. Since historic properties are not ubiquitous across the landscape, these widely-spaced connections are likely to have little effect on historic properties.

Aerial fiber optic cable (mainline and service lines) can be installed on new or existing distribution or transmission lines. The construction of a new pole line has the potential

for effects because its construction causes ground disturbance and could introduce a new element to the setting of a historic property. Placing aerial fiber optic cable on an existing distribution or transmission line does not introduce a new element to a historic property's setting. Therefore, this action will not affect historic properties, except when poles need to be added or replaced. Typically, the replacement of poles in the existing hole or within five feet of it limits the potential for adverse effects. RUS must take into account the effect of this action on historic properties only when its applicant has control over the existing pole line. When the applicant does not possess such authority, the action of the owner of the pole line is not subject to S.106 review.

This general overview of the potential for Telecommunications Program undertakings to affect historic properties does not apply to those that will cross federal lands. Unlike private or state lands, federal lands and the resources they contain are subject to authorizing legislation, such as the Organic Act of 1916 or the Federal Land Policy and Management Act of 1976, and other requirements, such as the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C 3001 et seq., and the Archeological Resources Protection Act (ARPA), 16 U.S.C. 470aa – 470mm, which enhance the protection afforded to cultural resources, including historic properties.

Actions crossing tribal lands, as defined pursuant to 36 CFR §800.16(x), also are subject to NAGPRA and ARPA, and in many cases oversight by the Bureau of Indian Affairs as well as tribal permitting and cultural resources ordinances. These additional requirements typically are meant to enhance the protection afforded to cultural resources, including historic properties.

4. Resolve adverse effects – When there will be an adverse effect, pursuant to 36 CFR §800.6, RUS works with consulting parties to identify measures to avoid, minimize or mitigate those adverse effects. Over the past five years, there have been fewer than ten adverse effects, a number particularly significant when compared with the funding provided by the Telecommunications Program from 2010 to 2015. For example, in implementing its American Recovery and Reinvestment Act (ARRA) Broadband Initiatives Program (BIP), RUS funded 301 projects, of which 51 were wireless only, 33 were combined wired/wireless, and the remaining 217 were wired only. Several of the wireless projects proposed construction of more than ten communications towers and in total the wired projects have constructed more than 10,000 miles of fiber optic cable in rural America. None of these projects, however, were found to have an adverse effect.

3.4.2 RUS Delegation of Authority to Conduct S.106 Review

In accordance with 36 CFR §800.2(d)(4), and by letters dated July 16, 2009 and August 14, 2012, RUS issued a blanket delegation authorizing all of its applicants to "initiate consultation." This blanket delegation allows RUS applicants to proceed through S.106 review as long as the applicant and consulting parties agree on the recommended

finding of effect and any determinations of eligibility. RUS, which retains responsibility to document findings and determinations as required by 54 U.S.C. part 306114 [formerly Section 110(l) of NHPA], is likely to conclude S.106 review on the basis of the agreed upon recommendations.

Federally recognized Indian tribes are legally considered sovereign nations entitled to a special government-to-government relationship with the federal government. Accordingly, RUS may not delegate to an applicant the authority "*to consult*" with Indian tribes. However, an applicant may "*work with"*, "*engage*" or "*involve*" a federally recognized Indian tribe in S.106 review under delegated authority as long as the tribe is willing to participate. An applicant must involve RUS in S.106 review whenever a federally recognized Indian tribe requests the participation of the federal agency. RUS encourages federally recognized Indian tribes to work with its applicants under delegated authority in order to become involved as early as possible in S.106 review.

Applicants authorized under this blanket delegation are required to involve RUS whenever there is an adverse effect, a disagreement between the applicant and consulting parties, an objection from a consulting party or the public, or a failure to adhere to regulatory requirements. The direct participation of RUS is required because all decision-making authority in S.106 review rests with the federal agency. Accordingly, only RUS can successfully resolve these issues in the public interest.

RUS expects its authorized applicants to "involve consulting parties in developing recommendations about S.106 findings and determinations, and to carry out the exchange of documentation and information in a respectful, constructive, and predictable manner." In order to assist its applicants in doing so, RUS has developed template letters to be used by applicants in notifying Indian tribes and SHPOs, and seeking their recommendations about proposed findings and determinations, and guidance on implementing the blanket delegation (See Appendix I).

3.4.3 Program Alternatives for Streamlining S.106 Review for Broadband Deployment

Federal agencies may use one or more of several program alternatives – alternate procedures, programmatic agreement (PA), exempted categories, standard treatments or program comment - identified pursuant to 36 CFR §800.14 to tailor S.106 review for a single undertaking or an entire program. There is one program alternative applicable to RUS telecommunications undertakings and two just beginning formal consideration.

3.4.3.1 Amended Program Comment for Wireless Telecommunications Facilities

Using 36 CFR §800.16(b), S.106 review has been tailored for the FCC through the execution of two nationwide PAs (NPAs) titled *Nationwide Programmatic Agreement for the Collocation of Wireless Antennas* (March 16, 2001;

http://wireless.fcc.gov/releases/da010691a.pdf), and *Nationwide Programmatic Agreement for Review of Effect on Historic Properties for Certain Undertakings Approved by the FCC* (October 4, 2004; https://apps.fcc.gov/edocs_public/attachmatch/FCC-04-222A3.pdf). Neither of these NPAs is applied to undertakings on federal or tribal lands. Following the execution of these NPAs, FCC developed special tools to enhance their implementation, including an electronic system for S. 106 review (E-106), Forms 620 and 621 for the recording of S.106 information for the construction of new telecommunications towers and the collocation of equipment, respectively, and the Tower Construction Notification System (TCNS) designed to notify and solicit the views of consulting parties.

On October 23, 2009, a program comment issued by the ACHP went into effect that would relieve RUS, the National Telecommunications and Information Administration (NTIA) and the Federal Emergency Management Agency (FEMA) from conducting duplicative S. 106 reviews when any one of them assisted in a telecommunications undertaking subject to review by the FCC under one of its NPAs. When an RUS, NTIA or FEMA undertaking consists of both wireless and wired infrastructure, the program comment provides efficiency only for the former. This program comment was successfully implemented by RUS and the other agencies until its expiration on September 30, 2015.

Prior to expiration, RUS, NTIA and FEMA initiated amendment of the 2009 program comment. The amendment to this program comment was published in the *Federal Register* Vol. 80 No. 189, pages 58744-58747, on September 30, 2015. This amendment extends the duration of the program comment to ten years, with the possibility of another five year extension through amendment, adds federal agencies and departments – the Federal Railroad Administration (FRA), the Federal Transit Authority (FTA), First Responder Network Authority (FirstNet) and the components of the Department of Homeland Security – and provides for development of a monitoring system. To date, this is the only program alternative specific to the deployment of broadband infrastructure available to RUS.

3.4.3.2 Program Comment for the Timing of Funding Obligation and S.106 Review

On January 8, 2016, RUS distributed a request to SHPOs, federally recognized Indian tribes, the National Association of Tribal Historic Preservation Officers, the National Trust, and selected organizations representing industry for their comments on a proposal by the Agency to continue the practice of obligating funding for Telecommunications Program applications and then conducting S.106 review prior to the release and advance of the obligated assistance. In addition to this review, RUS is seeking recommendations from these parties on the appropriate program alternative to use to establish this sequencing. RUS believes that given the benefits of this sequencing to applicants, the remarkably limited occurrence of adverse effects, and the

very straightforward nature of the issue that a program comment is the most appropriate program alternative.

RUS has requested submission of comments on or before the close of business on Friday, February 12, 2016. RUS will analyze the timely comments received and proceed to institute a program alternative as appropriate. If consulting parties agree with the proposed sequencing through a program comment this matter could be resolved as early as May 1, 2016.

3.4.3.3 Seeking Program Alternatives for Broadband Deployment

On June 14, 2012, the President issued Executive Order (EO) 13616 titled "*Accelerating Broadband Infrastructure Deployment*," with a specific focus on federal lands. RUS has been engaged with the EO Broadband Work Group since then to more precisely identify measures which might resolve the challenges faced by industry in the deployment of broadband on federal lands. In 2013, EO Broadband Work Group members, which include land managing agencies, developed the following proposed list of S. 106 efficiencies:

- **Wireless**

  1. Adopt best features of the FCC NPAs for use on Federal land and buildings [Proposed]

     Program Alternative: Standard Treatment

  2. Expand applicability of existing 2001 FCC NPA to DAS and small cells [Under Development by FCC]

     Program Alternative: Amendment to existing 2001 FCC NPA (Collocation Agreement). While this agreement currently excludes DAS and small cells from review on the same terms as conventional wireless facilities, the FCC believes the smaller size of these facilities warrants broader exclusions. While the agreement does not by its terms apply on Federal lands and buildings, the ACHP could leverage its applicability to other Federal agencies through a Standard Treatment.

- **Wired**

  1. Placement of aerial fiber optic cable on an existing line [Proposed]

     Condition: Pole replacement or additional poles needed

     Indirect Effects: (1) New and replacement poles are the same kind and quality as the originals; (2) any height increase limited to no more than 20% of the original; (3) poles are more than 250 feet from a historic district boundary

     Direct Effects: [Discussion needed]

*Treatment***:** Exemption from review

Program Alternative: Exemption

2. Connection of broadband to federal buildings and buildings located on federal land [Proposed]

   Condition for Exemption: Connection is adjacent to existing utility entry points or on the rear building façade

   Treatment if not Exempt: Lacking an existing utility entry point or the availability of the rear façade on a historic property, the connection would follow the Secretary of the Interior's Standards for Rehabilitation and National Park Service Preservation Briefs

   Program Alternative: Exemption and Standard Treatment

3. Installation of buried fiber optic cable in existing road ROW [Proposed]

   Condition: Use of vibratory or static plow

   Treatment: (1) Identify known archeological sites within 300 feet on either side of the road ROW; and (2) Adjust the buried fiber optic cable route to avoid these sites

   Program Alternative: Standard Treatment

The EO Broadband Working Group will consult with the ACHP to determine how best to proceed with the review and consideration of these efficiencies. The goal of the EO Broadband Work Group leads – the Office of Science Technology Policy and DHS - is to have this matter resolved as soon as possible before December 31, 2016. If and when these efficiencies are adopted and implemented, RUS will apply them to its broadband infrastructure programs as appropriate.

3.4.4 Impacts and Conclusion: Cultural and Historic Resources per NHPA

Therefore, compliance with NHPA is deferred to project-level planning as described in this section and Chapter 4.

3.5 Potential Impacts to Air-Related Resources

3.5.1 Greenhouse Gas Emissions and Climate Change: No Further Analysis for Project Level Planning

3.5.1.1 Introduction

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth, and therefore contribute to the greenhouse effect and global warming. Most GHGs occur naturally in the atmosphere, but increases in their concentration result from human activities such as the burning of fossil fuels. Global

temperatures are expected to continue to rise as human activities continue to add carbon dioxide, methane, nitrous oxide, and other greenhouse (heat-trapping) gases to the atmosphere.

3.5.2 Process for Evaluation of GHG Emissions

The President's Council on Environmental Quality (CEQ) advises federal agencies to consider whether analysis of the direct and indirect greenhouse gas (GHG) emissions from their proposed actions may provide meaningful information to decision makers and the public (CEQ Revised Draft Guidance 2014). Based on their review of the available science, CEQ advised agencies that if a proposed action would be reasonably anticipated to cause direct emissions of 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis, significant impacts on the environment from the action were possible and the agencies should consider that a quantitative and qualitative assessment may be meaningful to decision makers and the public. RUS has assessed the potential GHG impacts of its current and proposed actions in context of the CEQ guidance.

The CEQ states in the 2014 draft guidance:

- "In addressing GHG emissions, agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of projected GHG emissions. This concept of proportionality is grounded in the fundamental purpose of NEPA to concentrate on matters that are truly important to making a decision on the proposed action. When an agency determines that evaluating the effects of GHG emissions from a proposed Federal action would not be useful to the decision-making process and the public to distinguish between the no-action and proposed alternatives and mitigations, the agency should document the rationale for that determination…CEQ does not expect that an EIS would be required based on cumulative impacts of GHG emissions alone…"
- "Agencies should be guided by a "rule of reason" in ensuring that the level of effort expended in analyzing GHG emissions or climate change effects is reasonably proportionate to the importance of climate change related considerations to the agency action being evaluated…"
- "In considering when to disclose projected quantitative GHG emissions, CEQ is providing a reference point of 25,000 metric tons of CO_2 emissions on an annual basis below which a GHG emissions quantitative analysis is not warranted unless quantification below that reference point is easily accomplished. This is an appropriate reference point that would allow agencies to focus their attention on proposed projects with potentially large GHG emissions…"
- "Applying this guidance will promote an appropriate and measured consideration

of GHG emissions and the effects of climate change in the NEPA process through a clearer set of expectations and a more transparent process, thereby informing decision-makers and the public and resulting in better decisions."

The average person in a home produces 4 metric tons of carbon dioxide equivalents (CDEs); includes CO_2, NO_x, CO, and SO_x) annually (EPA 2010). Offices of companies applying to RUS for financial support for broadband projects would likely produce fewer CDEs annually than the average home because little electricity is used at night and on weekends when office staff are not present.

Prominent GHGs of primary concern from land use development projects include carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Other GHGs such as hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride are of less concern because construction and operational activities associated with land use development projects are not likely to generate substantial quantities of these GHGs. Land use development projects typically include the following sources of GHG emissions:

- Construction activities resulting in exhaust emissions of GHGs from fuel combustion for mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, material delivery trucks, and worker commuter trips;
- Motor vehicle trips generated by the particular land use (i.e. vehicles arriving and leaving the project site), including those by residents, shoppers, workers, and vendors (CEQA 2015; http://www.airquality.org/ceqa/cequguideupdate/Ch6ghgFINAL.pdf).

The questions needing consideration regarding contributions to GHG at the project level are:

- Will the project generate GHG emissions, either directly or indirectly, that may have a significant effect on the environment?
- Will the project conflict with an applicable plan, policy, or regulations adopted for reducing the emissions of GHGs in the state or region?

3.5.2.1 Calculation of GHG Emissions from RUS Broadband Projects

The following calculations are based on carbon dioxide, one of several greenhouse gases. All greenhouse gases are evaluated based on the amount of CO_2 that would have the same global warming potential (GWP), when measured over a specified timescale, generally 100 years. This index is called the carbon dioxide equivalence (CO_2e). For example, methane has a carbon dioxide equivalence of 25, meaning that one ton of methane will cause the same amount of warming as 25 tons of carbon dioxide. Similarly, nitrous oxide will cause the same amount of warming as 298 tons of carbon dioxide. For this reason, the CEQ uses only carbon dioxide emissions for its suggested threshold for more detailed calculations for GHG emissions. The carbon

dioxide equivalence for other GHG can be readily calculated from that for carbon dioxide.

Assumptions for the GHG calculations of hypothetical aerial and underground plant of fiber cable are:

- 600 miles of fiber plant;
- Use of vehicles in Table 2-1 for underground and Table 2-2 for aerial plant;
- 270 days (2,160 hours considering an 8-hour day) operation to complete project for aerial and underground (exception of directional boring);
- Directional boring only used half of the days (135 days; 1,080 hours considering an 8-hour day);
- Pickup trucks, chipper shredder, Ditch Witch, compactor use gasoline fuel;
- Bulldozers, two-ton trucks, backhoe/loaders, semi-truck with trailer, excavator, cable plow, flatbed truck, dump truck/trailer, skid loader use diesel fuel;
- Assume 2 gallons/hour of gasoline fuel used at 8 hours/day = 16 gallons gasoline/vehicle/day;
- Assume 10 gallons/hour of diesel fuels used at 8 hours/day = 80 gallons of diesel/vehicle/day (http://www.heavyequipmentforums.com/showthread.php?5804-fuel-consumption) (viewed 7/7/2015);

Calculation of CO_2 emissions for aerial plant of fiber on poles (to nearest whole number)

- Gasoline: 16 gals/day x 270 days x 8.8 kg/gal divided by 1000 kg/metric ton x 5 vehicles = 190 metric tons
- Diesel: 80 gals/day x 270 days x 10.1 kg/gal divided by 1000 kg/metric ton x 5 vehicles = 1,090 metric tons
- Total metric tons = 190.5 + 1090.8 = 1,281.3 metric tons for an aerial plant over 600 miles, which is substantially less than 25,000 metric tons suggested for detailed analysis by CEQ (2014)

Calculation of CO_2 emissions for underground plant of fiber (to nearest whole number):

- Gasoline (not including directional boring): Gasoline: 16 gals/day x 270 days x 8.8 kg/gal divided by 1000 kg/metric ton x 4 vehicles = 152 metric tons
- Diesel (not including directional boring): 80 gals/day x 270 days x 10.1 kg/gal divided by 1000 kg/metric ton x 6 vehicles = 1,309 metric tons
- Gasoline directional boring: 16 gals/day x 135 days x 8.8 kg/gal divided by 1000

kg/metric ton x 3 vehicles = 57 metric tons

- Diesel directional boring: 80 gals/day x 135 days x 10.1 kg/gal divided by 1000 kg/metric ton x 5 vehicles = 545 metric tons
- Total metric tons = 152.1 + 1,309.0 + 57.0 + 545.4 = 2,063 metric tons for underground plant, including directional boring, over 600 miles, which is substantially less than 25,000 metric tons suggested for detailed analysis by CEQ (2014).

It is assumed that because tower construction is conducted in a small localized area over a short period of time, that the GHG emissions would be even less than those for aerial or underground plant.

3.5.2.2 Impacts and Conclusion: Green House Gas Emissions and Climate Change

Considering the conservative calculations above and the scope of anticipated projects, the metric tons of CO_2 are substantially below the CEQ suggested threshold for conducting detailed calculations.

Applicants must consider the potential for climate change impacts on their projects during design and implementation. For example, applicants must ensure that:

- In areas that may be subject to more severe storms with high winds, that all poles, towers, and antennas are secured and can withstand the pressures;
- In coastal areas subject to rising sea levels, or in areas potentially subject to heavy precipitation and flooding, projects would not be inundated within the life of the project.

Further analysis of GHG emissions will not be considered further in this PEA and are not necessary at the level of project-level planning.

3.5.3 Air Quality: No Further Analysis for Project Level Planning

3.5.3.1 Introduction

Impacts to air quality associated with deploying fiber underground are limited to temporary and incidental increases in particulate matter (dust) during construction in addition to precursor emissions from operating construction equipment.

Aerial plant would not create fugitive dust issues except for vehicle use on dirt or gravel roads within rights-of-way. Following dust abatement best management practices in Section 3.14 would minimize dust emissions.

Underground plant is typically accomplished using the minimally ground disturbing plowing construction technique (Section 2.2). The narrow blade used for cable

installation causes soils to be cut and not tumbled, and limits the vegetative clearing and disruption of soils to a small trench approximately 3 to 6 inches in width. Tractor treads on the heavy equipment minimize vegetation disturbance beyond that width.

Construction of a tower would have very little ground disturbance, and all disturbed land would be quickly covered in concrete for the tower footings. Building construction would require erosion control, including dust suppression and rapid ground cover with building foundations and parking areas. Few projects require new building construction.

Dust suppression, especially use of water trucks, will be employed as required to control fugitive dust at construction sites for fiber plant and tower and building construction, as measured in particulate matter of 10 microns in size and 2.5 microns in size (PM_{10} and $PM_{2.5}$), with 2.5 micron grains being more damaging to lungs. However, because the narrow trenching blade and immediate reconstruction result in almost no dust, fugitive dust is not expected to be a problem with deployment of either underground or aerial deployment.

The air emissions of construction activities, including fiber plant and construction of towers and buildings, from the vehicle exhaust emissions of heavy-duty-diesel and gasoline-powered equipment and worker commute trips include criteria air pollutants NO_x, CO, SO_2, and ozone. These pollutants are less concern than particulate matter because construction activities are not likely to generate substantial quantities of the criteria pollutants (CEQA 2015; http://airquality.org/ceqa/cequguideupdate/Ch3Construction-GeneratedCAPsFINAL.pdf (viewed 7/6/2015)). The questions that need to be considered regarding air quality at the project level are:

- Is the air quality in the area for any criteria pollutant in non-attainment as determined by the state implementation plan?
- If so, will the project conflict with or obstruct implementation of the state air quality implementation plan?
- If so, will the project violate an air quality standard or contribute substantially to an existing or projected air quality violation?
- If so, will the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment?
- Will the project expose sensitive receptors to substantial pollutant concentrations?

3.5.3.2 Impacts and Conclusion: Air Quality

Adherence to BMPs and SOPs in Section 3.14 will keep the already minimal air quality emissions to a minimum. Most rural areas where RUS-supported projects are expected to be conducted within attainment areas. Emissions from an individual broadband

project in any one area are projected to be *de minimis* and do not need to be evaluated at the project level, even in the unlikely circumstance where the area is in maintenance or non-attainment for a precursor air pollutant. Therefore, it is highly unlikely that this analysis would be needed to be performed at a project level.

3.6 Potential Impact of Equipment Noise on Sensitive Receptors: No Further Analysis at Project Level Planning

3.6.1 Introduction

Noise and vibration are both fluctuations in the pressure of air (or other media) that affect the human body. Vibrations that are detected by the human ear are classified as sound. We use the term 'noise' to indicate unwanted sound.

Noise is measured in units of sound pressure levels called decibels, named after Alexander Graham Bell, using A-weighted sound levels (dBA). The A-weighted sound levels closely match the perception of loudness by the human ear. Decibels are measured on a logarithmic scale, which means that a small change in the number of decibels results in a huge change in the amount of noise and the potential damage to a person's hearing.

Sixty to eighty dBs are considered to be “loud.” Table 3-1 indicates the comparative sound pressure levels of “sound” in dBs of various sources (http://www.engineeringtoolbox.com/sound-pressure-d_711.html; viewed 7/12/2015).

Table 3-1. Comparative Sound Pressure Levels of “Noise” in Sound Pressure Levels (dBs).

Source	dB
Quietest audible sound for persons with excellent hearing under laboratory conditions (threshold of hearing)	0
Rustling leaves	20
Quiet room in a home	40
Vacuum cleaner, inside a car moving at 50 m/hour (loud for a voice conversation at 1 foot)	70
Automobile (30 feet away), diesel trucks, road with busy traffic, maximum REL for 8 hours to protect hearing (loud, intolerable for phone use)	80
Food blender, bulldozer or jackhammer at 45 feet away, maximum sound for 8 hour criteria (loud, intolerable for phone use)	90
Diesel truck at 30 feet (very loud)	100
Lawn mower at 3 feet (very loud)	107
Large aircraft at 450 feet overhead (threshold of discomfort)	110

Chainsaw (threshold of discomfort)	117
Siren (deafening, human pain limit)	120

For the worst-case analysis, we assumed deploying underground cable in a residential neighborhood for a period of, for example, two hours in a one-block area during the daytime. Sound is “less noisy” during the day than at night, when roads have traffic, and televisions, washing machines, music, and other sounds are occurring inside an individual residence, and other “noisy” activities are occurring inside and outside a residence. Also, residents tend to be either working or involved in activities away from the residence during the day. We assume that no resident is sleeping during the daytime.

Using Tables 2-1 and 2-2, we assume that, at any one time, a piece of equipment equivalent to a bulldozer would be operating within a one block area of a residential neighborhood for approximately 2 hours. To minimize a sound of 90 to 100 dB at distance of 45 feet from the source, a resident at home can shut their windows on the road side of the house for several hours, substantially reducing the sound level. Because the operating site is rehabilitated immediately, all vehicles and equipment would be gone within several hours, with no need to return.

When loud sounds may be a concern, the equipment may be artificially muffled by thick material, such as a carpet, between the loud equipment and the sensitive receptor, or a tent structure over loud equipment (pers. comm. PCCA, 7/5/2015).

3.6.2 Impacts and Conclusion: Noise

People in residential areas are exposed to the loud noise associated with the operation of lawn mowers and chain saws, which are “louder” than bulldozers and diesel trucks, on a regular basis (lawn mowers probably once per week, including their own). Therefore, people would not be exposed to harmful sounds for an extended period of time, and, although they may be slightly annoyed for several hours, the period of annoyance would be temporary. Construction would be consistent with local noise ordinances and limited to daylight hours. With these routine measures in place, the potential for adverse impacts to sensitive noise receptors is negligible. Therefore, potential impacts from noise will not be considered further in this PEA, nor must it be considered at project-level planning.

3.7 Potential Impacts to Threatened and Endangered Species: Deferred to Project Level Planning

3.7.1 Introduction

Under the Endangered Species Act of 1973 (ESA) (16 United States Code (U.S.C.) 1531 et seq., as amended; 16 U.S.C. 703-712), all federal agencies must conserve

listed threatened and endangered species and will use their authorities in furtherance of the purposes of the Act (Sec. 2(c)). The U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) are charged with implementation and enforcement of the ESA, including development of recovery plans for listed species. Under the authority of the ESA, these agencies act to prevent the extinction of plant and animal species by identifying species at risk of extinction, designating (or "listing") these species as threatened or endangered. These agencies provide protection for these listed species and their habitats by developing and implementing recovery plans to improve specie status, and ultimately "delisting" these species and returning full management authority of the species to the states or tribes when warranted.

Agencies conduct ESA Section 7 consultations with the USFWS/NMFS and use their expertise to ensure that "any action authorized, funded or carried out by such an agency…is not likely to jeopardize the continued existence of any endangered or threatened species…Each agency will use the best scientific and commercial data available" (Sec.7(a)(2)).

The USFWS/NMFS can issue permits providing for conducting various activities, including scientific research or enhancement of propagation or survival; “take” incidental to conducting other activities is covered under an incidental take statement issued under Section 7.

Under the ESA implementing regulations (50 CFR part 402) regarding informal Section 7 consultation, federal agencies must review their actions and determine whether their action may affect federally listed or proposed listed species as well as proposed or designated critical habitat. To accomplish Section 7 consultation, federal agencies must request from the USFWS/NMFS a list of species and critical habitats that may be in the project area or they can request concurrence with the agency’s list of species. The USFWS’s IPaC website can be used for informal consultation (Appendix G) by clicking on the “Request an Official Species List” button.

The USFWS/NMFS must respond to either a request or concurrence of an Agency species list within 30 days. If listed species may be present, the requesting entity may self-determine a “no effect” finding based on its analysis. Alternatively, the agency may proceed with informal consultation by submitting a finding of effects determination or Biological Assessment to their local USFWS field office and request guidance on ways to reduce any effects. If the results of informal consultation lead to the determination that the project may adversely affect the listed species, then formal Section 7 consultation is initiated, resulting in the USFWS/NMFS issuing a Biological Opinion, with conservation measures, and potentially an incidental take statement with mandatory terms and conditions.

Detailed step-by-step instruction and technical assistance is found at http://www.fws.gov/midwest/Endangered/section7/s7process/7a2process.html (viewed 7/6/2015). This site walks the viewer through the Section 7 consultation process, provides guidance for preparing a Biological Assessment for formal or informal consultation (format, content, and analysis), and links to the USFWS Section 7 Consultation Handbook.

The IPaC website and databases described in Appendix G of this PEA as well as the website identified above provide the information needed for informal consultation, including species lists, species information, maps of critical habitat, and meaningful and effective mitigation and conservation measures specific to the proposed and associated connected actions. Use of the available tools helps the USFWS focus on formal Section 7 consultations for proposals with higher impacts to listed species.

The website http://www.fws.gov/midwest/Endangered/section7/no_effect/telcoms3.html (viewed 7/6/15), which is accessible from the USFWS Section 7 Technical Assistance website, provides two primary factors for consideration of telecommunication projects:

> A. Does the project involve installing towers that include use of guy wires and/or is the tower over 200 feet in height? If yes - the project requires further review. Please contact the Ecological Services Field Office nearest the project for assistance. If no, continue with the “no effect” determination process; and
>
> B. Does the project involve removal of native vegetation? If yes, the project requires further review, including the determination of presence or absence of suitable habitat, presence or absence of associated listed species and critical habitat, and potential for impact to either. If no, continue with the “no effect” determination process.

See Appendix I for the USFWS criteria and checklist for tower siting and design.

Geospatial data regarding designated critical habitat can be readily found at the website http://ecos.fws.gov/crithab/ (Viewed 7/6/2015). See a detailed description of this website in Appendix G of this PEA.

3.7.2 Impacts and Conclusion: Threatened and Endangered Species

As species and associated critical habitat vary among regions both in and outside of the U.S., each project will need site-specific compliance with the ESA. Therefore, compliance with the ESA is deferred to project-level planning and NEPA compliance.

3.8 Potential Effects of Non-Ionizing Electromagnetic Radiation from Base Stations (Cell Towers and Microwave Towers) on Human Health and Safety: No Further Analysis at Project Planning

3.8.1 Introduction

With the rapid increase of cell phone use and wireless internet worldwide, including the proliferation of microwave antennas, questions and concerns have surfaced regarding the possible adverse impacts to human health and safety from electromagnetic radiation emitted by antennas located on towers and other elevated infrastructure, such as buildings. Some people perceive risks to human health from whole-body exposure to electromagnetic radio frequency (RF) fields as likely and even possibly severe (WHO; http://www.who.int/peh-emf/publications/facts/fs304/en/).

Since the late 1990s, much of the research on impacts of RF has been conducted outside the United States, with unclear or differing results. In many respects, the scientific literature concerning biological and possible health effects of RF fields is uneven, confused, and varies widely in quality. In many reports, biological endpoints and relevance are from limited experiments, have obvious technical flaws, small sample sizes, or present results promoting publication bias. The literature "abounds with reports of 'effects', many of which are artifacts from poorly conducted experiments" (Foster and Trottier 2013).

Considering the state of current information, the analysis in this PEA is based on reports and guidelines from the most recent, objective, and peer-reviewed sources. These sources include:

- *International Commission on Non-Ionizing Radiation Protection* (ICNIRP; http://www.icnirp.org/en/home/home-read-more.html; http://www.icnirp.org/en/frequencies/high-frequency/hf.html; http://www.icnirp.org/en/applications/base-stations/index.html);
- *United Nations World Health Organization* (WHO; http://www.who.int/peh-emf/publications/facts/fs304/en/);
- *United Nations World Health Organization International Agency for Research on Cancer (IARC)* Non-Ionizing Radiation Part 2: Radiofrequency Electromagnetic Fields Vol. 102. Published 2013, based on the working group meeting in Lyons France in 2011. (http://monographs.iarc.fr/ENG/Monographs/vol102/mono102-F01-F02.pdf); and
- *Federal Communications Commission* (FCC) https://transition.fcc.gov/oet/rfsafety/background.html) (https://www.fcc.gov/what-we-do) (https://transition.fcc.gov/oet/rfsafety/background.html)

(https://www.fcc.gov/guides/human-exposure-rf-fields-guidelines-cellular-and-pcs-sites).

References are drawn from the cited websites, which were reviewed on 06/30/2015, unless stated otherwise.

A frequently referenced report, "*The BioInitiative Report (BIR): A Rationale for Biologically-based Exposure Standards for Low-Intensity Electromagnetic Radiation*" (2012; http://www.bioinitiative.org/), is a non-peer-reviewed document that purports to evaluate the science, public health, and public policy impacts of RF exposures on human health, based primarily on RF emitted from cell and wireless phones, not the RF from cell towers and base stations, which has different frequencies and emissions, scope of exposure, and potential effects. It also misinterprets the conclusions related to cell phone RF emissions made in the 2013 IARC monograph.

Several international relevant entities invalidate the methodology and conclusions in the *BIR,* finding them unbalanced, biased, non-rigorous, scientifically unjustified, and not meeting the standards of science (Croft et al. 2008, the Health Council of the Netherlands 2008, Foster and Trottier, the Indian Ministry of Communications and Information Technology 2013). Therefore, the *BIR*, as well as and papers and blogs prepared by the primary preparers of the report, are not incorporated in this PEA.

3.8.2 Background

3.8.2.1 Non-ionizing Radiation and Base Stations

Ionization is the conversion of an atom, molecule, or substance into an ion or ions by removing one or more electrons. Ionization is associated with higher frequency electromagnetic radiation such as ultraviolet radiation, x-rays, and gamma rays. Lower-frequency non-ionizing radiation (NIR) includes microwaves and electromagnetic radiation such as ultraviolet light, visible light, infrared light, radio waves, and mechanical waves such as infra- and ultrasound. In daily life, common sources of NIR include the sun, household electrical appliances, mobile phones, microwave ovens, and magnetic resonance imaging (MRI) machines used for medical purposes, and microwave antennas used in telecommunications.

This analysis addresses non-ionizing radiation emitted from cell and microwave antennas (also called base stations or cellular or PCS cell site antennas) and associated infrastructure described in Section 2.5. Cellular or Personal Communications Service (PCS) cell site towers are typically 50-to 200-feet high, with antennas typically arranged in groups of three; antennas may also be mounted on water towers or other elevated structures such as rooftops or the sides of buildings. Base stations for cellular phones use frequencies between 800 and 900 megahertz (MHz). Transmitters in broadband PCS use frequencies in the range of 1850-1990 MHz.

The total RF power that can be transmitted from each transmitting antenna at a cell site depends on the power of each transmitter and the number of radio channels (transmitters) authorized by the FCC. While a typical base station could have as many as 63 transmitters (with total power ranging between 10 and 50 watts), not all of the transmitters routinely operate simultaneously or continuously, thus reducing overall emission levels below the possible maximum permitted by the FCC.

The RF signal from a cellular or PCS base station antenna mounted on a rooftop or tower is essentially directed toward the horizon in a relatively narrow pattern in the horizontal plane. Thus, the dispersion of microwave energy outside of the relatively narrow horizontal beam is minimal or insignificant. The radiation pattern from an omni-directional antenna may be compared to a thin doughnut or pancake centered around the antenna, while the pattern for a sector antenna is fan-shaped, like a wedge cut from a pie (Figure 3-15). As with all forms of electromagnetic energy, the power density decreases rapidly as one moves away from the antenna in horizontal distance or one is below the emission pattern that extends horizontally from the antenna. Generally, the RF field strength decreases very rapidly with distance from the source at the antenna and can be calculated as the inverse square of the distance (ICNIRP, FCC).

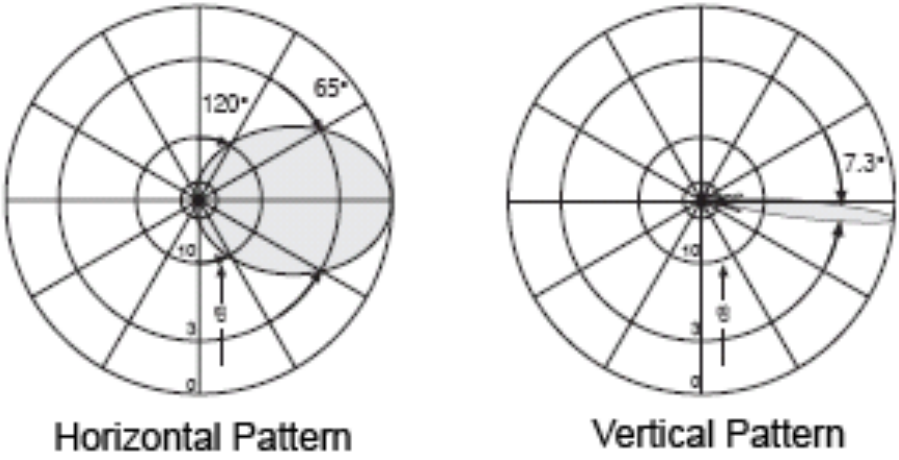


Figure 3-15. Diagrams of the Horizontal and Vertical Patterns from a Cell Phone Antenna. An antenna radiates a horizontal fan-shaped beam with a narrow vertical beam. A tower with multiple antennas would have a broader horizontal beam. (https://en.wikipedia.org/wiki/Sector_antenna#/media/File:Sector_antenna_radiation_pattern.png)

Consequently, ground-level exposure is substantially less than exposures that might be encountered if one were very close to the antenna directly within the transmitted beam.

3.8.2.2 Human Health Exposure Guidelines

Most countries, including the United States, base exposure recommendations upon the same general concepts and thresholds as those used by the:

- National Council on Radiation Protection and Measurements (NCRP), a non-profit corporation chartered by Congress to develop information and recommendations concerning radiation protection;
- American National Standards Institute (ANSI), a nonprofit, privately funded membership organization that coordinates development of voluntary national standards in the United States);
- Institute of Electrical and Electronics Engineers (IEEE), a national nonprofit technical and professional engineering society); and
- ICNIRP (1998, base station standards currently under revision).

Scientists and engineers experienced and knowledgeable in RF biological effects and related issues developed both the NCRP and ANSI/IEEE guidelines; the ANSI/IEEE guidelines are widely used and cited. The guidelines are based on published scientific studies relevant to establishing safe levels for human exposure to RF energy.

In 1985 the FCC adopted recognized safety guidelines for evaluating RF environmental exposure for portable devices, such as cell and cordless phones and mobile wireless, and fixed cellular and wireless antennas used for cellular and PCS, which were amended in 1996 (FCC 1996) based on recommendations by ANSI, IEEE, and NRCP. The FCC guidelines provide recommended human health exposure and received comments from more than 100 parties, including telecommunications organizations, federal agencies, local and state authorities, and individuals. However, the United States does not have regulatory standards for cellular base station RF emissions.

In its 1996 notice, the FCC concluded in part that, out of an abundance of caution, the FCC requires further environmental analysis for tower-mounted installations lower than 10 meters [approximately 30 feet, much taller than a human being] above ground and with an effective radiated power (ERP) of over 100 watts, or when the total power of all channels being used is over 1000 watts ERP. For antennas mounted higher than 10 meters above ground, measurement data for cellular facilities have indicated that ground-level power densities are typically hundreds to thousands of times below the new maximum permissible exposure (MPE) limits (FCC 1996 para. 92).

FCC radiofrequency radiation guidelines for the limit of human exposure recommend a maximum permissible exposure level to the general public of approximately 580 microwatts per cm^2, which is many times greater than RF levels typically found near the base of cellular or PCS cell site towers. Calculations corresponding to a “worst case” situation (all transmitters operating simultaneously and continuously at the maximum increased power) show that, in order to be exposed to RF levels near the FCC’s guidelines, an individual would essentially have to remain in the main transmitting beam (which is in a pattern horizontal from the point of transmission and decreases rapidly

above and below that plane) and within a few feet in front of the antenna for at least 6 minutes. The fact that rooftop cellular and PCS antennas usually operate at lower power levels than antennas on free-standing towers further reduces the likelihood of excessive exposure conditions on rooftops. In addition, the significant signal attenuation caused by a building's roof minimizes any chance for persons living or working within the building itself to be exposed to RF levels that could approach or exceed applicable safety limits (FCC). Thus the possibility that a member of the general public could be exposed to RF levels in excess of the FCC guidelines is extremely remote.

Recent surveys have indicated that RF exposures from base stations and wireless technologies in publicly accessible areas (including schools and hospitals) are normally thousands of times below international standards (FCC, WHO, ICNIRP). Moreover, as an added margin of safety, microwave tower sites are normally inaccessible to the general public. Significant exposures from these antennas could only occur in the unlikely event that an individual were to stand directly in front of and very close to an antenna for a period of time, such as standing on a rooftop near an antenna mounted there.

The Second Circuit Court of Appeals upheld FCC's guidelines developed using ANSI and NRCP standards and the human exposure standards as reasonable and not arbitrary or capricious (*Cellular Phone Taskforce, et al. v. Federal Communications Commission*, 205 F.3d 82, 2000).

3.8.3 Thermal and Non-thermal Potential Health Risks to Humans

To date, the only health effect from RF fields identified in scientific reviews is related to an increase in body temperature (>1°C) in exposed tissue from exposure at very high field intensity found only in certain industrial facilities. RF fields can penetrate into the body (the higher the frequency, the lower the penetration depth) and cause vibration of charged or polar molecules (such as water) inside resulting in friction and thus heat - a process similar to cooking food in a microwave oven.

Internal temperature regulation can accommodate small increases in heat, but above a certain threshold level and depending on the duration of exposure, higher frequency RF exposure and the accompanying temperature rise can provoke serious health effects such as heatstroke and tissue damage (burns). Acute and long-term effects of RF exposure below the thermal threshold have been studied extensively without revealing any conclusive evidence of adverse health effects. The levels of RF exposure from base stations and wireless networks are so low that temperature increases are insignificant and do not affect human health.

Few studies have investigated general non-thermal health effects in individuals exposed to RF fields from base stations, because of the difficulty in distinguishing possible health

effects from the very low signals emitted by base stations from other higher strength RF signals in the environment. Most non-thermal studies have focused on the RF exposures of cordless and cell phone users, which have exposures about 1,000 times higher than those associated with general exposure from base stations or wireless networks.

Due to their lower frequency, at similar exposure levels, the human body absorbs up to five times more of the signal from FM radio and television antennas than from base stations. This is because the frequencies used in FM radio (around 100 MHz) and in TV broadcasting (around 300 to 400 MHz) are lower than those used in mobile telephony (900 MHz and 1800 MHz) and because a person's height makes the body an efficient receiving antenna at those frequencies. Further, radio and television broadcast stations have been in operation for the past 50 or more years without any adverse health consequence being established (WHO).

As recognized in a recent WHO 2004 fact sheet "Electromagnetic Hypersensitivity (EHS)" (http://www.who.int/peh-emf/publications/facts/fs296/en/EMF; viewed 7/3/2015), EMF hypersensitivity is characterized by a variety of non-specific symptoms that differ among individuals in both types of symptoms and severity. It has not been identified as a medical diagnosis, and may not represent a single medical problem. The range of non-specific symptoms lack apparent toxicological or physiological basis or independent verification and might arise from unrelated environmental factors, stress reactions, and psychiatric conditions.

However, the WHO has identified research to determine health effects as a high priority. These topics include levels of RF exposures from various sources; behavioral, neurological, and development of fetuses and children; aging and neurodegenerative diseases in adults; and levels of exposure to non-thermal RF radiation from various sources (WHO 2010).

Natural RF from the earth’s electric and magnetic fields, the sun’s electromagnetic activity, cosmic ionizing and nonionizing radiation, and terrestrial radioactivity is non-polarized and has more or less a constant and stable intensity level most of the time. Artificial man-made electromagnetic radiation is polarized, changes/modulates/pulses frequently in intensity, is generated continuously, and is often made up of differing frequencies. Artificial electromagnetic frequencies add to the natural environmental ones, increasing the exposure (Panagopoulos 2013).

Stable electromagnetic fields outside and in the bodies of living organisms (endogenous weak electrical currents) are involved in all functions at the cellular, tissue, and organ levels, controlling cell growth, proliferation, and differentiation; embryonic development; wound healing/tissue regeneration; and various physiological functions, health, and vitality through the operation of the suprachiasmatic nucleus (SCN) gland that controls

the circadian biological clocks in all locations and cells in the body. The body's circadian clocks control sleep/wake cycles, brain and cardiovascular activity, the rhythmic operation of the heart; the operation of the endocrine system, physiology of the gastrointestinal tract, feeding behavior and timing, and hepatic metabolism. It is possible that disturbances in the communication between the different individual body clocks throughout the body potentially caused by RF may desynchronize the circadian system, which may lead to fatigue, decreased performance, obesity, neuropsychiatric disorders, and disease (Panagopoulos 2013).

Since man-made electromagnetic fields change or modulate constantly, typically including two or more different fields, usually of varying frequencies characteristic of most types of man-made RF fields, the cells of living organisms cannot adapt to the unstable EMF fields, which can lead to biological changes and potentially changes in health effects. Cell phones and the emissions from base stations serving phones and broadband can create frequency systems that are increasingly complex and constantly and unpredictably changeable to carry more and different types of information, such as voice, music, video, and internet. The RF becomes stronger when searching for signals or when signals are weak.

3.8.4 Potential Relationship of Non-ionizing EMF to Cancer

Scientific evidence on the distribution of cancer in the population can be obtained through carefully planned and executed epidemiological studies. Over the past 15 years, studies examining a potential relationship between RF transmitters and cancer have been published. These studies do not provide evidence that RF exposure from the transmitters increases the risk of cancer. Likewise, long-term animal studies have not established an increased risk of cancer from exposure to RF fields, even at levels that are much higher than those produced by base stations and wireless networks (WHO).

IARC (2013) analysis of emissions from fixed transmission antennas based on measures of geographic proximity to the antennas as an exposure surrogate do not suggest a positive association between RF emissions and cancer of the brain, based on five case-controlled studies. Two studies were based on AM radio-transmitters or mobile phone base station antennas; one was based on a mobile phone base station; one was based on the proximity of digital cordless phones (digital enhanced cordless telecommunications (DECT)) to beds in the home; and, the fifth was based on proximity of residences near a base station antenna. Together, these studies provided no indication that environmental exposure to RF radiation increases the risk of brain tumors, and no conclusions could be drawn regarding the risk of leukemia or lymphoma from environmental exposure to RF radiation, finding the available evidence uninformative.

In summary, IARC concluded that RF electromagnetic fields possibly associated with the use of cell and cordless phones are “possibly carcinogenic to humans,” potentially causing gliomas and acoustic neuromas, but not from RF radiation in the environment from base stations. Actual measurements found that being in close proximity to mobile phone base stations is not a good proxy for exposure, due to considerable variability in characteristics of the antennas and shielding and reflection of the microwaves. It found that typical exposures from rooftop or tower-mounted base stations are lower by more than five orders of magnitude than those from the cordless phone handsets.

3.8.5 Impacts and Conclusion: EMF on Human Health

There is no convincing or generally accepted scientific evidence to date that adverse short- or long-term human health effects may occur from the RF radiation produced by base stations for cell phones. Because wireless networks produce generally lower RF signals than base stations, the current state of the science indicates that no adverse health effects are expected from the level of exposure to RF radiation at a reasonable distance from base stations that would be routinely experienced by the general public (WHO, ICNIRP, FCC). Therefore, operation of wireless and microwave towers are assumed to comply with Executive Order 13045 “Protection of Children from Environmental Health Risks and Safety Risks” (http://www.archives.gov/federal-register/executive-orders/1997.html#13045; viewed 7/12/2015).

While no health effects are expected from exposure to RF fields from base stations, research is still being promoted by WHO and many other international organizations and scientists to determine whether there are any health consequences from the higher RF exposures from mobile phones and non-thermal effects from RF radiation from base stations and wireless networks (WHO 2010).

Because humans are generally below the plane of and at least 30 feet from primary RF radiation associated with broadband antennas, based on information available to date there should be negligible impact to human health.

Therefore, potential impacts from EMF on human health will not be considered further in this PEA, nor must it be further evaluated at project-level planning.

3.9 Potential Effects of Non-Ionizing Electromagnetic Radiation from Base Stations (Cell Towers and Microwave Towers) on Wildlife: No Further Analysis at Project Planning

3.9.1 Background

The following incorporates the analysis of impacts to human health in Section 3.9 without repeating citations.

Little research has been conducted on the ecological effects of RF on wildlife and insects in natural habitats. Most relevant research has been performed in the laboratory, primarily in Europe and India.

Cucurachi et al. (2012), attempting to use only high value, mostly peer-reviewed published literature, conducted a systematic review of the published literature regarding the ecological effects of RF including microwave frequencies on non-human organisms. However, most of the studies involved laboratory and field studies and did not use the newer forms of wireless communication, such as 3G and WiFi systems, focusing on frequencies emitted by older cell phones. The animal studies typically involved studies on growth, development, behavior, shifts in population size/abundance/presence, and reproduction/fertility that could potentially provide relevant information for extrapolation to broader ecological levels. All studies focused in the range of 10 MHz to 3.6 GHz (from the AM radio frequencies to lower band microwave frequencies), but many of the studies involved the frequencies emitted by cellular and cordless phones (900 MHz and 1800 MHz), which are not the same frequencies as those emitted from base stations. Many of the studies had differing levels and duration of exposure, making them difficult to compare and many of the studies and literature reviews were conducted by only a small number of researchers.

To provide context for the state of the science, Cucurachi et al. (2012) originally reviewed over 700 articles, but found only eight field studies that involved real exposure conditions, and no studies that evaluated the impacts of RF radiation at the ecosystem level.

Cucurachi et al. (2012) found that none of the studies analyzed in their review reported the use of standard, repeatable, and well-described protocols and analysis, such as appropriate controls, objective data collected subject to statistical analysis, and selection of appropriate study subjects (as cited in Michaelson (1991), Beers (1989), and Repacholi and Cardis (1997)). Beers (1989) states (as quoted in Cucurachi et al. 2012): “a long list of reports of positive results yielded by inadequate experiments may appear impressive in a review yet mean little.”

Balmari (2009) also reviewed the literature on effects of RF radiation on wildlife, but Cucurachi et al. (2012) found that his review of the literature did not identify the criteria for screening the literature or the rationale for inclusion or exclusion of articles; did not include a detailed analysis of the research protocols, such as duration of exposure and physical parameters; and only included studies finding a significant adverse effect, making conclusions difficult. Only five studies matched the ecological criteria set for the review, and only one laboratory study on mice (Lee et al. 2009) investigated the possible impacts of newer technologies such as 3G and WiFi. The review concluded that a clear need exists for the study of the effects of RF radiation on more species and

organisms, including more field studies of such effects on populations, interactions among species, and ecological impacts.

Therefore, the published studies regarding the possible effects of EMF on wildlife and plants do not provide a basis for making robust scientific conclusions.

The following summaries are based on recent published articles that are often quoted in other papers that use frequencies emitted from base stations (not mobile phones), including in Cucurachi et al. (2012), or that appear to provide useful information.

- Balmori (2015), in the review of the literature referenced above, identified that outdoor exposure to weak RF radiation in the broadband spectrum from radio and mobile phone base stations (especially RF in cell phone frequencies) may contribute to interference with the ability of insects and birds to orient themselves in the earth's magnetic field and to find food using the electromagnetic fields created by plants, including bumblebees (*Bombus terrestris;* Cammaerts et al. 2012, 2014); honeybees (*Apis mellifera*; Favre 2011); and monarch butterflies (*Danaus plexippus*; (Guerra et al. 2014). White storks (*Ciconia ciconia*) nesting directly on power lines (Vaitkuniene and Dagys 2014) and near phone base stations (Balmori 2005) appeared to have decreased reproductive success. These factors may possibly contribute cumulatively to population decreases, although ability to make conclusions based on the study protocols is weak at best.
- Everaert and Bauwens (2007) studied male house sparrows (*Passer domesticus*) in residential neighborhoods to evaluate nesting abundance related to the distance from and strength of the electromagnetic radiation in the 900 MHz and 1800 MHz frequency bands emitted from telephone base stations. Results suggested that long-term exposure to higher levels of radiation negatively affects the abundance or behavior of house sparrows in the wild (decreasing number of nesting birds with increasing levels of radiation) and/or may adversely affect the insect populations needed to feed nestling chicks. Birds may be susceptible to radiation because they have thin skulls, their feathers may actually perform as dielectric receptors of microwave radiation, and they may spend time nesting and flying in elevations above the ground that may be closer the emissions of antennas. The authors admit to multiple weaknesses in their study protocols, but believe that the consistent results among all study areas "strengthens the possibility that the relationship is not a spurious one."
- Balmori (2006) included a review of literature related to the impacts of electromagnetic radiation on rapid decline of amphibian populations. Amphibians may be reliable bio-indicators of the health of ecosystems because they have moist skin that is highly permeable to water chemicals (especially eggs and

larvae) and air pollutants (especially adults), without any protection between the skin and the environment. Population declines may be caused by increases in ultraviolet light, chemical pollutants, pathogens and parasites, destruction and changes in habitat, climate change, and introduction of invasive species, and are occurring even in relatively pristine areas. Despite the wide range of factors potentially impacting amphibian populations, the author postulates that man-made electromagnetic radiation, especially microwaves and RF from mobile telecommunications and radio station transmitters, may be contributing to adverse effects on amphibians and populations through increased mortality, heart arrhythmia, deformities, altered immune, nervous, and endocrine systems, increases in embryonic mortality, and synergistic relationships with the adverse effects of ultraviolet radiation. The author recognized that studying effects of RF on living organisms is complex, with many variables, non-linear dose-response relationships, and varying individual and species susceptibility to radiation, and that the results reported may not be causal.

3.9.2 Impacts and Conclusion: EMF on Wildlife

The limited laboratory and field studies and research conducted to date, mostly outside the United States, include poor-quality protocols with insufficient controls, lack of evaluation of other possible causes of potential results (for example, effects of water quality in the case of impacts on amphibians), and inability to determine causality relationships. Studies may infer that non-thermal, non-ionizing radiation may be contributing to adverse impacts to wildlife and insects through various mechanisms at the cellular, individual, species, population, and ecological levels, although consistently poor quality protocols do not provide evidence at this time. Many of the studies used RF frequencies emitted from cell phones at close range to the subjects; such emissions are more biologically active than those from PCS and microwave antennas, and therefore would have a much higher risk of impacts. Such conditions would also not occur in the environment.

Most of the literature reviewed, as well as reports from the USFWS, identifies an urgent need for additional laboratory and field studies with robust protocols for further investigation of the potential adverse impacts of towers and RF on ecological systems and species diversity.

Wildlife (insects, mammals, reptiles and amphibians, and most birds) and plants would not be directly within an EMF pattern emitted horizontally from the antenna for any duration, such as the six minutes used for the threshold for direct human exposure, and the fact that emissions dissipate quickly with distance from the antenna (Sections 3.9.2.1 and 3.9.2.2). The only possible exception could be a bird nesting or a bird roost area directly located directly within the main beam in front of the antenna, either of which is highly unlikely. Therefore, no adverse impacts could be expected from direct

exposure. The number of confounding factors and lack of robust protocols associated with current studies cannot lead to a prediction of the relationship of causality to adverse impacts with certainty.

The USFWS, operating within its authority per the Migratory Bird Treaty Act and the Endangered Species Act, has expressed concerns regarding the potential cumulative effects on birds caused by non-ionizing electromagnetic radiation from communication towers. The agency, quoting many of the papers summarized above, has expressed concerned that the 1996 FCC guidelines, which are based on thermal effects of EMF on humans, are outdated. The agency recommends that independent third-party field studies should be conducted in the United States and Canada to determine "the potential impacts of communication tower radiation – both direct and indirect – to migratory birds and other wildlife" (USFWS 2014).

Given the state of the science as summarized here, it is highly unlikely that wildlife would be located within the direct beam of a wireless base station. Therefore, the impact to wildlife and ecosystems from the RUS Telecommunications Program is negligible.

Therefore, potential impacts from EMF on wildlife will not be considered further in this PEA, nor must it be further evaluated at project-level planning.

3.10 Physical Impacts of Telecommunications Towers to Migratory Birds: No Further Analysis at Project Planning

3.10.1 Background

This analysis summarizes and incorporates by reference the analysis in the PEA prepared for the FCC's Antenna Structure Registration Program (FCC 2012), as well as USFWS recent guidance for minimizing the risk of collisions of migratory birds with telecommunications towers (Patterson 2012, Manville 2014, USFWS 2014).

The physical impacts of towers on migratory birds (collisions) and the electromagnetic impacts of cell and microwave tower emissions on living organisms are of interest to the public. Therefore, to consider these environmental effects, the following summarizes known information and research results, with conclusions related to the physical impacts of towers on birds.

3.10.2 Effects of Bird Collisions with Communications Towers

Bird kills caused by towers and their guy wires, as well as the effects of non-flashing lights, have been recorded since the 1950s, with the earliest mass kill documented in 1874. However, the first comprehensive study of such kills was not conducted until 2000 (American Bird Conservancy 2000). Since 2000, the USFWS has provided and updated guidance regarding tower siting and construction standards and mitigation for

minimizing the risk of bird collisions. The most recent FAA advisory circular regarding tower obstruction marking and lighting (AC 70/7460-1K, 2007) was published in 2007. Since then, the FAA has been informally updating the requirements as new information regarding impacts of towers on birds becomes available. To reduce the risk to migratory birds, the FAA has proposed to make specific changes to the obstruction lighting standards in its 2007 advisory circular, including a proposal to omit steady-burning red lights or configuring red lights so that they flash periodically (Patterson 2012).

The USFWS states (Manville 2014):

> "Some will argue that the current estimated annual levels of mortality from avian collisions with communication towers are relatively small (i.e., 6.8 million in the U.S. and Canada; Longcore et al. 2012), compared to collisions with window glass (median 599 million; Loss et al. 2013b, Klem and Saenger 2013), or domestic and feral cats (median 2.4 billion; Loss et al. 2013a). While these comparisons may be interesting and perhaps instructive, they are by far not the end of the story. Impacts to migratory birds must include cumulative effects (cumulative biologically and under the legal mandates of NEPA) from all sources, including the effects of collisions and radiation from cellular towers, the latter which remains un-assessed and still poorly understood in North America."

Longcore et al. (2013) conducted a detailed and thorough meta-review and regression analysis of the North American avian research data, estimating that at least 13 species of Birds of Conservation Concern (USFWS 2008) and species of concern from Canada are being impacted at the population level based solely on collisions with communication towers. Ninety-seven per cent of these birds were migratory birds. Most notable were projected impacts to the yellow rail, pied-billed grebe, bay-breasted warbler, prairie warbler, and ovenbird. Their estimates were based on data that included 259,393 documented deaths of 239 species at 107 locations in the United States and Canada (Manville 2014).

3.10.3 Characteristics of Towers Contributing to Bird Mortality and FAA and USFWS Mitigation

Light appears to be a key attractant for night-migrating songbirds, especially on nights with poor visibility, low cloud ceilings, heavy fog, or various forms of precipitation associated with passing or stationary cold fronts (Manville 2005). Tall towers supported by guy wires are also a major contributor. The FCC (2012) identified towers located in heavy migration areas such as ridgelines, coastal zones, bird staging areas, colonial nesting sites, Western Hemisphere Shorebird Reserve Network (WHSRN) areas, and riparian zones as having the potential for higher adverse impacts to migrating birds.

Cutting edge research by J. Gehring on Michigan State Police and several tall Michigan television towers (Gehring et al. 2009, 2011, 2013a and 2013b), and more recently on tall towers in Michigan and New Jersey (Gehring and Walker 2012), have clearly illustrated the relationship between communication towers, bird collisions, tower structural lighting, tower height, and the presence of guy wires (Gehring 2013, Gehring and Manville 2013, Gehring et al. 2009, 2011).

The majority of fatalities involved night-migrating songbirds, and the key factors can be summarized as follows:

- Towers with guy-support wires result in higher levels of avian mortality than towers without guy wires (16 times more in the Michigan study by Gehring et al. 2009, Gehring 2013);
- Taller towers result in higher levels of avian mortality than shorter towers. In the Michigan study (Gehring et al. 2011 and Gehring 2013), tall towers >1,000 feet above ground level (AGL) were involved in 5 times more collisions than towers than those less than 470 ft. AGL;
- Steady-burning lights on towers result in higher levels of avian mortality than flashing lights. In the Michigan study (Gehring et al. 2009, Gehring 2013), tower lighting systems that included non-blinking red lights were involved in 3.5 times more bird collisions than any other lighting system present; and
- The elimination (through retrofit, relicensing, or new construction) of steady red (L-810) non-flashing lights could collectively reduce avian mortality by 50-70% nationwide based on current assessments. In the Michigan study (Gehring et al. 2009, Gehring 2013), this level of reduction was attained at the $P < 0.01$ level using the simple Student t-test.

The FAA (Patterson 2012) published a detailed memo authorizing these lighting and other changes, but the final changes have yet to be incorporated into the new FAA Obstruction and Marking Lighting Circular that will update FAA's current 2007 guidance. The updated Lighting Circular is anticipated to be publicly available in the near future. The changes, however, are authorized by the FAA for implementation (Patterson 2012).

The FCC, having acknowledged the results of the FAA's study on the visibility of towers to airplane pilots and subsequent 2012 determination, now requires that all new towers >450 feet AGL have no steady red lights. The FCC is currently recommending that new towers 350 to 450 feet AGL contain no steady red lights, but has not yet made that a requirement.

The FCC will eventually address new towers <350 feet AGL, recommending that existing non-flashing lights flash with the other flashing beacons. These new flashing side-marker lights are currently under development and LED lighting will be suggested

for all new construction and for retrofits. Synchronization of flashes will be required (Manville 2014).

The USFWS has developed Revised Voluntary Guidelines for Communication Tower Design, Siting, Construction, Retrofitting, and Decommissioning (USFWS September 2014), including a Tower Site Evaluation Form, to help project managers and planners having one or more towers as a component of their project select sites that minimize bird mortality (Appendix H).

3.10.4 Impacts and Conclusion: Towers on Birds

Following the USFWS voluntary guidelines by collocating antennas whenever possible, and using non-guyed towers less than 200 feet tall with appropriate lighting if collocation is not possible whenever practical and feasible, would minimize or avoid the risk of bird collisions with towers. Each project should complete the USFWS "Tower Site Evaluation Form" to ensure that proposed towers meet the USFWS's guidelines (Appendix H). New towers not meeting the USFWS and FCC recommended standards will require additional evaluation and consultation with the USFWS, and possibly a project-level EA.

Therefore, if proposed towers meet the USFWS guidelines, this issue does not need to be further evaluated at project-level planning.

3.11 Specially-Designated Lands and Consistency with Federal Management Plans: Deferred to Project Planning

Specially-designated lands include lands such as national parks, state and federal wildlife refuges, public parks, national monuments, wilderness and wilderness study areas, roadless areas, wild and scenic rivers, and other classifications. Often these lands have unique requirements for land uses in addition to those of national forests, federal public lands, state forests or other agency-administered lands. Management plans include Forest Service Land and Resource Management Plans (LRMPs), BLM Resource Management Plans (RMPs), National Wildlife Refuges and National Park Service Comprehensive Plans, Wilderness Management Plans and other agency-specific management plans.

If a project would involve federal, state, and/or specially-designated land, the applicant must submit an application to the relevant land management agency for an authorization or permit to use the land for project purposes. In preparation of a land use application, the applicant should review the pertinent management plan prior to submitting the application to the agency to determine if the proposed project is consistent with the agency's land management plan. If not consistent with the management plan, the applicant should make appropriate changes to the proposal or further coordinate with the land management agency. The federal, state, or local land

management agency will make the final determination of consistency of a proposed project with the applicable management plan.

Therefore, this subject is deferred to project-level planning.

3.12 EO 12898 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations: Not Considered in Detail

Any construction or visual impacts will occur to any person, regardless of socioeconomic status, within the area, and will be managed with the BMPs and SOPs identified in Section 3.14 and terms and conditions included in permits. The proposed action should improve the quality of life for low income and/or minority communities by providing affordable internet service where it is not currently available. Therefore, potential adverse impacts to low income and/or minority populations will not be considered further in this PEA, nor must it be considered at project-level planning.

3.13 Best Management Practices (BMPs), Standard Operating Procedures (SOPs), and Mitigation

These BMPs, SOPs, and mitigation measures should be considered for inclusion in project design and implementation, in addition to terms and conditions included in state, county, and local permits. BMPs are based on impact analyses in Chapter 3. SOPs are actions that are routinely implemented in project design to protect resources.

3.13.1 Protection of Soils, Wetlands, Floodplains, Groundwater, and Surface Water Quality (Section 3.2)

- Do not disturb stream or riverbanks and beds by using directional boring, attaching cable to bridges, attaching cable to poles, or using microwave as feasible.
- If stream or river banks and beds must be disturbed, design the project to disturb the minimum amount necessary, using the fewest pieces of equipment, and minimize the amount of sediment flowing downstream.
- Avoid removing native riparian vegetation, including trees and shrubs, within riparian areas, wetlands, and floodplains. If trees or shrubs must be removed, design the project to remove the absolute minimum number of trees and shrubs necessary. This applies to underground and aerial plant and new towers. However, for aerial plant, woody vegetation must be permanently removed to avoid interference with poles and wires and to minimize the risk of fire.
- Any sites needing revegetation to improve recovery rates or minimize the risk of soil erosion shall be planted with either existing species (such as lawn grass) or native species, as appropriate.

- Maintain or protect roadside ditches and culverts to efficiently collect storm water within construction areas and avoid over-road flow.
- No fueling will be conducted less than 200 feet from wetland, floodplain, and/or riparian areas, and secondary containment will be used where appropriate and minimum spill cleanup kits will be in all fueling vehicles, including equipment such as storm drain plug or cover kit, non-water absorbent containment boom of at least 10 feet in length with a 12-gallon absorbent capacity, non-metallic shovel, and two five-gallon buckets with lids. All fueling will be conducted at least 25 feet from the nearest storm drain or inside an impervious containment with a volumetric holding capacity equal to or greater than 110% of the fueling tank volume, or covering the storm drain to ensure no inflow of spilled or leaked fuel. Spills over five gallons or any spills of hazardous or toxic materials/wastes will be reported to the state environmental protection agency.
- The contact information for the local fire department (911) and the appropriate regional office of the state natural resources regulatory agency will be on site to report all spills in a timely manner.
- During directional boring operations near riparian areas, containment, and cleanup equipment will be present for use at the site, as needed; a qualified hydrological monitor will be present for prompt detection of any releases; releases will be immediately controlled and drilling fluid contained or removed; a remediation plan will be in place for all directional boring operations; and all slurry used for directional boring will be removed from the site and discarded at an approved site.
- Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on-site or in unapproved sites.
- Each contractor will designate at least one trained person to be responsible for erosion and spill control to ensure compliance with all local, state, and federal erosion and sediment control requirements.
- Storm drain inlets will be protected to prevent coarse sediment from entering drainage systems prior to permanent stabilization of disturbed areas. Protection may include, depending on site conditions: a temporary dike using concrete blocks and gravel; a gravel “donut”; gravel and wire mesh filters; catch basin filters; curb inlet protection with wooden weir; block and gravel curb inlet protection; or curb and gutter sediment barrier.
- If contaminated soils are encountered during ground disturbing activities, the contractor will halt construction and contact the state environmental protection agency.

- To prevent compaction, gullying, and rutting, mechanical equipment would be limited or excluded during wet soil conditions.

3.13.2 Potential Impacts to Cultural Resources (Section 3.4)

- Installation equipment and vehicles will remain on road surfaces or within existing rights-of-way whenever possible.
- Should ground disturbance encounter previously unknown cultural artifacts or deposits or human remains, work will be halted within a defined area. The RUS applicant or approved archaeologist must contact the SHPO and RUS for further consultation.
- Whenever possible, avoid all historic sites when causing ground disturbance, especially in sites not previously disturbed.
- If a site is possibly within the Area of Potential Effect (APE) and cannot be avoided, including by direction boring, monitoring by an approved archaeologist and/or appropriate consultation with the State Historic Preservation Officer (SHPO) is required for proper mitigation.
- For cemeteries located within 200 feet of the APE, flagging and/or monitoring by an approved archaeologist will be conducted to ensure that no adverse impacts are created.
- Any buildings and properties contributing to a historic district may be adversely impacted by vibrating equipment or visually by towers and poles. Ensure proper consultation with the SHPO for such properties.
- Protection measures resulting from consultations with the SHPO will be provided to the construction contractor prior to work, and an approved archaeologist will conduct training on the location, actions, and protective conditions that must be followed.

3.13.3 Protected Migratory Birds Protected (MBTA or ESA) and All Protected Species (ESA) (Sections 3.10 and 3.11)

- Where placement of cable or other infrastructure would require removing nest trees for migratory birds protected by the MBTA or ESA, develop effective protective measures, such as avoiding removing the nesting trees or shrubs during nesting season. If active nests of migratory birds are discovered during surveys, the potential for adverse impact would be evaluated by RUS and appropriate protective measures identified, including measures such as appropriate buffers, avoidance during the sensitive season (such as nesting), not removing or disturbing habitat or vegetation to avoid or minimize adverse impacts.

- If nests or birds must be disturbed while present, the applicant will contact RUS and the USFWS. Any permits from the USFWS will be provided to the construction contractor prior to work.
- The applicant should consult with the USFWS if lattice towers are proposed for constructing in areas of protected birds or mammals (such as sage grouse, for example) that might provide perching habitat for raptors that might prey on the protected species, or use monopole towers instead.
- Any project-specific or programmatic agreements from consultations with the USFWS will be provided to the construction contractor prior to work.
- Follow the USFWS guidelines for towers to protect migratory birds (Appendix H) as appropriate.
- If informal consultation results in conservation recommendations, or if formal consultation is required, resulting in mandatory terms and conditions per the ESA, integrate such recommendations if appropriate, and terms and conditions when required into project design and implementation.

3.13.4 Protection of Human Health and Safety (Section 3.9)

- Ensure that all cell and microwave towers/base stations are at least 30 feet from public areas and residences, with no access by unauthorized people.

3.13.5 Protection of Air Quality and Minimizing GHGs (Section 3.6)

The impact analyses associated with these BMPs are found in Section 3.6.

- All measures to control fugitive dust will be followed as appropriate.
- Dust suppression, such as use of water trucks, will be employed as required to control PM_{10} and $PM_{2.5}$.
- Minimize idling time either by shutting equipment off when not in use or reducing the idling time to 5 minutes.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications.
- When appropriate, update equipment to higher efficiency models to minimize air quality and GHG emission.

3.13.6 Minimizing the Effects of Noise

The impact analyses associated with these BMPs are found in Section 3.7.

- Activities near residences and sensitive noise receptors such as hospitals, nursing homes, and residences would be performed during daylight hours, with

optimum muffling of equipment where needed and in accordance with local noise ordinances.

3.13.7 Values of Lands with Special Designations

- Integrate standards, guidelines, and conditions found in the agency's land management plan as pertinent to the project and its construction into site-specific project location and design.

4 Tiering Process for Broadband Projects

The information presented in Chapter 3 provides a broad-scale environmental impact analysis of technologies typically financed through the RUS Telecommunications Programs. This section provides the basis for how tiered environmental reviews will be completed for each applicant's loan or grant application and/or interim financing request. Exhibits 4-1 through 4-3 (Appendix J) serve as the mechanisms by which RUS and program applicants would conduct environmental reviews for activities analyzed in this PEA. Environmental reviews for activities not covered in the PEA will proceed following normal processes described in the agency's Environmental Policies and Procedures or more specifically, RUS would need to conclude its site-specific environmental review process prior to making a decision.

4.1 Loan and Grant Applications

Figure 4-A identifies which exhibits must be completed prior to RUS making certain agency decisions in association with a loan or grant application, including but not limited to the approval of financing, construction contracts, and funds dispersal. Exhibit 4-1 should be completed when a program applicant submits a financing application for activities where site-specific information is currently unavailable. RUS will use Exhibit 4-1 to document if the activities in an application are consistent with this PEA and its associated Finding prior to making a decision on the application.

Exhibits 4-2 and 4-3 document the site-specific analyses of activities included within the scope of this PEA. The applicable forms must be completed by the program applicant before project construction or RUS approval of construction contracts or funds dispersal. Program applicants must receive RUS written notification that the environmental review is complete before RUS can approve actions that have the potential to result in project construction or completion. If a program applicant proceeds with actions that may have an adverse environmental impact or limit the choice of reasonable alternatives before conclusion of the environmental process, it may jeopardize project eligibility for RUS funds dispersal. Such prohibited actions may include site preparation or construction (see 7 CFR §1794.15 and 40 CFR §1506.1).

4.2 Interim Financing Requests

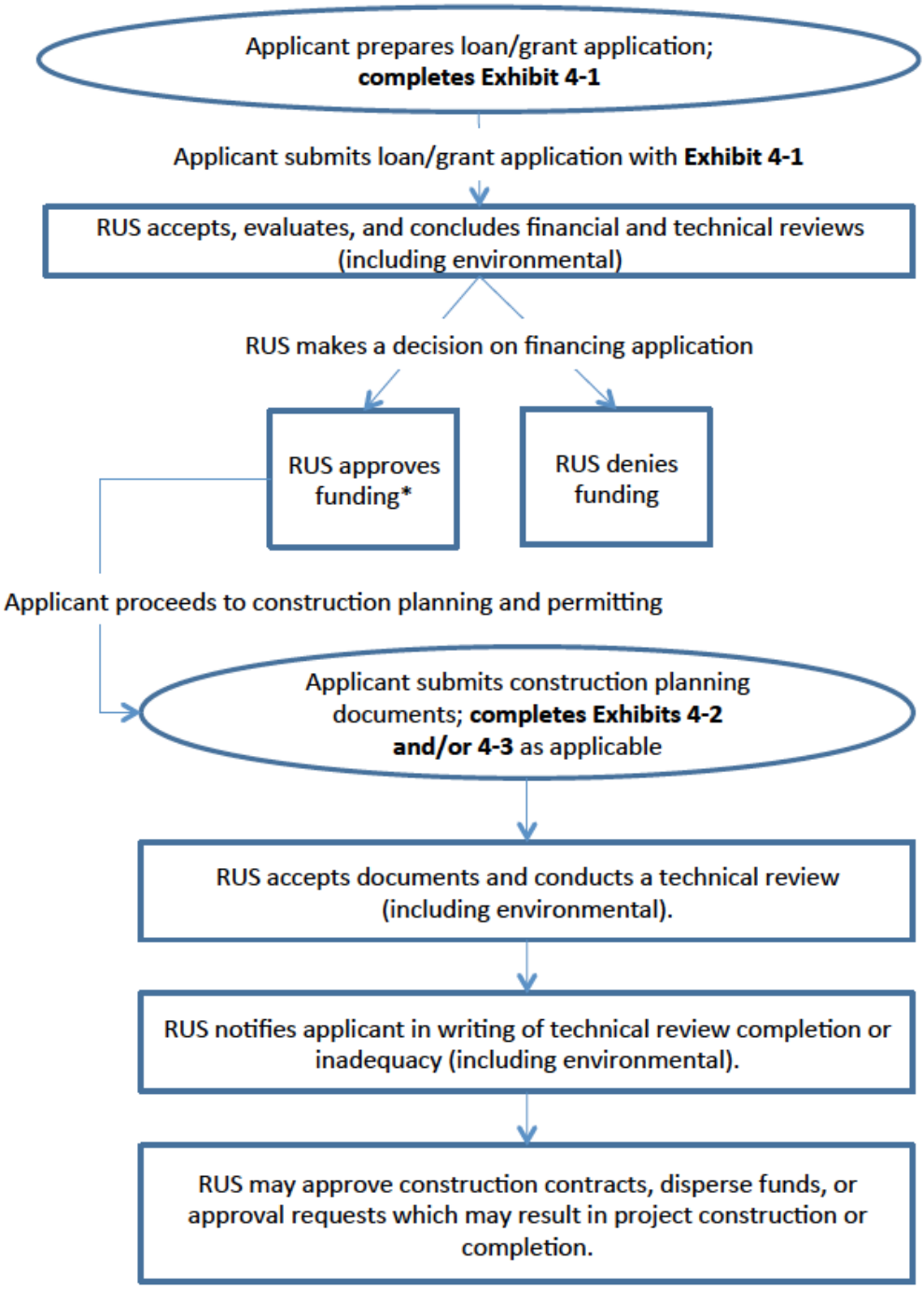
There are instances where a program applicant may request interim financing from an outside lender for project design, construction activities, or other purposes. Before using interim financing, the program applicant must receive written approval from RUS if the program applicant plans to later request RUS long-term financing for the activities. RUS approval of an interim financing request does not obligate the agency to approve a future long-term financing application; it only allows for the activities included in the

interim financing request to be eligible for reimbursement purposes, provided all underwriting, engineering, and environmental requirements are met.

Figure 4-B shows when Exhibits 4-1 through 4-3 should be completed for the kinds of activities included in an interim financing request. Exhibit 4-1 is required for requests involving design and planning activities or for activities where site-specific information is currently unavailable. The program applicant should complete the form and include it as an attachment to interim financing requests of this nature. Requests involving construction or land disturbing activities where site-specific information is available require the completion of Exhibits 4-2 and 4-3 as applicable. Similar to the requirements of loan and grant applications, program applicants must receive RUS written notification that the environmental review is complete before proceeding with project construction or land disturbing activities for the approved activities to be eligible for RUS long-term financing.

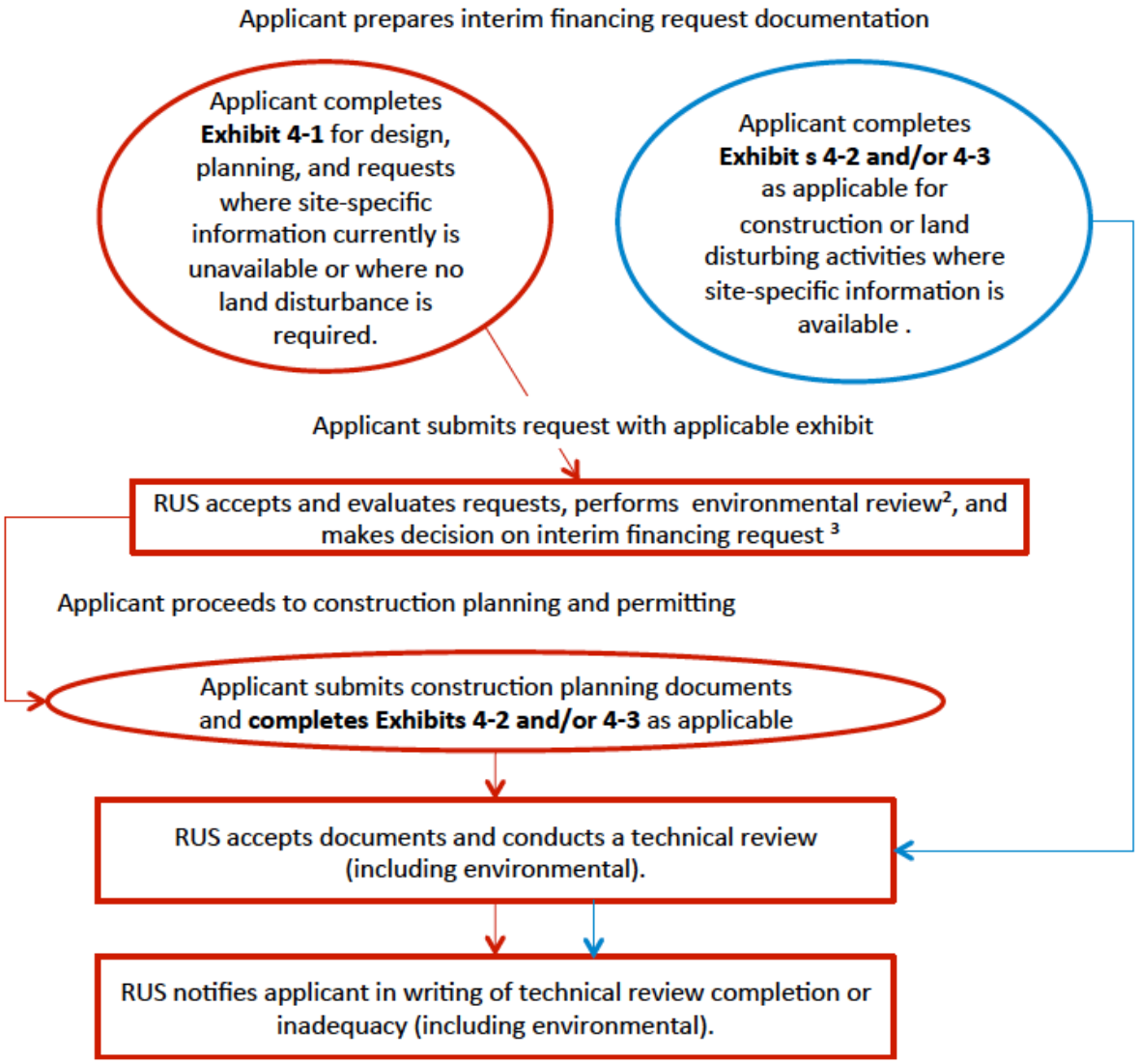
When a program applicant submits a long-term financing application for activities included in interim financing requests previously approved by RUS, copies of the RUS notification letters showing completion of the environmental review process also should be submitted.

Figure 4-A: Tiering Process for Loans and Grants



** Activities in funding request are consistent with PEA/Finding as documented in Exhibit 4-1; if not, NEPA has been concluded for the activities in an application.*

Figure 4-B: Tiering Process for Interim Financing[1] Requests



[1] Interim financing is defined as funding for a project which RUS has acknowledged could be included in a loan, should said loan be approved, but for which RUS funds have not yet been made available (7 CFR 1735.2). See also 7 CFR § 1735.75 and 7 CFR part 1737, subpart E.
[2] Includes an evaluation to determine if activities in request are consistent with PEA/Finding through completion of appropriate exhibits (4-1 through 4-3); if activities are not consistent with PEA/Finding, NEPA must be concluded for the activities included in the request.
[3] RUS approval of an interim financing request does not guarantee or bind RUS in approving a funding application that includes these activities.

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6 Persons and Agencies Consulted

Federal agencies:

- Federal Communications Commission (FCC)
- FirstNet
- National Telecommunications and Information Administration (NTIA)
- Bureau of Land Management (BLM)
- U.S. Forest Service (USFS)
- U.S. Fish and Wildlife Service (USFWS; included Migratory Birds, Ecological Services, and Refuges divisions)
- National Park Service (NPS)
- Bureau of Indian Affairs (BIA)

Industry groups:

- Association of Communications Engineers
- Power and Communication Contractors Association
- WTA Advocates for Rural Broadband

Current and former program applicants

- Georgia Transmission Corporation, Tucker, GA
- Mid-Rivers Telephone Cooperative, Bismarck, ND
- Sacred Wind Communications, Yatehey, NM
- Tabletop Telephone Company, North Fork, CA
- The Ponderosa Company, North Fork, CA
- Triangle Communications, Havre, MT

Consultants and contractors working for program applicants

- ACRS Telecommunications Consulting and Engineering, Oklahoma City, OK
- Heberly Engineering and Associates, Havre, MT
- Kadrmas Lee Jackson, Bismarck, ND
- Metcalf Archaeology, Bismarck, ND
- Mid-State Consultants, Nephi, VT
- Quality Services, Rapid City, SD
- RVW, Inc. Architectural Planning and Design, Columbus, NE
- Transcom, Salt Lake City, UT
- Vantage Point Solutions, Inc., Mitchell, SD

7 List of Preparers

Environmental Planning Strategies, Inc.
Judith Lee, President
Analyst and Principal Writer
Stakeholder Interviews and Report

Pathway Consulting Service, LLC
Robert Cunningham, Principal
Analyst and Writer
Stakeholder Interviews and Report

Rural Utilities Service

Lauren McGee-Rayburn, Environmental Scientist

Laura Dean, Archeologist and Federal Preservation Officer

Richard Fristik, Senior Environmental Protection Specialist

Dennis Rankin, Environmental Protection Specialist

Scott Steiner, Engineering Branch Chief

Norberto Esteves, Engineering Branch Chief

Aylene Mafnas, Engineering Branch Chief

8 Appendices

Appendix A. Summary of Laws and Executive Orders Relevant to RUS Broadband Telecommunications Program

Appendix B. Rural Utilities Service NEPA Procedures 7 CFR part 1794

Appendix C. Agency NEPA Procedures: USFS, BLM, FEMA, BIA, NPS, USFWS, FirstNet, BOR

Appendix D. Land Use Authorization Regulations: USFS, BLM, USFWS, BIA

Appendix E. References to state environmental policy laws and relevant US Territory/Commonwealth Environmental Laws and Agencies

Appendix F. RUS Stakeholder Report

Appendix G. Links to useful natural resources databases

Appendix H. USFWS Guidelines for Mitigating Impacts of Towers on Migratory Birds

Appendix I. NHPA Section 106 Template Documents (SHPO/THPO Letter templates) and RUS delegation of authority letter

Appendix J. RUS Guidance and Exhibits for Project-Level Tiered Compliance

Appendix A. Laws and Executive Orders Relevant to USDA RUS Broadband Support

Federal Laws

National Environmental Policy Act (NEPA)

Most federal actions are subject to NEPA (Public Law 9-190, 42 USC 4321 et seq.). NEPA requires federal agencies to incorporate environmental planning into federal agency actions and decision-making processes. The two primary objectives of the NEPA are: 1) agencies must have available and fully consider detailed information regarding environmental effects of federal actions and 2) agencies must make information regarding environmental effects available to interested persons and agencies before decisions are made and before actions are taken.

When federal agencies undertake actions involving another federal agency, it is often most efficient for them to cooperate in fulfilling their NEPA compliance obligations.

The CEQ regulations implementing NEPA are at 40 CFR 1500 - 1508 while USDA's are at 7 CFR part 1b and RUS' are at 7 CFR part 1794. Pursuant to NEPA and the CEQ regulations, agency processes document the analyses resulting from proposed federal actions, informs decision-makers and the public of reasonable alternatives capable of avoiding or minimizing adverse impacts, and serve as a decision-aiding mechanism to ensure that the policies and goals of NEPA are infused into federal agency actions. NEPA documents integrate as many of the natural and social sciences as relevant to pending decisions and based on the potential effects of the proposed actions. The direct, indirect, and cumulative impacts of the proposed action are analyzed at an appropriate level of detail.

Endangered Species Act of 1973, as amended (ESA)

Under the ESA (16 U.S.C. 1531 et seq., as amended; 16 U.S.C. 703-712), all federal agencies will seek to conserve threatened and endangered listed species and will utilize their authorities in furtherance of the purposes of the Act (Sec.2(c)). Depending on the species, the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) are charged with implementation and enforcement of the ESA, as amended, including development of recovery plans for listed species. Agencies conduct ESA Section 7 consultations with USFWS/NMFS and use their expertise to ensure that "any action authorized, funded or carried out by such an agency . . . is not likely to jeopardize the

continued existence of any endangered or threatened species . . . Each agency will use the best scientific and commercial data available" (Sec.7 (a)(2)). Under the authority of the ESA, USFWS/NMFS act to prevent the extinction of plant and animal species by identifying species at risk of extinction, designating ("listing") these species as threatened or endangered. These agencies provide protection for these listed species and their habitats, developing and implementing recovery plans to improve their status, and ultimately "delisting" these species and returning full management authority to the states or tribes when warranted. The USFWS/NMFS can issue permits providing for various activities, including scientific research, enhancement of propagation or survival, and take incidental to conducting other activities, while minimizing potential harm to the listed species.

National Historic Preservation Act (NHPA) of 1966, as amended

Section 106 of the NHPA and its implementing regulations (36 CFR part 800) require federal agencies to initiate an evaluation and consultation if the agency determines that its actions are “undertakings” as defined in Sec. 800.16(y) and, if so, whether the action is a type of activity with the potential affect historic properties that are either listed on or eligible for listing in the National Register of Historic Places. If the undertaking is a type of activity that does not have the potential to adversely affect historic properties or historic districts, the agency official has no further obligations under section 106. The Advisory Council on Historic Preservation (ACHP) and each state’s State Historic Preservation Officer (SHPO) or the tribal government Tribal Historic Preservation Officer (THPO) are the primary entities consulted. If an individual activity with the potential to affect historic resources were planned, the site-specific consultation as required by Section 106 of the NHPA would be conducted with the SHPO or THPO as necessary.

Migratory Bird Treaty Act (MBTA)

The MBTA gives the USFWS regulatory authority to protect native species of birds that migrate outside the United States. The law prohibits any "take" of these species, except as permitted by the USFWS. The MBTA established a federal prohibition, unless permitted by regulations, to pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird or any part, nest, or egg of any such bird. The USFWS released a final rule on November 1, 2013 identifying 1,026 birds in its List of Migratory Birds that are protected under

MBTA (USFWS 2013). Species not protected by the MBTA include nonnative species introduced to the United States or its territories by humans, such as starlings, pigeons, house sparrows, mute swans, and domestic waterfowl, and native species that are not mentioned by the Canadian, Mexican, or Russian Conventions that were implemented to protect migratory birds (USFWS 2013). Some listed migratory bird species are not protected if they are causing economic hardship due to agricultural depredation.

Bald and Golden Eagle Protection Act (BGEPA).

This law provides special protection for bald and golden eagles. Similar to the Migratory Bird Treaty Act, BGEPA (16 U.S.C. 668 et seq.) prohibits the take of bald or golden eagles unless permitted by the Department of the Interior. The term “take” in the Act is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb.” Disturb is defined as any activity that can result in injury to an eagle, or cause nest abandonment or decrease in productivity by impacting breeding, feeding, or sheltering behavior.

Section 404 of the Clean Water Act

Section 404 (see 33 USC 1344) of the Clean Water Act prohibits the discharge of dredged or fill material into waters of the United States without a permit from the United States Army Corps of Engineers (USACE) unless the specific activity is exempted in 33 CFR part 323 or covered by a nationwide permit in 33 CFR part 330.

Section 401 of the Clean Water Act

As required by Section 401 of the Clean Water Act (see 33 USC 1341), an applicant for a permit issued pursuant to Section 404 of the Clean Water Act must also possess a permit from the state in which the discharge originates or will originate, when applicable. The USACE is responsible for reviewing Water Quality Certifications applications required by Section 401. The USACE developed the requirements of the Water Quality Certification process to be compliant with the State’s water quality policy.

Presidential Executive Orders

Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations - Executive Order 12898

Executive Order 12898 promotes the equitable treatment of people of all races, income levels, and cultures with respect to the development and implementation of federal actions, and enforcement of environmental laws, regulations, and policies. EO 12898 requires federal agencies to make environmental justice part of their mission, and to identify and address, when appropriate,

disproportionately high and adverse human health and environmental effects of federal programs, policies, and activities on minority and low-income persons or populations.

Invasive Species - Executive Order 13112

Executive Order 13112 establishes guidance for federal agencies to use their programs and authorities to prevent the spread or to control populations of invasive species that cause economic or environmental harm or harm to human health. The EO states that each federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law: 1) reduce invasion of exotic species and the associated damages; 2) monitor invasive species populations and provide for restoration of native species and habitats; 3) conduct research on invasive species and develop technologies to prevent introduction; and 4) provide for environmentally sound control and promote public education of invasive species. This EO created the National Invasive Species Council (NISC).

Flood Plain Management – Executive Order 11988, as amended

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse effects associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities." This EO was amended by EO 13690, dated January 29, 2015, to expand public notice, consideration of alternatives, and construction requirements. The EO as amended applies to all agencies and all relevant actions. Agencies are to *act*, not merely to *consider* reducing risk, and minimize adverse impacts, and restore and preserve floodplain values, through consideration of alternatives whenever practicable, including avoiding actions in a floodplain wherever practicable and using nature-based systems, with additional opportunities for public notice and review. Draft guidance was published by FEMA for public comment on January 28, 2015. EO 13690 also establishes a Federal Flood Risk Management Standard that considers the effects of climate change on future flood risk. Implementing Guidelines for EO 11988 and 13690 were published on October 8, 2015.

Protection of Wetlands – Executive Order 11990

Executive Order 11990 was signed to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial

values of wetlands." To meet those objectives, EO 11990 requires federal agencies to consider alternatives to wetland sites, in planning their actions, and to limit potential damage, if a federal agency cannot avoid an activity affecting a wetland.

Consultation and Coordination with Indian Tribal Governments - Executive Order 13175

This EO directs federal agencies to provide federally recognized tribes the opportunity for government-to-government consultation and coordination in policy development and program activities that may have direct and substantial effects on their tribe. Its purpose is to ensure that tribal perspectives on the social, cultural, economic, and ecological aspects of agriculture, as well as tribal food and natural-resource priorities and goals, are heard and fully considered in the decision-making processes of all parts of the Federal Government.

Appendix B. Relevant Sections from RUS NEPA Procedures 7 CFR part 1794

Actions requiring environmental review §1794.3

The provisions of this part apply to actions by RUS including the approval of financial assistance pursuant to the Electric, Telecommunications, and Water and Waste Programs, the disposal of property held by RUS pursuant to such programs, and the issuance of new or revised rules, regulations, and bulletins. Approvals provided by RUS pursuant to loan contracts and security instruments, including approvals of lien accommodations, are not actions for the purposes of this part and the provisions of this part shall not apply to the exercise of such approvals.

Applicant responsibilities §1794.10

As described in subpart C of this part, applicants shall prepare the applicable environmental documentation concurrent with a proposed action's engineering, planning, and design activities. RUS shall assist applicants by outlining the types of information required and shall provide guidance and oversight in the development of the documentation. Documentation shall not be considered complete until all public review periods, as applicable, have expired and RUS concurrence, as set forth in the appropriate decision document and associated public notice, has been issued.

Consideration of alternatives §1794.12

In determining what are reasonable alternatives, RUS considers a number of factors. These factors may include, but are not limited to, the proposed action's size and scope, state of the technology, economic considerations, legal and socioeconomic concerns, availability of resources, and the timeframe in which the identified need must be fulfilled.

Public involvement §1794.13

(a) In carrying out its responsibilities under NEPA, RUS shall make diligent efforts to involve the public in the environmental review process through public notices and public hearings and meetings.

(1) All public notices required by this part shall describe the nature, location, and extent of the proposed action and indicate the availability and location of additional information. They shall be published in newspaper(s) of general circulation within the proposed action's area of environmental impact and the county(s) in which the proposed action will take place or such other places as RUS determines.

(2) The number of editions in which the notices should be published will be specified in the Bulletins referenced in §1794.7 or established on a project-by-project basis. Alternative forms of notice may also be necessary to ensure that residents located in

the area affected by the proposed action are notified. The applicant should not publish notices for compliance with this part until so notified by RUS.

(3) A copy of all comments received by the applicant concerning environmental aspects of the proposed action shall be provided to RUS in a timely manner. RUS and applicants shall assess and consider public comments both individually and collectively. Responses to public comments will be appended to the applicable environmental document.

(4) RUS and applicants shall make available to the public those project related environmental documents that RUS determines will enhance public participation in the environmental process. These materials shall be placed in locations convenient for the public as determined by RUS in consultation with applicants. Included with the documentation shall be a list of other project-related information that shall be available for inspection through a designated RUS or applicant contact person.

(5) Public hearings or meetings shall be held at reasonable times and locations concerning environmental aspects of a proposed action in all cases where, in the opinion of RUS, the need for hearings or meetings is indicated in order to develop adequate information on the environmental implications of the proposed action. Public hearings or meetings conducted by RUS will be coordinated to the extent practicable with other meetings, hearings, and environmental reviews which may be held or required by other Federal, state and local agencies. Applicants shall, as necessary, participate in all RUS conducted public hearings or meeting.

(6) Scoping procedures, in accordance with 40 CFR §1501.7, are required for proposed actions normally requiring an EA with scoping (§1794.24) or an EIS (§1794.25). RUS may require scoping procedures to be followed for other proposed actions where appropriate to achieve the purposes of NEPA.

(b) The applicant shall have public notices described in this section published in a newspaper(s). Applicants shall obtain proof of publication from the newspaper(s) for inclusion into the applicable environmental document. Where the proposed action requires an EIS RUS shall, in addition to applicant published notices, publish notice in the *Federal Register*. In all cases, RUS may publish notices in the *Federal Register* as appropriate.

Interagency involvement and coordination §1794.14

In an attempt to reduce or eliminate duplication of effort with state or local procedures, RUS will, to the extent possible and in accordance with 40 CFR §1506.2, actively participate with any governmental agency to cooperatively or jointly prepare environmental documents so that one document will comply with all applicable laws. Where RUS has agreed to participate as a cooperating agency, in accordance with 40

CFR §1501.6, RUS may rely upon the lead agency's procedures for implementing NEPA procedures. In addition, RUS shall request that:

(a) The lead agency indicates that RUS is a cooperating agency in all NEPA-related notices published for the proposed action;

(b) The scope and content of the EA or EIS satisfies the statutory and regulatory requirements applicable to RUS; and

(c) The applicant shall inform RUS in a timely manner of its involvement in a proposed action where another Federal agency is preparing an environmental document so as to permit RUS to adequately fulfill its duties as a cooperating agency.

Categorical exclusions that normally do not require the submission of an ER §1794.21

Applications for financial assistance for the types of proposed actions listed in this paragraph (b) normally do not require the submission of an ER. These types of actions are subject to the requirements of Sec. 1794.31. Applicants shall sufficiently identify all proposed actions so their proper classification can be determined. Detailed descriptions shall be provided for each proposal noted in this section. RUS normally requires additional information in addition to a description of what is being proposed, to ensure that proposals are properly classified. In order to provide for extraordinary circumstances, RUS may require development of an ER for proposals listed in this section.

Electric and Telecommunications Programs §1794.21(b)

(4) Changes or additions to microwave sites, substation, switching station, telecommunications switching or multiplexing centers, buildings, or small structures requiring new physical disturbance or fencing of less than one acre. A description of the additions or changes and the area to be impacted by the expansions shall be provided to RUS.

(7) Ordinary maintenance or replacement of equipment or small structures (e.g., line support structures, line transformers, microwave facilities, telecommunications remote switching and multiplexing sites.

(8) Construction of…telecommunications facilities within the fenced area of an existing substation, switching station, or within the boundaries of an existing electric generating facility site. A description of the facilities to be constructed shall be provided to RUS.

(14) Rebuilding of power lines or telecommunications cables where road or highway reconstruction requires the applicant to relocate the lines either within or

adjacent to the new road or highway easement or right-of-way. A description of the facilities to be constructed shall be provided to RUS.

(16) Construction of new power lines, substations, or telecommunications facilities on industrial or commercial sites, where the applicant has no control over the location of the new facilities. Related off-site facilities would be treated in their normal category. A description of the facilities to be constructed shall be provided to RUS.

Categorical Exclusions that normally do require the submission of an ER §1794.22(a)

(2) Construction of buried and aerial communications lines, cable, and related facilities.

(3) Construction of microwave facilities...involving no more than five acres (2 hectares) of physical disturbance at any single site.

(4) Construction of cooperative or company headquarters, maintenance facilities, or other buildings involving no more than 10 acres (4 hectares) of physical disturbance or fenced property.

(6) Changes or additions to existing substations, switching stations, telecommunications switching or multiplexing centers, or external changes to buildings or small structures requiring one acre (0.4 hectare) or more but no more than five acres (2 hectares) of new physically disturbed land or fenced property.

(7) Construction of substations, switching stations, telecommunications switching or multiplexing centers requiring no more than five acres (2 hectares) of new physically disturbed land or fenced property.

7 CFR part 1794 does not identify specific extraordinary circumstances.

General categorical exclusion guidance §1794.30

The procedures of this subpart which apply to proposed actions classified as CEs in §§1794.21 and 1794.22 provide RUS with information necessary to determine if the proposed action meets the criteria for a CE. Where, because of extraordinary circumstances, a normally categorically excluded action may have a significant effect on the quality of the human environment, RUS may require additional environmental documentation.

Electric and telecommunications programs §1794.31(a)

RUS will normally determine the proper environmental classification of projects based on its evaluation of the project description set forth in the construction work plan or loan design which the applicant is required to submit with its application for financial

assistance. Each project must be sufficiently described to ensure its proper classification. RUS may require the applicant to provide additional information on a project where appropriate.

Environmental Report (ER) §1794.32

(a) For proposed actions listed in §1794.21(b) and (c), the applicant is normally not required to submit an ER.

(b) For proposed actions listed in §1794.22(a) and (b), the applicant shall normally submit an ER. Guidance in preparing the ER for Electric and Telecommunication proposals is contained in RUS Bulletin 1794A-600. The applicant may be required to publish public notices and provide evidence of such if the proposed action is located in, impacts, or converts important land resources.

Agency action §1794.33

RUS may act on an application for financial assistance upon determining, based on the review of documents as set forth in §1794.32 and such additional information as RUS deems necessary, that the project is categorically excluded.

Appendix C. NEPA Regulations for Federal Agencies from which Applicants May Need Land Use Authorizations

NEPA regulations for the following agencies are summarized below (agency paragraph and regulation numbering is included for reference to appropriate sections of agency regulations):

- National Telecommunications and Information Administration, First Responder Network Authority (FirstNet): 79 FR 23950-23958; April 29, 2014
- US Forest Service, US Department of Agriculture: 36 CFR part 220
- The following agencies within the Department of Interior (DOI) follow both 43 CFR part 46, and their own chapter within 516 DM. Therefore, to organize each agency within the DOI clearly and independently, sections of 43 CFR part 46 that apply to all DOI agencies are repeated for each of the following agencies within their particular section:
    - National Park Service, US Department of Interior: 516 DM Chapter 12; Department of Interior 43 CFR part 46
    - Bureau of Indian Affairs, US Department of Interior: 516 DM Chapter 10; Department of Interior 43 CFR part 46
    - Bureau of Land Management, US Department of Interior: 516 DM Chapter 11; Department of Interior 43 CFR part 46
    - US Fish and Wildlife Service, US Department of Interior: 516 DM Chapter 8; Department of Interior 43 CFR part 46
    - Bureau of Reclamation, US Department of Interior: 516 DM Chapter 14; Department of Interior 43 CFR part 46
- Federal Emergency Management Agency: 44 CFR part 10
- US Air Force: 32 CFR part 989
- US Army: 32 CFR part 651.28 (AR 200-2) Subpart D
- US Navy: 32 CFR part 775
- US Army Corps of Engineers: 33 CFR part 230

National Telecommunications and Information Administration, First Responder Network Authority (FirstNet) 79 FR 23950-23958 4/29/14

The Middle Class Tax Relief and Job Creation Act of 2012 (Pub.L.112–96, 126 Stat. 156 (2012)) created and authorized FirstNet to take all actions necessary to ensure the design, construction, and operation of a nationwide interoperable public safety broadband network (PSBN) based on a single, national network architecture. The Act meets a long-standing and critical national infrastructure need, to create a nationwide interoperable broadband network that will, for the first time, allow police officers, fire fighters, emergency medical service professionals, and other public safety officials to effectively communicate with each other across agencies and jurisdictions.

(d) Where the action requiring FirstNet review is by a private applicant or other nonfederal entity:

1. The Director of Environmental Compliance and/or the NEPA Coordinator or other assigned FirstNet Environmental Protection Specialist will advise the applicant of FirstNet's policies and procedures for NEPA compliance and make available or direct the applicant to resources within FirstNet, the Department, or elsewhere in the federal government to facilitate the applicant's consideration and explanation of environmental impacts and alternatives.

2. FirstNet will consult with appropriate state, local, and tribal governments and other relevant organizations on environmental impacts of, and alternatives to, a proposed action when its own involvement is reasonably foreseeable.

3. FirstNet will initiate its NEPA review process at the earliest practicable time.

Scoping

FirstNet shall comply with scoping procedures described in 40 CFR §1501.7 required for proposed actions normally requiring an EIS. In some, but not all, circumstances, and at the discretion of the Director of Environmental Compliance and/ or the NEPA Coordinator, scoping will also be conducted on an EA. Additionally, FirstNet may also require scoping procedures to be followed for other proposed actions, where appropriate, to achieve the purposes of NEPA.

Environmental Assessment

(a) When a proposed action is not in a category of actions described in an available categorical exclusion and there is not enough information available to know whether the proposed action will have significant environmental impacts,

an EA will be prepared. In this situation, an EA process is used to determine, through environmental impact evaluation and opportunity for public involvement, as appropriate, if the impacts on the quality of the human environment are potentially significant.

(b) A proposed action that meets categorical exclusion criteria, but that is associated with extraordinary circumstances, may require the preparation of an environmental assessment to determine if there are significant impacts associated with the action.

(a) Categorical Exclusion (CE)

1. If a proposed action is determined to be a CE and not considered a routine administrative, ministerial, or a personnel or procurement action, FirstNet shall document its determination that a CE applies to a proposed action with a memorandum to the file that states no extraordinary circumstances are present that would preclude the use of the CE.

2. For more complicated CEs, a Record of Environmental Consideration (REC) would be prepared to document the decision. A REC is a brief document that demonstrates that NEPA and other relevant laws, regulations, and EOs have been analyzed for an action that does not require an EA or EIS. A REC is kept in the administrative record and should cite the categorical exclusion used and show that the agency determined:

> (1) The action fits within the category of actions described in the categorical exclusions; and
>
> (2) There are no extraordinary circumstances that would preclude the project or proposed action from qualifying as a categorically excluded action.

If a proposed action is determined to be a CE and not considered a routine administrative, ministerial, procurement, or personnel action, FirstNet shall document its determination that a CE applies to a proposed action with a Memorandum to File or a Record of Environmental Consideration.

Tiering

FirstNet shall tier environmental documents to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review, as appropriate (see 40 CFR 1508.28). When a Programmatic EIS has been prepared, FirstNet need only summarize the issues discussed in the broader environmental document, incorporate discussions from the broader environmental document by reference, and focus the tiered document on issues specific to the subsequent action.

Supplemental Environmental Documentation

FirstNet may prepare supplements to either the draft or final environmental documentation if:

(a) FirstNet makes substantial changes in the proposed action that are relevant to environmental concerns; or

(b) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(c) FirstNet is relying upon an environmental review previously performed by another federal agency with authority over the action or related activity of an applicant, and additional analysis is needed to address the reasonably foreseeable impacts of the action under consideration by FirstNet.

Appendix C. Categorical Exclusions

A.4: Purchase of existing facilities or a portion thereof where use or operation will remain unchanged.

A.5: Internal modifications or equipment additions (e.g., computer facilities, relocating interior walls) to structures or buildings.

A.6: Construction of buried and aerial telecommunications lines, cables, and related facilities.

A.7: Construction of wireless telecommunications facilities involving no more than five acres (2 hectares) of physical disturbance at any single site.

A.8: Construction of cooperative or company headquarters, maintenance facilities, or other buildings involving no more than 10 acres (4 hectares) of physical disturbance or fenced property.

A.9: Changes to existing transmission lines that involve less than 20 percent pole replacement, or the complete rebuilding of existing distribution lines within the same right of way. Changes to existing transmission lines that require 20 percent or greater pole replacement will be considered the same as new construction.

A.10: Changes or additions to existing substations, switching stations, telecommunications switching or multiplexing centers, or external changes to buildings or small structures requiring one acre (0.4 hectare) or more but no more than five acres (2 hectares) of new physically disturbed land or fenced property.

A.11: Construction of substations, switching stations, or telecommunications switching or multiplexing centers requiring no more than five acres (2 hectares) of new physically disturbed land or fenced property.

A.12: Changes or additions to wireless telecommunication sites, substations, switching stations, telecommunications switching or multiplexing centers, buildings, or small structures requiring new physical disturbance or fencing of less than one acre (0.4 hectare).

A.13: Ordinary maintenance or replacement of equipment or small structures (e.g., line support structures, line transformers, microwave facilities, telecommunications remote switching and multiplexing sites).

A.14: The construction of telecommunications facilities within the fenced area of an existing substation, switching station, or within the boundaries of an existing electric generating facility site.

A.15: Testing or monitoring work (e.g., soil or rock core sampling, monitoring wells, air monitoring).

A.16: Studies and engineering undertaken to define proposed actions or alternatives sufficiently so that environmental effects can be assessed.

A.17: Rebuilding of power lines or telecommunications cables where road or highway reconstruction requires the applicant to relocate the lines either within or adjacent to the new road or highway easement or right-of-way.

A.18: Phase or voltage conversions, reconductoring, or upgrading of existing electric distribution lines, or telecommunication facilities.

A.19: Construction of standby diesel electric generators (one megawatt or less total capacity) and associated facilities, for the primary purpose of providing emergency power at an existing applicant headquarters or district office, telecommunications switching or multiplexing site, or at an industrial, commercial, or agricultural facility served by the applicant.

Appendix D: Extraordinary Circumstances

Extraordinary circumstances that may preclude the use of a CE include:

(a) Reasonable likelihood of significant impact on public health or safety.

(b) Reasonable likelihood of significant environmental effects (direct, indirect, and cumulative)

(c) Reasonable likelihood of effects on the environment that are highly uncertain, unique, or are scientifically controversial.

(d) Reasonable likelihood of violating any federal, state, or local law or requirements imposed for the protection of the environment.

(e) Reasonable likelihood of adversely affecting ‘‘environmentally sensitive’’ resources, unless the impact has been resolved through another environmental process (e.g., Coastal Zone Management Act, Clean Air Act, Clean Water Act). Environmentally sensitive resources may include:

1. Proposed or federally listed threatened or endangered species, or their designated critical habitat (including species and habitat listed under the Endangered Species Act of 1973 (16 U.S.C. §1531 et seq.); Migratory Bird Treaty Act of 1918 (16 U.S.C. §703 et seq.) and Bald and Golden Eagle Act of 1940, (16 U.S.C. § 68 et seq.).

2. Areas having special designation or recognition such as prime or unique or agricultural lands; designated wilderness or wilderness study areas; wild and scenic rivers; 100-year or 500-year floodplains; wetlands; sole source aquifers (potential sources of drinking water); National Wildlife Refuges; National Parks; areas of critical environmental concern; or other areas of high environmental sensitivity.

(f) Reasonable likelihood of adversely impacting water quality, sole source aquifers, public water supply systems, or state, local, or tribal water quality standards established under the Clean Water Act and the Safe Drinking Water Act.

(g) Reasonable likelihood of effects on the quality of the environment that are highly controversial on environmental grounds. The term ‘‘controversial’’ means a substantial dispute exists as to the size, nature, or effect of the proposed action rather than to the existence of opposition to a proposed action, the effect of which is relatively undisputed.

(h) Reasonable likelihood of a disproportionately high and adverse effect on low income populations or minority populations.

(i) Limited access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.

(j) A greater scope or size than is normal for this category of action.

(k) Reasonable likelihood of degrading already existing poor environmental conditions. Also, initiation of a degrading influence, activity, or effect in areas not already significantly modified from their natural condition.

(l) Introduction or employment of unproven technology.

Forest Service Pertinent NEPA Regulations 36 CFR part 220

36 CFR §220.6. Categorical Exclusions

(d) Categories of actions for which a project or case file and decision memo are not required. A supporting record and a decision memo are not required, but at the discretion of the responsible official, may be prepared for the following categories:

(2) Rules, regulations, or policies to establish service-wide administrative procedures, program processes, or instructions. Examples include but are not limited to:

> (iv) Proposing changes in contract terms and conditions or terms and conditions of special use authorizations;

(4) Repair and maintenance of roads, trails, and landline boundaries. Examples include but are not limited to:

> (ii) Grading a road and clearing the roadside of brush without the use of herbicides;
>
> (iii) Resurfacing a road to its original condition;
>
> (v) Surveying, painting, and posting landline boundaries.

(10) Amendment to or replacement of an existing special use authorization that involves only administrative changes and does not involve changes in the authorized facilities or increase in the scope or intensity of authorized activities, or extensions to the term of authorization, when the applicant or holder is in full compliance with the terms and conditions of the special use authorization. Examples include, but are not limited to:

> (i) Amending a special use authorization to reflect administrative changes such as adjustment to the land use fees, inclusion of non-discretionary environmental standards or updating a special use authorization to bring it into conformance with current laws or regulations (for example, new monitoring required by water quality standards), and
>
> (ii) Issuance of a new special use authorization to reflect administrative changes such as, a change of ownership or control of previously authorized facilities or activities, or conversion of the existing special use authorization to a new type of special use authorization (for example, converting a permit to a lease or easement).

(e) Categories of actions for which a project or case file and decision memo are required.

A supporting record is required and the decision to proceed must be documented in a decision memo for the categories of action in paragraphs (e)(1) through (17) of this section. As a minimum, the project or case file should include any records prepared, such as: The names of interested and affected people, groups, and agencies contacted; the determination that no extraordinary circumstances exist; a copy of the decision memo; and a list of the people notified of the decision. If the proposed action is approval of a land management plan, plan amendment, or plan revision, the plan approval document required by 36 CFR part 219 satisfies the decision memo requirements of this section.

(2) Additional construction or reconstruction of existing telephone or utility lines in a designated corridor. Examples include, but are not limited to:

(i) Replacing an underground cable trunk and adding additional phone lines, and

(ii) Reconstructing a power line by replacing poles and wires.

(3) Approval, modification, or continuation of minor special uses of NFS lands that require less than five contiguous acres of land. Examples include, but are not limited to:

(i) Approving the construction of a meteorological sampling site;

(iv) Approving the use of land for a 40-foot utility corridor that crosses one mile of a national forest;

(vi) Approving an additional telecommunication use at a site already used for such purposes;

(viii) Approving the continued use of land where such use has not changed since authorized and no change in the physical environment or facilities are proposed.

(15) Issuance of a new special use authorization for a new term to replace an existing or expired special use authorization when the only changes are administrative, there are not changes to the authorized facilities or increases in the scope or intensity of authorized activities, and the applicant or holder is in full compliance with the terms and conditions of the special use authorization.

(16) Land management plans, plan amendments, and plan revisions developed in accordance with 36 CFR part 219 et seq. that provide broad guidance and information for project and activity decision-making in a NFS unit. Proposals for actions that approve projects and activities, or that command anyone to refrain from undertaking projects and activities, or that grant, withhold or modify contracts, permits or other formal legal instruments, are outside the scope of this category and shall be considered separately under Forest Service NEPA

procedures.

36 CFR §220.6(b). Extraordinary Circumstances for Categorical Exclusions

Resource conditions.

(1) Resource conditions that should be considered in determining whether extraordinary circumstances related to a proposed action warrant further analysis and documentation in an EA or an EIS are:

(i) Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species;

(ii) Flood plains, wetlands, or municipal watersheds;

(iii) Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas;

(iv) Inventoried roadless area or potential wilderness area;

(v) Research natural areas;

(vi) American Indians and Alaska Native religious or cultural sites; and

(vii) Archaeological sites, or historic properties or areas.

(2) The mere presence of one or more of these resource conditions does not preclude use of a categorical exclusion (CE). It is the existence of a cause-effect relationship between a proposed action and the potential effect on these resource conditions, and if such a relationship exists, the degree of the potential effect of a proposed action on these resource conditions that determines whether extraordinary circumstances exists.

36 CFR §220.6(f). Decision memos for Categorical Exclusions

The responsible official shall notify interested or affected parties of the availability of the decision signing. While sections may be combined or rearranged in the interest of clarity and brevity, decision memos must include the following content:

(1) A heading, which must identify:

(i) Title of document: Decision Memo;

(ii) Agency and administrative unit;

(iii) Title of the proposed action; and

(iv) Location of the proposed action, including administrative unit, county, and State.

(2) Decision to be implemented and the reasons for categorically excluding the

proposed action including:

(i) The category of the proposed action;

(ii) The rationale for using the category and, if more than one category could have been used, why the specific category was chosen;

(iii) A finding that no extraordinary circumstances exist;

(3) Any interested and affected agencies, organizations, and persons contacted;

(4) Findings required by other laws such as, but not limited to findings of consistency with the forest land and resource management plan as required by the National Forest Management Act; or a public interest determination (36 CFR §254.3(c));

(5) The date when the responsible official intends to implement the decision and any conditions related to implementation;

(6) Whether the decision is subject to review or appeal, the applicable regulations, and when and where to file a request for review or appeal;

(7) Name, address, and phone number of a contact person who can supply further information about the decision; and

(8) The responsible official's signature and date when the decision is made.

36 CFR §220.7. Environmental Assessment processes

(a) Environmental assessment. An environmental assessment (EA) shall be prepared for proposals as described in §220.4(a) that are not categorically excluded from documentation §220.6) and for which the need of an EIS has not been determined (§220.5). An EA may be prepared in any format useful to facilitate planning, decision-making, and public disclosure as long as the requirements of paragraph (b) of this section are met. The EA may incorporate by reference information that is reasonably available to the public.

(b). An EA must include the following:

(1) Need for the proposal. The EA must briefly describe the need for the project.

(2) Proposed action and alternative(s). The EA shall briefly describe the proposed action and alternative(s) that meet the need for action. No specific number of alternatives is required or prescribed.

(i) When there are no unresolved conflicts concerning alternative uses of available resources (NEPA, Section §102(2)(E)), the EA need only analyze the proposed action and proceed without consideration of additional alternatives.

(ii) The EA may document consideration of a no-action alternative through the effects analysis by contrasting the impacts of the proposed action and any

alternative(s) with the current condition and expected future condition if the proposed action were not implemented.

(iii) The description of the proposal and alternative(s) may include a brief description of modifications and incremental design features developed through the analysis process to develop the alternatives considered. The documentation of these incremental changes to a proposed action or alternatives may be incorporated by reference in accord with 40 CFR §1502.21.

(iv) The proposed action and one or more alternatives to the proposed action may include adaptive management. An adaptive management proposal or alternative must clearly identify the adjustment(s) that maybe made when monitoring during project implementation indicates that the action is not having its intended effect, or is causing unintended and undesirable effects. The EA must disclose not only the effect of the proposed action or alternative but also the effect of the adjustment. Such proposal or alternative must also describe the monitoring that would take place to inform the responsible official whether the action is having its intended effect.

(3) Environmental Impacts of the Proposed Action and Alternative(s).

The EA:

(i) Shall briefly provide sufficient evidence and analysis, including the environmental impacts of the proposed action and alternative(s), to determine whether to prepare either an EIS or a FONSI (40 CFR §1508.9);

(ii) Shall disclose the environmental effects of any adaptive management adjustments;

(iii) Shall describe the impacts of the proposed action and any alternatives in terms of context and intensity as described in the definition of ‘‘significantly’’ at 40 CFR §1508.27;

(iv) May discuss the direct, indirect, and cumulative impact(s) of the proposed action and any alternatives together in a comparative description or describe the impacts of each alternative separately; and

(v) May incorporate by reference data, inventories, other information, and analyses.

(4) Agencies and Persons Consulted.

36 CFR §220.7(c). Decision Notice

If an EA and FONSI have been prepared, the responsible official must document a decision to proceed with an action in a decision notice unless law or regulation requires another form of decision documentation (40 CFR §1508.13). A decision

notice must document the conclusions drawn and the decision(s) made based on the supporting record, including the EA and FONSI.

A decision notice must include:

(1) A heading, which identifies the: (i) Title of document; (ii) Agency and administrative unit; (iii) Title of the project; and (iv) Location of the action, including county and State.

(2) Decision and rationale;

(3) Brief summary of public involvement;

(4) A statement incorporating by reference the EA and FONSI if not combined with the decision notice;

(5) Findings required by other laws and regulations applicable to the decision at the time of decision;

(6) Expected implementation date;

(7) Administrative review or appeal opportunities and, when such opportunities exist, a citation to the applicable regulations and directions on when and where to file a request for review or an appeal;

(8) Contact information, including the name, address, and phone number of a contact person who can supply additional information; and

(9) Responsible Official's signature, and the date the notice is signed.

(d) Notification. The responsible official shall notify interested and affected parties of the availability of the EA, FONSI and decision notice, as soon as practicable after the decision notice is signed.

36 CFR §220.3. Schedule of proposed actions (SOPA)

A Forest Service document that informs the public about those proposed and ongoing Forest Service actions for which a record of decision, decision notice or decision memo would be or has been prepared. The SOPA also identifies a contact for additional information on any proposed actions.

36 CFR §220.4(d and e). Scoping

(d) The responsible official shall ensure the SOPA is updated and notify the public of the availability of the SOPA.

(e) Scoping (40 CFR §1501.7). (1) Scoping is required for all Forest Service proposed actions, including those that would appear to be categorically excluded from further analysis and documentation in an EA or an EIS (§ 220.6).

(2) Scoping shall be carried out in accordance with the requirements of 40 CFR

§1501.7. Because the nature and complexity of a proposed action determine the scope and intensity of analysis, no single scoping technique is required or prescribed.

(3) The SOPA shall not to be used as the sole scoping mechanism for a proposed action.

36 CFR §220.6(c). Scoping

If the responsible official determines, based on scoping, that it is uncertain whether the proposed action may have a significant effect on the environment, prepare an EA. If the responsible official determines, based on scoping, that the proposed action may have a significant environmental effect, prepare an EIS.

36 CFR §220.4(i). Applicants

The responsible official shall make policies or staff available to advise potential applicants of studies or other information foreseeably required for acceptance of their applications. Upon acceptance of an application as provided by 36 CFR §251.54(g) the responsible official shall initiate the NEPA process.

Forest Service Handbook (FSH) 1909.15, Section 11.21. Purpose and Need

The need for action discusses the relationship between the desired condition and the existing condition in order to answer the question, "why consider taking any action?" The breadth or narrowness of the need for action has a substantial influence on the scope of the subsequent analysis. A well-defined "need" or "purpose and need" statement narrows the range of alternatives that may need to be considered. For example, a statement like "there is a need for more developed recreation" would lead to a very broad analysis and consideration of many different types of recreation. However, a statement like "there is a need for more developed campsites along Clear Creek" would result in a more focused analysis with consideration of a much narrower range of alternatives.

"Purpose" and "need" may be discussed separately, but normally they are discussed as one because the purpose of an action will be to respond to the stated need.

It is critical that the responsible official and interdisciplinary team members all understand and agree on the need for action. An informed decision can only be made when everyone is working together to solve the same problem.

Department of Interior Extraordinary Circumstances Applicable to all DOI Bureaus and Services

43 CFR §46.215. Categorical exclusions: Extraordinary circumstances

Extraordinary circumstances (see paragraph §46.205(c)) exist for individual actions within categorical exclusions that may meet any of the criteria listed in paragraphs (a) through (l) of this section. Applicability of extraordinary circumstances to categorical exclusions is determined by the Responsible Official.

(a) Have significant impacts on public health or safety.

(b) Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas.

(c) Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)].

(d) Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.

(e) Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.

(f) Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.

(g) Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau.

(h) Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species.

(i) Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.

(j) Have a disproportionately high and adverse effect on low income or minority populations (EO 12898).

(k) Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007).

(l) Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112).

National Park Service 516 DM Chapter 12; Department of Interior 43 CFR part 46

§46.205. Actions categorically excluded from further NEPA review

Categorical Exclusion means a category or kind of action that has no significant individual or cumulative effect on the quality of the human environment. See 40 CFR §1508.4.

(a) Except as provided in paragraph (c) of this section, if an action is covered by a Departmental categorical exclusion, the bureau is not required to prepare an environmental assessment (see subpart D of this part) or an environmental impact statement (see subpart E of this part). If a proposed action does not meet the criteria for any of the listed Departmental categorical exclusions or any of the individual bureau categorical exclusions, then the proposed action must be analyzed in an environmental assessment or environmental impact statement.

(b) The actions listed in section §46.210 are categorically excluded, Department-wide, from preparation of environmental assessments or environmental impact statements.

(c) The CEQ Regulations at 40 CFR §1508.4 require agency procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis and action. Section §46.215 lists the extraordinary circumstances under which actions otherwise covered by a categorical exclusion require analyses under NEPA.

(1) Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section §46.215; if it does, further analysis and environmental documents must be prepared for the action.

(2) Bureaus must work within existing administrative frameworks, including any existing programmatic agreements, when deciding how to apply any of the section §46.215 extraordinary circumstances.

Ch. 12.5 Categorical Exclusions [pertinent to broadband projects]. The following NPS actions are designated categorical exclusions unless the action qualifies as an exception under [43 CFR §46.215].

A. Actions Related to General Administration.

(4) Reissuance/renewal of permits, rights-of-way or easements not involving new environmental impacts,

(5) Conversion of existing permits to rights-of-way, when such conversions do not continue or initiate unsatisfactory environmental conditions,

(6) Issuances, extensions, renewals, reissuances or minor modifications of concession contracts or permits not entailing new construction,

(7) Commercial use licenses involving no construction,

(11) At the direction of the NPS responsible official, actions where NPS has concurrence or co-approval with another bureau and the action is a categorical exclusion for that bureau.

B. Plans, Studies and Reports.

(1) Changes or amendments to an approved plan, when such changes would cause no or only minimal environmental impact.

(9) Adoption or approval of surveys, studies, reports, plans and similar documents which will result in recommendations or proposed actions which would cause no or only minimal environmental impact.

C. Actions Related to Development.

(3) Routine maintenance and repairs to non-historic structures, facilities, utilities, grounds and trails.

(4) Routine maintenance and repairs to cultural resource sites, structures, utilities and grounds under an approved Historic Structures Preservation Guide or Cyclic Maintenance Guide; or if the action would not adversely affect the cultural resource.

(5) Installation of signs, displays, kiosks, etc.

(8) Replacement in kind of minor structures and facilities with little or no change in location, capacity, or appearance.

(13) Upgrading or adding new overhead utility facilities to existing poles, or replacement poles which do not change existing pole line configurations.

(14) Issuance of rights-of-way for overhead utility lines to an individual building or well from an existing line where installation will not result in

significant visual intrusion and will involve no clearance of vegetation other than for placement of poles.

(15) Issuance of rights-of-way for minor overhead utility lines not involving placement of poles or towers and not involving vegetation management or significant visual intrusion in an NPS-administered area.

(16) Installation of underground utilities in previously disturbed areas having stable soils, or in an existing utility right-of-way.

(17) Construction of minor structures, including small, improved parking lots in previously disturbed or developed areas.

(20) Construction of fencing enclosures or boundary fencing posing no effect on wildlife migrations.

E. Actions Related to Resource Management and Protection.

(1) Archeological surveys and permits involving only surface collection or small-scale test excavations.

§46.120. Using existing environmental analyses prepared pursuant to NEPA and the Council on Environmental Quality regulations

(a) When available, the Responsible Official should use existing NEPA analyses for assessing the impacts of a proposed action and any alternatives. Procedures for adoption or incorporation by reference of such analyses must be followed where applicable.

(b) If existing NEPA analyses include data and assumptions appropriate for the analysis at hand, the Responsible Official should use these existing NEPA analyses and/or their underlying data and assumptions where feasible.

(c) An existing environmental analysis prepared pursuant to NEPA and the Council on Environmental Quality regulations may be used in its entirety if the Responsible Official determines, with appropriate supporting documentation, that it adequately assesses the environmental effects of the proposed action and reasonable alternatives. The supporting record must include an evaluation of whether new circumstances, new information, or changes in the action or its impacts not previously analyzed may result in significantly different environmental effects.

(d) Responsible Officials should make the best use of existing NEPA documents by supplementing, tiering to, incorporating by reference, or adopting previous NEPA environmental analyses to avoid redundancy and unnecessary paperwork.

§46.320. Adopting environmental assessments prepared by another agency, entity, or person

(a) A Responsible Official may adopt an environmental assessment prepared by another agency, entity, or person, including an applicant, if the Responsible Official:

(1) Independently reviews the environmental assessment; and

(2) Finds that the environmental assessment complies with this subpart and relevant provisions of the CEQ Regulations and with other program requirements.

(b) When appropriate, the Responsible Official may augment the environmental assessment to be consistent with the bureau's proposed action.

(c) In adopting or augmenting the environmental assessment, the Responsible Official will cite the original environmental assessment.

(d) The Responsible Official must ensure that its bureau's public involvement requirements have been met before it adopts another agency's environmental assessment.

§46.300. Purpose of an environmental assessment and when it must be prepared

The purpose of an environmental assessment is to allow the Responsible Official to determine whether to prepare an environmental impact statement or a finding of no significant impact.

(a) A bureau must ensure that an environmental assessment is prepared for all proposed Federal actions, except those:

(1) That are covered by a categorical exclusion;

(2) That are covered sufficiently by an earlier environmental document as determined and documented by the Responsible Official; or

(3) For which the bureau has already decided to prepare an environmental impact statement.

(b) A bureau may prepare an environmental assessment for any proposed action at any time to:

(1) Assist in planning and decision-making;

(2) Further the purposes of NEPA when no environmental impact statement is necessary; or

(3) Facilitate environmental impact statement preparation.

§46.235. NEPA scoping process

(a) Scoping is a process that continues throughout the planning and early stages of preparation of an environmental impact statement. Scoping is required for an environmental impact statement; scoping may be helpful during preparation of an environmental assessment, but is not required (see paragraph 46.305(a) Public involvement in the environmental assessment process). For an environmental impact statement, bureaus must use scoping to engage State, local and tribal governments and the public in the early identification of concerns, potential impacts, relevant effects of past actions and possible alternative actions. Scoping is an opportunity to introduce and explain the interdisciplinary approach and solicit information as to additional disciplines that should be included. Scoping also provides an opportunity to bring agencies and applicants together to lay the groundwork for setting time limits, expediting reviews where possible, integrating other environmental reviews, and identifying any major obstacles that could delay the process. The Responsible Official shall determine whether, in some cases, the invitation requirement in 40 CFR §1501.7(a)(1) may be satisfied by including such an invitation in the notice of intent (NOI).

(b) In scoping meetings, newsletters, or by other communication methods appropriate to scoping, the lead agency must make it clear that the lead agency is ultimately responsible for determining the scope of an environmental impact statement and that suggestions obtained during scoping are only options for the bureau to consider.

Ch. 12.3 Guidance to Applicants. Actions in areas of NPS jurisdiction that are initiated by private or non-Federal entities include the following:

C. Permits, Rights-of-Way, and Easements for Non-Park Uses

Informational requirements are determined on a case-by-case basis, and applicants should consult with the Park Superintendent before making formal application. The applicant must provide sufficient information on the proposed non-park use, as well as park resources and resource-related values to be affected directly and indirectly by the proposed use in order to allow the Service to evaluate the application, assess the impact of the proposed use on the NPS unit and other environmental values, develop restrictions/stipulations to mitigate adverse impacts, and reach a decision on issuance of the instrument. Authorities for such permits, rights-of-way, etc., are found in the enabling legislation for individual National Park System units and 16 U.S.C. 5 and 79 and 23 U.S.C. 317. Right-of-way and easement regulations are found at 36 CFR Part 14. Policies concerning regulation of special uses are described in the NPS Management Policies Notebook.

BIA Appendix 516 DM Chapter 10; Department of Interior 43 CFR part 46

§46.205. Actions categorically excluded from further NEPA review

Categorical Exclusion means a category or kind of action that has no significant individual or cumulative effect on the quality of the human environment. See 40 CFR §1508.4.

(a) Except as provided in paragraph (c) of this section, if an action is covered by a Departmental categorical exclusion, the bureau is not required to prepare an environmental assessment (see subpart D of this part) or an environmental impact statement (see subpart E of this part). If a proposed action does not meet the criteria for any of the listed Departmental categorical exclusions or any of the individual bureau categorical exclusions, then the proposed action must be analyzed in an environmental assessment or environmental impact statement.

(b) The actions listed in section 46.210 are categorically excluded, Department-wide, from preparation of environmental assessments or environmental impact statements.

(c) The CEQ Regulations at 40 CFR §1508.4 require agency procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis and action. Section 46.215 lists the extraordinary circumstances under which actions otherwise covered by a categorical exclusion require analyses under NEPA.

(1) Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section 46.215; if it does, further analysis and environmental documents must be prepared for the action.

(2) Bureaus must work within existing administrative frameworks, including any existing programmatic agreements, when deciding how to apply any of the section 46.215 extraordinary circumstances.

Ch. 10.5 Categorical Exclusions [pertinent to this PEA].

The following BIA actions are hereby designated as categorical exclusions unless the action qualifies as an exception [43 CFR Part 46]. These activities are single, independent actions not associated with a larger, existing or proposed, complex or facility. If cases occur that involve larger complexes or facilities, an EA or supplement should be accomplished.

A. Operation, maintenance, and replacement of existing facilities. Examples are normal renovation of buildings, road maintenance and limited rehabilitation of irrigation structures.

F. Rights-of-Way.

(1) Rights-of-way inside another right-of-way, or amendments to rights-of-way where deviations from or additions to the original right-of-way are involved and

where there is an existing NEPA analysis covering the same or similar impacts in the right-of-way.

(2) Service line agreements to an individual residence, building or well from an existing facility where installation will involve no clearance of vegetation from the right-of-way other than for placement of poles, signs, (including highway signs), or buried power/cable lines.

(3) Renewals, assignments and conversions of existing rights-of-way where there would be essentially no change in use and continuation would not lead to environmental degradation.

L. Roads and Transportation

(1) Approval of utility installations along or across a transportation facility located in whole within the limits of the roadway right-of-way.

(4) Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial acquisition or traffic disruption will occur.

M. Other.

(3) Actions where BIA has concurrence or co-approval with another Bureau and the action is categorically excluded for that Bureau.

§46.120. Using existing environmental analyses prepared pursuant to NEPA and the Council on Environmental Quality regulations

(a) When available, the Responsible Official should use existing NEPA analyses for assessing the impacts of a proposed action and any alternatives. Procedures for adoption or incorporation by reference of such analyses must be followed where applicable.

(b) If existing NEPA analyses include data and assumptions appropriate for the analysis at hand, the Responsible Official should use these existing NEPA analyses and/or their underlying data and assumptions where feasible.

(c) An existing environmental analysis prepared pursuant to NEPA and the Council on Environmental Quality regulations may be used in its entirety if the Responsible Official determines, with appropriate supporting documentation, that it adequately assesses the environmental effects of the proposed action and reasonable alternatives. The supporting record must include an evaluation of whether new circumstances, new information or changes in the action or its impacts not previously analyzed may result in significantly different environmental effects.

(d) Responsible Officials should make the best use of existing NEPA documents by supplementing, tiering to, incorporating by reference, or adopting previous NEPA environmental analyses to avoid redundancy and unnecessary paperwork.

§46.320. Adopting environmental assessments prepared by another agency, entity, or person

(a) A Responsible Official may adopt an environmental assessment prepared by another agency, entity, or person, including an applicant, if the Responsible Official:

(1) Independently reviews the environmental assessment; and

(2) Finds that the environmental assessment complies with this subpart and relevant provisions of the CEQ Regulations and with other program requirements.

(b) When appropriate, the Responsible Official may augment the environmental assessment to be consistent with the bureau's proposed action.

(c) In adopting or augmenting the environmental assessment, the Responsible Official will cite the original environmental assessment.

(d) The Responsible Official must ensure that its bureau's public involvement requirements have been met before it adopts another agency's environmental assessment.

§46.300. Purpose of an environmental assessment and when it must be prepared

The purpose of an environmental assessment is to allow the Responsible Official to determine whether to prepare an environmental impact statement or a finding of no significant impact.

(a) A bureau must ensure that an environmental assessment is prepared for all proposed Federal actions, except those:

(1) That are covered by a categorical exclusion;

(2) That are covered sufficiently by an earlier environmental document as determined and documented by the Responsible Official; or

(3) For which the bureau has already decided to prepare an environmental impact statement.

(b) A bureau may prepare an environmental assessment for any proposed action at any time to:

(1) Assist in planning and decision-making;

(2) Further the purposes of NEPA when no environmental impact statement is necessary; or

(3) Facilitate environmental impact statement preparation.

§46.235. NEPA scoping process

(a) Scoping is a process that continues throughout the planning and early stages of preparation of an environmental impact statement. Scoping is required for an environmental impact statement; scoping may be helpful during preparation of an environmental assessment, but is not required (see paragraph 46.305(a) Public involvement in the environmental assessment process). For an environmental impact statement, bureaus must use scoping to engage State, local, and tribal governments and the public in the early identification of concerns, potential impacts, relevant effects of past actions and possible alternative actions. Scoping is an opportunity to introduce and explain the interdisciplinary approach and solicit information as to additional disciplines that should be included. Scoping also provides an opportunity to bring agencies and applicants together to lay the groundwork for setting time limits, expediting reviews where possible, integrating other environmental reviews, and identifying any major obstacles that could delay the process. The Responsible Official shall determine whether, in some cases, the invitation requirement in 40 CFR §1501.7(a)(1) may be satisfied by including such an invitation in the notice of intent (NOI).

(b) In scoping meetings, newsletters, or by other communication methods appropriate to scoping, the lead agency must make it clear that the lead agency is ultimately responsible for determining the scope of an environmental impact statement and that suggestions obtained during scoping are only options for the bureau to consider.

Ch. 10.3A(1). Guidance to Applicants

(a) An “applicant” is an entity which proposes to undertake any activity which will at some point require BIA action. These may include tribal governments, private entities, state and local governments or other Federal agencies. BIA compliance with NEPA is Congressionally-mandated. Compliance is initiated when a BIA action is necessary in order to implement a proposal.

(b) Applicants should contact the BIA official at the appropriate level for assistances. This will be the Agency Superintendent, Area Director or the Director, Office of Trust Responsibilities.

(c) if the applicant’s proposed action will affect or involve more than one tribal government, one government agency, one BIA agency or where the action may be of State-wide or regional significance, the applicant should contact the

respective Area Director(s). The Area Director(s), using sole discretion, may assign the lead NEPA compliance responsibilities to one Area Office, or, as appropriate, to one Agency Superintendent. From that point, the Applicant will deal with the designated lead office.

(d) Since much of the applicant's planning may take place outside the BIA system, it is the applicant's responsibility to prepare a milestone chart for BIA use at the earliest possible stage in order to coordinate the efforts of both parties. Early communication with the responsible BIA office will expedite determination of the appropriate type of NEPA documentation required. Other matters such as the scope, depth and sources of data for an environmental document will also be expedited and will help lead to a more efficient and more timely NEPA compliance process.

Ch. 10.3C. Programs under 25 CFR for which BIA has not yet issued regulations or directives for environmental information for applicants are listed below. These programs may or may not require environmental documents and could involve submission of applicant information to determine NEPA applicability. Applicants for these types of programs should contact the appropriate BIA office for information and assistance.

(8) Leasing and permitting (Lands) (25 CFR Part 162)

(14) Rights-of-way over Indian lands (25 CFR Part 169)

Bureau of Land Management Pertinent NEPA Regulations 43 CFR Section 46.210 (Department of Interior-wide); Part 516 DM Ch. 11 (Bureau of Land Management)

§46.205. Actions categorically excluded from further NEPA review.

Categorical Exclusion means a category or kind of action that has no significant individual or cumulative effect on the quality of the human environment. See 40 CFR §1508.4.

(c) The CEQ Regulations at 40 CFR §1508.4 require agency procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis and action. Section 46.215 lists the extraordinary circumstances under which actions otherwise covered by a categorical exclusion require analyses under NEPA.

(1) Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section §46.215; if it does, further analysis and environmental documents must be prepared for the action.

(2) Bureaus must work within existing administrative frameworks, including any existing programmatic agreements, when deciding how to apply any of the section 46.215 extraordinary circumstances.

Ch. 11.9 Actions Eligible for a Categorical Exclusion (CX).

[43 CFR §46.205] requires that before any action described in the following list of CXs is used, the list of "extraordinary circumstances" must be reviewed for applicability. If a CX does not pass the "extraordinary circumstances" test, the proposed action analysis defaults to either an EA or an EIS. When no "extraordinary circumstances" apply, the following activities do not require the preparation of an EA or EIS. As proposed actions are designed and then reviewed against the CX list, proposed actions or activities must be, at a minimum, consistent with the DOI and the BLM regulations, manuals, handbooks, policies, and applicable land use plans regarding design features, best management practices, terms and conditions, conditions of approval, and stipulations.

Pertinent BLM Categorical Exclusions

Ch. 11E. Realty.

(9) Renewals and assignments of leases, permits, or rights-of-way where no additional rights are conveyed beyond those granted by the original authorizations.

(10) Transfer or conversion of leases, permits, or rights-of-way from one agency to another (e.g., conversion of Forest Service permits to a BLM Title V Right-of-way).

(11) Conversion of existing right-of-way grants to Title V grants or existing leases to FLPMA Section 302(b) leases where no new facilities or other changes are needed.

(12) Grants of right-of-way wholly within the boundaries of other compatibly developed rights-of-way.

(13) Amendments to existing rights-of-way, such as the upgrading of existing facilities, which entail no additional disturbances outside the right-of-way boundary.

(14) Grants of rights-of-way for an overhead line (no pole or tower on BLM land) crossing over a corner of public land.

(16) Acquisition of easements for an existing road or issuance of leases, permits, or rights-of-way for the use of existing facilities, improvements, or sites for the same or similar purposes.

(17) Grant of a short rights-of-way for utility service or terminal access roads to an individual residence, outbuilding, or water well.

(18) Temporary placement of a pipeline above ground.

The BLM list of actions for which an EA is the appropriate NEPA document
Ch. 11.7C. An EA is usually the appropriate NEPA document for:

(1) Land Use Plan Amendments;

(2) Land use plan implementation decisions, including but not limited to analysis for implementation plans such as watershed plans or coordinated resource activity plans, resource use permits (except for those that are categorically excludable), and site-specific project plans, such as construction of a trail.

D. An EA should be completed when the Responsible Official is uncertain of the potential for significant impacts and needs further analysis to make the determination.

§46.240. Establishing time limits for the NEPA process
(a) For each proposed action, on a case-by-case basis, bureaus shall:

(1) Set time limits from the start to the finish of the NEPA analysis and documentation, consistent with the requirements of 40 CFR §1501.8 and other legal obligations, including statutory and regulatory timeframes;

(2) Consult with cooperating agencies in setting time limits; and

(3) Encourage cooperating agencies to meet established time frames.

(b) Time limits should reflect the availability of Department and bureau personnel and funds. Efficiency of the NEPA process is dependent on the management capabilities of the lead bureau, which must assemble an interdisciplinary team and/or qualified staff appropriate to the type of project to be analyzed to ensure timely completion of NEPA documents.

§46.120. Using existing environmental analyses prepared pursuant to NEPA and the Council on Environmental Quality regulations

(a) When available, the Responsible Official should use existing NEPA analyses for assessing the impacts of a proposed action and any alternatives. Procedures for adoption or incorporation by reference of such analyses must be followed where applicable.

(b) If existing NEPA analyses include data and assumptions appropriate for the analysis at hand, the Responsible Official should use these existing NEPA analyses and/or their underlying data and assumptions where feasible.

(c) An existing environmental analysis prepared pursuant to NEPA and the Council on Environmental Quality regulations may be used in its entirety if the Responsible Official determines, with appropriate supporting documentation, that it adequately assesses the environmental effects of the proposed action and reasonable alternatives. The supporting record must include an evaluation of whether new circumstances, new information or changes in the action or its impacts not previously analyzed may result in significantly different environmental effects.

(d) Responsible Officials should make the best use of existing NEPA documents by supplementing, tiering to, incorporating by reference, or adopting previous NEPA environmental analyses to avoid redundancy and unnecessary paperwork.

§46.320. Adopting environmental assessments prepared by another agency, entity, or person

(a) A Responsible Official may adopt an environmental assessment prepared by another agency, entity, or person, including an applicant, if the Responsible Official:

(1) Independently reviews the environmental assessment; and

(2) Finds that the environmental assessment complies with this subpart and relevant provisions of the CEQ Regulations and with other program requirements.

(b) When appropriate, the Responsible Official may augment the environmental assessment to be consistent with the bureau's proposed action.

(c) In adopting or augmenting the environmental assessment, the Responsible Official will cite the original environmental assessment.

(d) The Responsible Official must ensure that its bureau's public involvement requirements have been met before it adopts another agency's environmental assessment.

Ch. 11.5. Plan Conformance

Where a BLM land use plan (LUP) exists, a proposed action must be in conformance with the plan. This means that the proposed action must be specifically provided for in the plan, or if not specifically mentioned, the proposal must be clearly consistent with the terms, conditions, and decisions of the plan or plan as amended. If it is determined that the proposed action does not conform to the plan, the Responsible Official may:

A. Reject the proposal;

B. Modify the proposal to conform to the land use plan; or

C. Complete appropriate plan amendments and associated NEPA compliance requirements prior to proceeding with the proposed action.

Ch. 11.6. Existing Documentation (Determination of NEPA Adequacy [Supplements])

The Responsible Official may consider using existing NEPA analysis for a proposed action when the record documents show that the following conditions are met:

A. The proposed action is adequately covered by (i.e., is within the scope of and analyzed in) relevant existing analyses, data, and records; and

B. There are no new circumstances, new information, or unanticipated or unanalyzed environmental impacts that warrant new or supplemental analysis. If the Responsible Official determines that existing NEPA documents adequately analyzed the effects of the proposed action, this determination, usually prepared in a Determination of NEPA Adequacy (DNA) worksheet to provide the administrative record support, serves as an interim step in the BLM's internal decision-making process. The DNA is intended to evaluate the coverage of existing documents and the significance of new information, but does not itself provide NEPA analysis. If the Responsible Official concludes that the proposed action(s) warrant additional review, information from the DNA worksheet may be used to facilitate the preparation of the appropriate level of NEPA analysis. The BLM's NEPA Handbook and program specific regulations and guidance describe additional steps needed to make and document the agency's final determination regarding a proposed action.

Ch. 11.3. External Applicants' Guidance

A(1) For all external proposals, applicants should make initial contact with the Responsible Official (District Manager, Field Manager, or State Director) responsible for the affected public lands as soon as possible after determining the BLM's involvement. This early contact is necessary to allow the BLM to consult early with appropriate state and local agencies and tribes and with interested private persons and organizations, and to commence its NEPA process at the earliest possible time.

A(2) When a proposed action has the potential to affect public lands in more than one administrative unit, the applicant may initially contact any Responsible Official whose jurisdiction is involved. The BLM may then designate a lead office to coordinate between BLM jurisdictions.

A(3) Potential applicants may secure from the Responsible Official a list of NEPA and other relevant regulations and requirements for environmental review related

to each applicant's proposed action. The purpose of making these regulations and requirements known in advance is to assist the applicant in the development of an adequate and accurate description of the proposed action when the applicant submits their project application. The list provided to the applicant may not fully disclose all relevant regulations and requirements because additional requirements could be identified after review of the applicant's proposal document(s) and as a result of the "scoping" process.

A(4) The applicant is encouraged to advise the BLM of their intentions early on in their planning process. Early communication is necessary so that the BLM can efficiently advise the applicant on the anticipated type of NEPA review required, information needed, and potential data gaps that may or may not need to be filled, so that the BLM can describe the relevant regulations and requirements likely to affect the proposed action(s), and to discuss scheduling expectations.

43 CFR §2805.10(a)(1). Applicant's Need for Action as Evaluated by the BLM. (IM 2011-059, re-authorized February 2013)

The purpose and need statement as a whole describes the problem or opportunity to which the BLM is responding and what the BLM hopes to accomplish by the action. The purpose and need statement in a NEPA document for a renewable energy right-of-way application must describe the BLM's purpose and need for action, not the applicant's interests and objectives (BLM NEPA Handbook Section 6.2). The applicant's interests and objectives, including any constraints or flexibility with respect to their proposal, help to inform the BLM's decision and cannot be ignored in the NEPA process. The applicant's interest and objectives should be described in the NEPA document (e.g., in the background section or in the project description). This information will help determine which alternatives are analyzed in detail through the NEPA process and may also provide a basis for eliminating some alternatives from detailed analysis.

For most renewable energy projects the BLM's purpose and need for action will arise from the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to a right-of way application requesting authorized use of public lands for a specific type of renewable energy development. The purpose and need statement should also describe the BLM's authorities and management objectives with respect to renewable energy and public lands (see example below). Additionally, offices should include a description of the BLM's decision(s) to be made as part of the purpose and need statement to help establish the scope of the NEPA analysis (BLM NEPA Handbook Section 6.2). In responding to a right-of-way application the BLM may decide to deny the proposed right-of-way, grant the right-of way, or grant the

right-of-way with modifications. In accordance with the right-of-way regulations, modifications may include modifying the proposed use or changing the route or location of the proposed facilities (43 CFR §2805.10(a)(1)).

The following purpose and need statement is provided as an example. Changes in the statement as written are expected based on project-specific circumstances including appropriate reference to land use plans or other management objectives or policies for an area (e.g., Secretarial Order 3310, dated December 22, 2010, Protecting Wilderness Characteristics on Lands Managed by the BLM). In some situations, distinguishing the "purpose" from the "need" as two separate aspects of the purpose and need statement may provide an opportunity to better clarify why the BLM is proposing an action (BLM NEPA Handbook Section 6.2).

In accordance with FLPMA (Section 103(c)), public lands are to be managed for multiple use that takes into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant rights-of-way on public lands for systems of generation, transmission, and distribution of electric energy (Section 501(a)(4)). Taking into account the BLM's multiple use mandate, the purpose and need for the proposed action is to respond to a FLPMA right-of-way application submitted by [Company X] to construct, operate, maintain, and decommission a [type of energy] facility and associated infrastructure on public lands administered by the BLM in compliance with FLPMA, BLM right-of-way regulations, and other applicable Federal laws and policies. This proposed action would, if approved, assist the BLM in addressing the management objectives in the Energy Policy Act of 2005 (Title II, Section 211) which establish a goal for the Secretary of the Interior to approve 10,000 MWs of electricity from non-hydropower renewable energy projects located on public lands. This proposed action, if approved, would also further the purpose of Secretarial Order 3285A1 (March 11, 2009) that establishes the development of environmentally responsible renewable energy as a priority for the Department of the Interior.

The BLM will decide whether to deny the proposed right-of-way, grant the right-of way, or grant the right-of-way with modifications. Modifications may include modifying the proposed use or changing the route or location of the proposed facilities.

USFWS CX 516 DM chapter 8; Department of Interior 43 CFR part 46

§46.205. Actions categorically excluded from further NEPA review

Categorical Exclusion means a category or kind of action that has no significant individual or cumulative effect on the quality of the human environment. See 40 CFR §1508.4.

(a) Except as provided in paragraph (c) of this section, if an action is covered by a Departmental categorical exclusion, the bureau is not required to prepare an environmental assessment (see subpart D of this part) or an environmental impact statement (see subpart E of this part). If a proposed action does not meet the criteria for any of the listed Departmental categorical exclusions or any of the individual bureau categorical exclusions, then the proposed action must be analyzed in an environmental assessment or environmental impact statement.

(b) The actions listed in section 46.210 are categorically excluded, Department-wide, from preparation of environmental assessments or environmental impact statements.

(c) The CEQ Regulations at 40 CFR §1508.4 require agency procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis and action. Section 46.215 lists the extraordinary circumstances under which actions otherwise covered by a categorical exclusion require analyses under NEPA.

(1) Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section 46.215; if it does, further analysis and environmental documents must be prepared for the action.

(2) Bureaus must work within existing administrative frameworks, including any existing programmatic agreements, when deciding how to apply any of the section 46.215 extraordinary circumstances.

Ch. 8.5 Categorical Exclusions [pertinent to this PEA]

In addition to the actions listed in the Departmental categorical exclusions [43 CFR part 46.215], the following Service actions are designated as categorical exclusions unless the action is an exception to the categorical exclusion.

B. Resource Management. Prior to carrying out these actions, the Service should coordinate with affected Federal agencies and State, tribal, and local governments.

(2). The operation, maintenance, and management of existing facilities and routine recurring management activities and improvements, including renovations

and replacements which result in no or only minor changes in the use, and have no or negligible environmental effects on-site or in the vicinity of the site.

C. Permit and Regulatory Functions.

(3) The issuance of special regulations for public use of Service-managed land, which maintain essentially the permitted level of use and do not continue a level of use that has resulted in adverse environmental effects.

(4) The issuance or reissuance of permits for limited additional use of an existing right-of-way for underground or above ground power, telephone, or pipelines, where no new structures (i.e., facilities) or major improvement to those facilities are required; and for permitting a new right-of-way, where no or negligible environmental disturbances are anticipated.

(5) The issuance or reissuance of special use permits for the administration of specialized sues, including agricultural uses, or other economic uses for management purposes, when such uses are compatible, contribute to the purposes of the refuge system unit, and result in no or negligible environmental effects.

(6) The denial of special use permit applications, either initially or when permits are reviewed for renewal, when the proposed action is determined not compatible with the purposes of the refuge system unit.

(8) Actions where the Service has concurrence or co-approval with another agency and the action is a categorical exclusion for that agency. This would normally involve one Federal action or connected actions where the Service is a cooperating agency.

§46.215. Categorical exclusions: Extraordinary circumstances

Extraordinary circumstances (see paragraph 46.205(c)) exist for individual actions within categorical exclusions that may meet any of the criteria listed in paragraphs (a) through (l) of this section. Applicability of extraordinary circumstances to categorical exclusions is determined by the Responsible Official.

(a) Have significant impacts on public health or safety.

(b) Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas.

(c) Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)].

(d) Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.

(e) Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.

(f) Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.

(g) Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau.

(h) Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated Critical Habitat for these species.

(i) Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.

(j) Have a disproportionately high and adverse effect on low income or minority populations (EO 12898).

(k) Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007).

(l) Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112).

§46.300. Purpose of an environmental assessment and when it must be prepared

The purpose of an environmental assessment is to allow the Responsible Official to determine whether to prepare an environmental impact statement or a finding of no significant impact.

(a) A bureau must ensure that an environmental assessment is prepared for all proposed Federal actions, except those:

(1) That are covered by a categorical exclusion;

(2) That are covered sufficiently by an earlier environmental document as determined and documented by the Responsible Official; or

(3) For which the bureau has already decided to prepare an environmental impact statement.

(b) A bureau may prepare an environmental assessment for any proposed action at any time to:

(1) Assist in planning and decision-making;

(2) Further the purposes of NEPA when no environmental impact statement is necessary; or

(3) Facilitate environmental impact statement preparation.

Ch. 8.6 Actions Normally Requiring an EA

A. Proposals to establish most new refuges and fish hatcheries, and most additions and rehabilitations to existing installations.

B. Any habitat conservation plan that does not meet the definition of "low effect" in the Section 10(a)(1)(B) Handbook.

§46.235. NEPA scoping process

(a) Scoping is a process that continues throughout the planning and early stages of preparation of an environmental impact statement. Scoping is required for an environmental impact statement; scoping may be helpful during preparation of an environmental assessment, but is not required (see paragraph 46.305(a) Public involvement in the environmental assessment process). For an environmental impact statement, bureaus must use scoping to engage State, local and tribal governments and the public in the early identification of concerns, potential impacts, relevant effects of past actions and possible alternative actions. Scoping is an opportunity to introduce and explain the interdisciplinary approach and solicit information as to additional disciplines that should be included. Scoping also provides an opportunity to bring agencies and applicants together to lay the groundwork for setting time limits, expediting reviews where possible, integrating other environmental reviews, and identifying any major obstacles that could delay the process. The Responsible Official shall determine whether, in some cases, the invitation requirement in 40 CFR §1501.7(a)(1) may be satisfied by including such an invitation in the notice of intent (NOI).

(b) In scoping meetings, newsletters, or by other communication methods appropriate to scoping, the lead agency must make it clear that the lead agency is ultimately responsible for determining the scope of an environmental impact

statement and that suggestions obtained during scoping are only options for the bureau to consider.

§46.120. Using existing environmental analyses prepared pursuant to NEPA and the Council on Environmental Quality regulations

(a) When available, the Responsible Official should use existing NEPA analyses for assessing the impacts of a proposed action and any alternatives. Procedures for adoption or incorporation by reference of such analyses must be followed where applicable.

(b) If existing NEPA analyses include data and assumptions appropriate for the analysis at hand, the Responsible Official should use these existing NEPA analyses and/or their underlying data and assumptions where feasible.

(c) An existing environmental analysis prepared pursuant to NEPA and the Council on Environmental Quality regulations may be used in its entirety if the Responsible Official determines, with appropriate supporting documentation, that it adequately assesses the environmental effects of the proposed action and reasonable alternatives. The supporting record must include an evaluation of whether new circumstances, new information or changes in the action or its impacts not previously analyzed may result in significantly different environmental effects.

(d) Responsible Officials should make the best use of existing NEPA documents by supplementing, tiering to, incorporating by reference, or adopting previous NEPA environmental analyses to avoid redundancy and unnecessary paperwork.

§46.320. Adopting environmental assessments prepared by another agency, entity, or person

(a) A Responsible Official may adopt an environmental assessment prepared by another agency, entity, or person, including an applicant, if the Responsible Official:

(1) Independently reviews the environmental assessment; and

(2) Finds that the environmental assessment complies with this subpart and relevant provisions of the CEQ Regulations and with other program requirements.

(b) When appropriate, the Responsible Official may augment the environmental assessment to be consistent with the bureau's proposed action.

(c) In adopting or augmenting the environmental assessment, the Responsible Official will cite the original environmental assessment.

(d) The Responsible Official must ensure that its bureau's public involvement requirements have been met before it adopts another agency's environmental assessment.

Ch. 8.4 Guidance to Applicants

A. Service permits. The Service has responsibility for issuing permits to Federal and state agencies and private parties for actions which would involve certain wildlife species and/or use of Service-administered lands. When applicable, the Service may require permit applicants to provide additional information on the proposal and on its environmental effects as may be necessary to satisfy the Service's requirements to comply with NEPA, other Federal laws, and executive orders.

(2) Federal lands managed by the Service. Service lands are administered under the National Wildlife Refuge System Administration Act of 1966 (16 USC 668dd-668ee), the Refuge Recreation Act of 1962 (16 USC 460k-460k-4), and the Alaska National Interest Lands Conservation Act of 1980 (16 USC 410hh-3233, 43 USC 1602-1784). Inherent in these acts is the requirement that only those uses that are compatible with the purposes of the refuge system unit may be allowed on Service lands. The Service also complies with Executive Order 12996, signed March 25, 1996, entitled "Management and General Public Use of the National Wildlife Refuge System." This Executive Order identifies general public uses that will be given priority consideration in refuge planning and management, subject to meeting the compatibility requirement and if adequate funding is available to administer the use. Detailed procedures regarding comprehensive management planning and integration with NEPA are found in the Service Manual (602 FW 1-3). Reference to this and other National Wildlife Refuge System requirements are found in the Code of Federal Regulations, Title 50 parts 25-29, 31-36, 60, and 70-71. Under these regulations, these protections are extended to all Service-administered lands, including the National Fish Hatchery System.

Bureau of Reclamation 516 DM Ch. 14; DOI 43 CFR 46

§46.205. Actions categorically excluded from further NEPA review

Categorical Exclusion means a category or kind of action that has no significant individual or cumulative effect on the quality of the human environment. See 40 CFR §1508.4.

(a) Except as provided in paragraph (c) of this section, if an action is covered by a Departmental categorical exclusion, the bureau is not required to prepare an environmental assessment (see subpart D of this part) or an environmental impact statement (see subpart E of this part). If a proposed action does not meet

the criteria for any of the listed Departmental categorical exclusions or any of the individual bureau categorical exclusions, then the proposed action must be analyzed in an environmental assessment or environmental impact statement.

(b) The actions listed in section 46.210 are categorically excluded, Department-wide, from preparation of environmental assessments or environmental impact statements.

(c) The CEQ Regulations at 40 CFR §1508.4 require agency procedures to provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect and require additional analysis and action. Section 46.215 lists the extraordinary circumstances under which actions otherwise covered by a categorical exclusion require analyses under NEPA.

(1) Any action that is normally categorically excluded must be evaluated to determine whether it meets any of the extraordinary circumstances in section 46.215; if it does, further analysis and environmental documents must be prepared for the action.

(2) Bureaus must work within existing administrative frameworks, including any existing programmatic agreements, when deciding how to apply any of the section 46.215 extraordinary circumstances.

Ch. 14.5. Categorical Exclusions [pertinent to this PEA]. The following Bureau actions are designated categorical exclusions unless the action qualifies as an exception under [43 CFR 215]:

B. Planning Activities.

(1) Routine planning investigation activities where the impacts are expected to be localized, such as land classification surveys, topographic surveys, archeological surveys, wildlife studies, economic studies, social studies, and other study activity during any planning, preconstruction, construction, or operation and maintenance phases.

(3) Data collection studies that involve test excavations for cultural resources investigations or test pitting, drilling, or seismic investigations for geologic exploration purposes where the impacts will be localized.

C. Project Implementation Activities.

(2) Minor acquisition of land and rights-of-way or easements.

(3) Minor construction activities associated with authorized projects which correct unsatisfactory environmental conditions or which merely augment or supplement, or are enclosed within existing facilities.

D. Operation and Maintenance Activities.

(1) Maintenance, rehabilitation, and replacement of existing facilities which may involve a minor change in size, location, and/or operation.

(7) Withdrawal, termination, modification, or revocation where the land would be opened to discretionary land laws and where such future discretionary actions would be subject to the NEPA process, and disposal and sale of acquired lands where no major change in usage is anticipated.

(10) Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where the action does not allow for or lead to a major public or private action.

§46.120. Using existing environmental analyses prepared pursuant to NEPA and the Council on Environmental Quality regulations

(a) When available, the Responsible Official should use existing NEPA analyses for assessing the impacts of a proposed action and any alternatives. Procedures for adoption or incorporation by reference of such analyses must be followed where applicable.

(b) If existing NEPA analyses include data and assumptions appropriate for the analysis at hand, the Responsible Official should use these existing NEPA analyses and/or their underlying data and assumptions where feasible.

(c) An existing environmental analysis prepared pursuant to NEPA and the Council on Environmental Quality regulations may be used in its entirety if the Responsible Official determines, with appropriate supporting documentation, that it adequately assesses the environmental effects of the proposed action and reasonable alternatives. The supporting record must include an evaluation of whether new circumstances, new information or changes in the action or its impacts not previously analyzed may result in significantly different environmental effects.

(d) Responsible Officials should make the best use of existing NEPA documents by supplementing, tiering to, incorporating by reference, or adopting previous NEPA environmental analyses to avoid redundancy and unnecessary paperwork.

§46.320. Adopting environmental assessments prepared by another agency, entity, or person

(a) A Responsible Official may adopt an environmental assessment prepared by another agency, entity, or person, including an applicant, if the Responsible Official:

(1) Independently reviews the environmental assessment; and

(2) Finds that the environmental assessment complies with this subpart and relevant provisions of the CEQ Regulations and with other program requirements.

(b) When appropriate, the Responsible Official may augment the environmental assessment to be consistent with the bureau's proposed action.

(c) In adopting or augmenting the environmental assessment, the Responsible Official will cite the original environmental assessment.

(d) The Responsible Official must ensure that its bureau's public involvement requirements have been met before it adopts another agency's environmental assessment.

§46.300. Purpose of an EA and when it must be prepared

The purpose of an environmental assessment is to allow the Responsible Official to determine whether to prepare an environmental impact statement or a finding of no significant impact.

(a) A bureau must ensure that an environmental assessment is prepared for all proposed Federal actions, except those:

(1) That are covered by a categorical exclusion;

(2) That are covered sufficiently by an earlier environmental document as determined and documented by the Responsible Official; or

(3) For which the bureau has already decided to prepare an environmental impact statement.

(b) A bureau may prepare an environmental assessment for any proposed action at any time to:

(1) Assist in planning and decision-making;

(2) Further the purposes of NEPA when no environmental impact statement is necessary; or

(3) Facilitate environmental impact statement preparation.

§46.235. NEPA scoping process

(a) Scoping is a process that continues throughout the planning and early stages of preparation of an environmental impact statement. Scoping is required for an environmental impact statement; scoping may be helpful during preparation of an environmental assessment, but is not required (see paragraph 46.305(a) Public involvement in the environmental assessment process). For an environmental impact statement, bureaus must use scoping to engage State, local and tribal governments and the public in the early identification of concerns, potential

impacts, relevant effects of past actions and possible alternative actions. Scoping is an opportunity to introduce and explain the interdisciplinary approach and solicit information as to additional disciplines that should be included. Scoping also provides an opportunity to bring agencies and applicants together to lay the groundwork for setting time limits, expediting reviews where possible, integrating other environmental reviews, and identifying any major obstacles that could delay the process. The Responsible Official shall determine whether, in some cases, the invitation requirement in 40 CFR 1501.7(a)(1) may be satisfied by including such an invitation in the notice of intent (NOI).

(b) In scoping meetings, newsletters, or by other communication methods appropriate to scoping, the lead agency must make it clear that the lead agency is ultimately responsible for determining the scope of an environmental impact statement and that suggestions obtained during scoping are only options for the bureau to consider.

Ch. 14.3 Guidance to Applicants.

A. Types of Applicants.

(1) Actions that are initiated by private or non-Federal entities through applications include the following: Repayment contracts, water service contracts, Small Reclamation Projects Act Loans, Emergency Loans, Rehabilitation and Betterment Loans, Distribution System Loans, land use permits, licenses, easements, crossing agreements, permits for removal of sand and gravel, renewal of grazing, recreation management, or cabin site leases.

(2) Applicants will be provided information by the regional office on what environmental reports, analysis, or information are needed when they initiate their application. The environmental information requested may, of necessity, be related to impacts on private lands or other lands not under the jurisdiction of the Bureau to allow the BuRec to meet its environmental responsibilities.

Federal Emergency Management Agency 44 CFR Part 10

§10.7. Planning

(b) Lead agency. To determine the lead agency for policy-making in which more than one FEMA office or administration is involved or any action in which another Federal agency is involved, FEMA offices and administrations shall apply criteria defined in §1501.5 of the CEQ regulation. If there is disagreement, the FEMA offices and/or administrations shall forward a request for lead agency determination to the Environmental Officer;

(1) The Environmental Officer will determine lead agency responsibility among FEMA offices and administration.

(2) In those cases involving a FEMA office or administration and another Federal agency, the Environmental Officer will attempt to resolve the differences. If unsuccessful, the Environmental Officer will file the request with the Council on Environmental Quality for determination.

(c) Technical assistance to applicants. (1) Section 1501.2(d) of the CEQ regulations requires agencies to provide for early involvement in actions which, while planned by private applicants or other non-Federal entities, require some form of Federal approval. To implement the requirements of §1501.2(d),

(ii) The Regional Administrator shall provide such guidance on a project-by-project basis to applicants seeking assistance from FEMA.

(iii) Upon receipt of an application for agency approval, or notification that an application will be filed, the Regional Administrator shall consult as required with other appropriate parties to initiate and coordinate the necessary environmental analyses.

(2) To facilitate compliance with the requirements of paragraph (a) of this section, applicants and other non-Federal entities are expected to:

(i) Contact the Regional Administrator as early as possible in the planning process for guidance on the scope and level of environmental information required to be submitted in support of their application;

(ii) Conduct any studies which are deemed necessary and appropriate by FEMA to determine the impact of the proposed action on the human environment;

(iii) Consult with appropriate Federal, regional, State, and local agencies and other potentially interested parties during preliminary planning stages to ensure that all environmental factors are identified;

(iv) Submit applications for all Federal, regional, State, and local approvals as early as possible in the planning process;

(v) Notify the Regional Administrator as early as possible of all other Federal, regional, State, local, and Indian tribe actions required for project completion so that FEMA may coordinate all Federal environmental reviews; and

(vi) Notify the Regional Administrator of all known parties potentially affected by or interested in the proposed action.

§10.8. Determination of Requirement for Environmental Review

(d) Categorical Exclusions (CATEXs). CEQ regulations at 40 CFR §1508.4 provide for the categorical exclusion of actions that do not individually or cumulatively have a significant impact on the human environment and for which,

therefore, neither an environmental assessment nor an environmental impact statement is required. Full implementation of this concept will help FEMA avoid unnecessary or duplicate effort and concentrate resources on significant environmental issues.

(1) Criteria. The criteria used for determination of those categories of actions that normally do not require either an environmental impact statement or an environmental assessment include:

(i) Minimal or no effect on environmental quality;

(ii) No significant change to existing environmental conditions; and

(iii) No significant cumulative environmental impact.

(2) List of exclusion categories [pertinent to this PEA]. FEMA has determined that the following categories of actions have no significant effect on the human environment and are, therefore, categorically excluded from the preparation of environmental impact statements and environmental assessments except where extraordinary circumstances as defined in paragraph (d)(5) of this section exist. If the action is of an emergency nature as described in §316 of the Stafford Act (42 U.S.C. 5159), it is statutorily excluded and is noted with [SE].

(vii) The acquisition of properties and the associated demolition/removal [see paragraph (d)(2)(xii) of this section] or relocation of structures [see paragraph (d)(2)(xiii) of this section] under any applicable authority when the acquisition is from a willing seller, the buyer coordinated acquisition planning with affected authorities, and the acquired property will be dedicated in perpetuity to uses that are compatible with open space, recreational, or wetland practices.

(viii) Acquisition or lease of existing facilities where planned uses conform to past use or local land use requirements;

(ix) Acquisition, installation, or operation of utility and communication systems that use existing distribution systems or facilities, or currently used infrastructure rights-of-way;

(xi) Planting of indigenous vegetation;

(xii) Demolition of structures and other improvements or disposal of uncontaminated structures and other improvements to permitted off-site locations, or both;

(xiii) Physical relocation of individual structures where FEMA has no involvement in the relocation site selection or development;

(xv) Repair, reconstruction, restoration, elevation, retrofitting, upgrading to current codes and standards, or replacement of any facility in a manner that

substantially conforms to the preexisting design, function, and location; [SE, in part]

(xvi) Improvements to existing facilities and the construction of small scale hazard mitigation measures in existing developed areas with substantially completed infrastructure, when the immediate project area has already been disturbed, and when those actions do not alter basic functions, do not exceed capacity of other system components, or modify intended land use; provided the operation of the completed project will not, of itself, have an adverse effect on the quality of the human environment;

(xvii) Actions conducted within enclosed facilities where all airborne emissions, waterborne effluent, external radiation levels, outdoor noise, and solid and bulk waste disposal practices comply with existing Federal, state, and local laws and regulations;

(3) Extraordinary circumstances. If extraordinary circumstances exist within an area affected by an action, such that an action that is categorically excluded from NEPA compliance may have a significant adverse environmental impact, an environmental assessment shall be prepared. Extraordinary circumstances that may have a significant environmental impact include:

(i) Greater scope or size than normally experienced for a particular category of action;

(ii) Actions with a high level of public controversy;

(iii) Potential for degradation, even though slight, of already existing poor environmental conditions;

(iv) Employment of unproven technology with potential adverse effects or actions involving unique or unknown environmental risks;

(v) Presence of endangered or threatened species or their critical habitat, or archaeological, cultural, historical, or other protected resources;

(vi) Presence of hazardous or toxic substances at levels which exceed Federal, state or local regulations or standards requiring action or attention;

(vii) Actions with the potential to affect special status areas adversely or other critical resources such as wetlands, coastal zones, wildlife refuge and wilderness areas, wild and scenic rivers, sole or principal drinking water aquifers;

(viii) Potential for adverse effects on health or safety; and

(ix) Potential to violate a Federal, State, local or tribal law or requirement imposed for the protection of the environment.

(x) Potential for significant cumulative impact when the proposed action is combined with other past, present and reasonably foreseeable future actions, even though the impacts of the proposed action may not be significant by themselves.

(4) Documentation. The Regional Administrator will prepare and maintain an administrative record of each proposal that is determined to be categorically excluded from the preparation of an environmental impact statement or an environmental assessment.

§10.9 Preparation of environmental assessments.

(a) When to prepare. The Regional Administrator shall begin preparation of an environmental assessment as early as possible after the determination that an assessment is required. The Regional Administrator may prepare an environmental assessment at any time to assist planning and decision-making.

(b) Content and format. The environmental assessment is a concise public document to determine whether to prepare an environmental impact statement, aiding in compliance with NEPA when no EIS is necessary, and facilitating preparation of a statement when one is necessary. Preparation of an environmental assessment generally will not require extensive research or lengthy documentation. The environmental assessment shall contain brief discussion of the following:

(1) Purpose and need for the proposed action;

(2) Description of the proposed action;

(3) Alternatives considered;

(4) Environmental impact of the proposed action and alternatives;

(5) Listing of agencies and persons consulted; and

(6) Conclusion of whether to prepare an environmental impact statement.

(c) Public participation. The Regional Administrator shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing environmental assessments. In determining “to the extent practicable,” the Regional Administrator shall consider:

(1) Magnitude of the proposal;

(2) Likelihood of public interest;

(3) Need to act quickly;

(4) Likelihood of meaningful public comment;

(5) National security classification issues;

(6) Need for permits; and

(7) Statutory authority of environmental agency regarding the proposal.

§10.9(e) Finding of No Significant Impact. If the Regional Administrator determines on the basis of the environmental assessment not to prepare an environmental impact statement, the Regional Administrator shall prepare a finding of no significant impact in accordance with 40 CFR §1501.4(e) of the CEQ regulations. The assessment and the finding shall be submitted to the Environmental Officer and the Office of Chief Counsel (OCC) for approval. If Environmental Officer and OGC approval is obtained, the Regional Administrator shall then make the finding of no significant impact available to the public as specified in §1506.6 of the CEQ regulations. A finding of no significant impact is not required when the decision not to prepare an environmental impact statement is based on a categorical exclusion.

US Air Force NEPA Regulations 32 CFR part 989

§989.6(f). Pertinent Categorical Exclusions

§989 Appendix B. Pertinent Categorical Exclusions

A2.3.11. Actions similar to other actions which have been determined to have an insignificant impact in a similar setting as established in an EIS or an EA resulting in a FONSI. The EPF must document application of this CATEX on AF Form 813, specifically identifying the previous Air Force approved environmental document which provides the basis for this determination.

A2.3.12. Installing, operating, modifying, and routinely repairing and replacing utility and communications systems, data processing cable, and similar electronic equipment that use existing rights of way, easements, distribution systems, or facilities.

A2.3.14. Installing on previously developed land, equipment that does not substantially alter land use (i.e., land use of more than one acre). This includes outgrants to private lessees for similar construction. The EPF must document application of this CATEX on AF Form 813

A2.3.19. Granting easements, leases, licenses, rights of entry, and permits to use Air Force controlled property for activities that, if conducted by the Air Force, could be categorically excluded in accordance with this Appendix. The EPF must document application of this CATEX on AF Form 813.

A2.3.25. The analysis and assessment of the natural environment without altering it (inspections, audits, surveys, investigations). This CATEX includes the

granting of any permits necessary for such surveys, provided that the technology or procedure involved is well understood and there are no adverse environmental impacts anticipated from it. The EPF must document application of this CATEX on AF Form 813.

§989.13(b) Extraordinary Circumstances. Characteristics of categories of actions that usually do not require either an EIS or an EA (in the absence of extraordinary circumstances) include:

(1) Minimal adverse effect on environmental quality;

(2) No significant change to existing environmental conditions;

(3) No significant cumulative environmental impact;

(4) Socioeconomic effects only; and

(5) Similarity to actions previously assessed and found to have no significant environmental impacts.

Appendix A2.2 Additional (extraordinary) Circumstances

Circumstances may arise in which usually categorically excluded actions may have a significant environmental impact and, therefore, may generate a requirement for further environmental analysis. Examples of situations where such unique circumstances may be present include:

A2.2.1. Actions of greater scope or size than generally experienced for a particular category of action.

A2.2.2. Potential for degradation (even though slight) of already marginal or poor environmental conditions.

A2.2.3. Initiating a degrading influence, activity, or effect in areas not already significantly modified from their natural condition.

A2.2.4. Use of unproved technology.

A2.2.5. Use of hazardous or toxic substances that may come in contact with the surrounding environment.

A2.2.6. Presence of threatened or endangered species, archaeological remains, historical sites, or other protected resources.

A2.2.7. Proposals adversely affecting areas of critical environmental concern, such as prime or unique agricultural lands, wetlands, coastal zones, wilderness areas, floodplains, or wild and scenic river areas.

A2.2.8. Proposals with disproportionately high and adverse human health or environmental effects on minority populations or low-income populations.

§989.12. AF Form 813. The Air Force uses AF Form 813 to document the need for environmental analysis or for certain CATEX determinations for proposed actions. The form helps narrow and focus the issues to potential environmental impacts. AF Form 813 must be retained with the EA or EIS to record the focusing of environmental issues. [note: it is often used for categorical exclusions as well]

§989.9(b). Adoption of EA or EIS. The Air Force, even though not a cooperating agency, may adopt an EA or EIS prepared by another entity where the proposed action is substantially the same as the action described in the EA or EIS. In this case, the EA or EIS must be recirculated as a final EA or EIS but the Air Force must independently review the EA or EIS and determine that it is current and that it satisfies the requirements of this part. The Air Force then prepares its own FONSI or ROD, as the case may be. In the situation where the proposed action is not substantially the same as that described in the EA or the EIS, the Air Force may adopt the EA or EIS, or a portion thereof, by circulating the EA or EIS as a draft and then preparing the final EA or EIS.

§989.7. Guidance to Applicants

(a) Non-Air Force agencies or entities may request the Air Force to undertake an action, such as issuing a permit or outleasing Air Force property, that may primarily benefit the requester or an agency other than the Air Force. The EPF and other Air Force staff elements must identify such requests and coordinate with the proponent of the non-Air Force proposal, as well as with concerned state, Tribal, and local governments.

(b) Air Force decisions on such proposals must take into consideration the potential environmental impacts of the applicant's proposed activity (as described in an Air Force environmental document), insofar as the proposed action involves Air Force property or programs, or requires Air Force approval.

(c) The Air Force may require the requester to prepare, at the requester's expense, an analysis of environmental impacts (40 CFR §1506.5), or the requester may be required to pay for an EA or EIS to be prepared by a contractor selected and supervised by the Air Force. The EPF may permit requesters to submit draft EAs for their proposed actions, except for actions described in §989.16(a) and (b), or for actions the EPF has reason to believe will ultimately require an EIS. For EISs, the EPF has the responsibility to prepare the environmental document, although responsibility for funding remains with the requester. The fact that the requester has prepared environmental documents at its own expense does not commit the Air Force to allow or undertake the proposed action or its alternatives. The requester is not entitled to any

preference over other potential parties with whom the Air Force might contract or make similar arrangements.

(d) In no event is the requester who prepares or funds an environmental analysis entitled to reimbursement from the Air Force. When requesters prepare environmental documents outside the Air Force, the Air Force must independently evaluate and approve the scope and content of the environmental analyses before using the analyses to fulfill EIAP [Environmental Impact Analysis Process] requirements. Any outside environmental analysis must evaluate reasonable alternatives as defined in §989.8.

US Army NEPA Regulations 32 CFR part 651.28 (AR 200-2) Subpart D

§651 Appendix B. List of Categorically Excluded Actions

(b)(13) Actions affecting Army property that fall under another federal agency's list of categorical exclusions when the other federal agency is the lead agency (decision maker), or joint actions on another federal agency's property that fall under that agency's list of categorical exclusions (REC [Record of Environmental Consideration] required).

(c)(1) Construction of an addition to an existing structure or new construction on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acres of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, and hazardous waste (REC required).

(d)(4) Studies, data collection, monitoring, and information gathering that do not involve major surface disturbance. Examples include topographic surveys, bird counts, wetland mapping, and other resources inventories (REC required).

(e)(2) Acquisition, installation, and operation of utility and communication systems, mobile antennas, data processing cable and similar electronic equipment that use existing right-of-way, easement, distribution systems, and/or facilities (REC required).

(f)(1) Grants or acquisitions of leases, licenses, easements, and permits for use of real property or facilities in which there is no significant change in land or facility use. Examples include, but are not limited to, Army controlled property and Army leases of civilian property to include leases of training, administrative, general use, special purpose, or warehouse space (REC required).

§651.29. Determining when to use a CX (screening criteria).

(a) To use a CX, the proponent must satisfy the following three screening conditions:

(1) The action has not been segmented. Determine that the action has not been segmented to meet the definition of a CX. Segmentation can occur when an action is broken down into small parts in order to avoid the appearance of significance of the total action. An action can be too narrowly defined, minimizing potential impacts in an effort to avoid a higher level of NEPA documentation. The scope of an action must include the consideration of connected, cumulative, and similar actions (see §651.51(a)).

(2) No exceptional circumstances exist. Determine if the action involves extraordinary circumstances that would preclude the use of a CX (see paragraphs (b) (1) through (14) of this section).

(3) One (or more) CX encompasses the proposed action. Identify a CX (or multiple CXs) that potentially encompasses the proposed action (Appendix B of this part). If no CX is appropriate, and the project is not exempted by statute or emergency provisions, an EA or an EIS must be prepared, before a proposed action may proceed.

(b) Extraordinary circumstances that preclude the use of a CX are:

(1) Reasonable likelihood of significant effects on public health, safety, or the environment.

(2) Reasonable likelihood of significant environmental effects (direct, indirect, and cumulative).

(3) Imposition of uncertain or unique environmental risks.

(4) Greater scope or size than is normal for this category of action.

(5) Reportable releases of hazardous or toxic substances as specified in 40 CFR part 302, Designation, Reportable Quantities, and Notification.

(6) Releases of petroleum, oils, and lubricants (POL) except from a properly functioning engine or vehicle, application of pesticides and herbicides, or where the proposed action results in the requirement to develop or amend a Spill Prevention, Control, or Countermeasures Plan.

(7) When a review of an action that might otherwise qualify for a Record of Non-applicability (RONA) reveals that air emissions exceed de minimis levels or otherwise that a formal Clean Air Act conformity determination is required.

(8) Reasonable likelihood of violating any federal, state, or local law or requirements imposed for the protection of the environment.

(9) Unresolved effect on environmentally sensitive resources, as defined in paragraph (c) of this section.

(10) Involving effects on the quality of the environment that are likely to be highly controversial.

(11) Involving effects on the environment that are highly uncertain, involve unique or unknown risks, or are scientifically controversial.

(12) Establishes a precedent (or makes decisions in principle) for future or subsequent actions that are reasonably likely to have a future significant effect.

(13) Potential for degradation of already existing poor environmental conditions. Also, initiation of a degrading influence, activity, or effect in areas not already significantly modified from their natural condition.

(14) Introduction/employment of unproven technology.

(c) If a proposed action would adversely affect ‘‘environmentally sensitive’’ resources, unless the impact has been resolved through another environmental process (e.g., CZMA, NHPA, CWA, etc.) a CX cannot be used (see paragraph (e) of this section).

Environmentally sensitive resources include:

(1) Proposed federally listed, threatened, or endangered species or their designated critical habitats.

(2) Properties listed or eligible for listing on the National Register of Historic Places (AR 200–4).

(3) Areas having special designation or recognition such as prime or unique agricultural lands; coastal zones; designated wilderness or wilderness study areas; wild and scenic rivers; National Historic Landmarks (designated by the Secretary of the Interior); 100-year floodplains; wetlands; sole source aquifers (potential sources of drinking water); National Wildlife Refuges; National Parks; areas of critical environmental concern; or other areas of high environmental sensitivity.

(4) Cultural Resources as defined in AR 200–4.

§651.33. Actions normally requiring an EA.

(c) Changes to established installation land use that generate impacts on the environment.

(d) Alteration projects affecting historically significant structures, archaeological sites, or places listed or eligible for listing on the National Register of Historic Places.

(e) Actions that could cause significant increase in soil erosion, or affect prime or unique farmland (off Army property), wetlands, floodplains, coastal zones,

wilderness areas, aquifers or other water supplies, prime or unique wildlife habitat, or wild and scenic rivers.

(i) Actions that take place in, or adversely affect, important wildlife habitats, including wildlife refuges.

(p) An activity that affects a federally listed threatened or endangered plant or animal species, a federal candidate species, a species proposed for federal listing, or critical habitat or violation of federal, state, or local law or requirements imposed for the protection of the environment.

§651.47(c). Public Involvement. Proponents will invite public involvement in the review and comment of EAs and draft FNSIs (40 CFR §1506.6).

US Navy NEPA Regulations 32 CFR part 775

§775.6(f). Pertinent Categorical Exclusions

(18) Studies, data, and information gathering that involve no permanent physical change to the environment (e.g., topographic surveys, wetlands mapping, surveys for evaluating environmental damage, and engineering efforts to support environmental analyses);

(30) Renewals and minor amendments of existing real estate grants for use of Government-owned real property where no significant change in land use is anticipated;

(33) Grants of license, easement, or similar arrangements for the use of existing rights-of-way or incidental easements complementing the use of existing rights-of-way for use by vehicles (not to include significant increases in vehicle loading); electrical, telephone, and other transmission and communication lines; water, wastewater, storm water, and irrigation pipelines, pumping stations, and facilities; and for similar utility and transportation uses;

(34) New construction that is similar to existing land use and, when completed, the use or operation of which complies with existing regulatory requirements (e.g., a building within a cantonment area with associated discharges/runoff within existing handling capacities);

(36) Acquisition, installation, and operation of utility (e.g., water, sewer, electrical) and communication systems (e.g., data processing cable and similar electronic equipment) which use existing rights of way, easements, distribution systems, and/or facilities.

§775.6(e). Extraordinary Circumstances. Even though a proposed action generally is covered by a listed categorical exclusion, a categorical exclusion will not be used if the proposed action:

(1) Would adversely affect public health or safety;

(2) Involves effects on the human environment that are highly uncertain, involve unique or unknown risks, or which are scientifically controversial;

(3) Establishes precedents or makes decisions in principle for future actions that have the potential for significant impacts;

(4) Threatens a violation of Federal, state, or local environmental laws applicable to the Department of the Navy; or

(5) Involves an action that, as determined in coordination with the appropriate resource agency, may:

(i) Have an adverse effect on federally listed endangered/threatened species or marine mammals;

(ii) Have an adverse effect on coral reefs or on federally designated wilderness areas, wildlife refuges, marine sanctuaries, or parklands;

(iii) Adversely affect the size, function or biological value of wetlands and is not covered by a nation-wide or regional permit;

(iv) Have an adverse effect on archaeological resources or resources (including but not limited to ships, aircraft, vessels and equipment) listed or determined eligible for listing on the National Register of Historic Places; or

(v) Result in an uncontrolled or unpermitted release of hazardous substances or require a conformity determination under standards of the Clean Air Act General Conformity Rule.

US Army Corps of Engineers: NEPA Regulations 33 part 230

§230.9. Pertinent US Army Corps of Engineers Actions Eligible for a Categorical Exclusion (CX).

(i) Real estate grants for rights-of-way which involve only minor disturbances to earth, air, or water:

(2) Minor utility distribution and collection lines, including irrigation.

(j) Real estate grants of consent to use Government-owned easement areas.

(k) Real estate grants for archeological and historical investigations compatible with the Corps Historic Preservation Act responsibilities.

(l) Renewal and minor amendments of existing real estate grants evidencing authority to use Government-owned real property.

§230.7. Actions normally requiring an Environmental Assessment (EA) but not necessarily an EIS.

Actions normally requiring an EA, but not an EIS, are listed below:

(a) Regulatory Actions. Most permits will normally require only an EA.

(3) Grants of leases or easements for other than minor oil and gas transmission lines, electric power transmission lines, road and highway rights-of-way, and sewage or water treatment facilities and landfills.

§230.21. Adoption

A district commander will normally adopt another Federal agency's EIS and consider it to be adequate unless the district commander finds substantial doubt as to technical or procedural adequacy or omission of factors important to the Corps decision. In such cases, the district commander will prepare a draft and final supplement noting in the draft supplement why the EIS was considered inadequate. In all cases, except where the document is not recirculated as provided in 40 CFR §1506.3 (b) or (c), the adopted EIS with the supplement, if any, will be processed in accordance with this regulation. A district commander may also adopt another agency's EA/FONSI.

Appendix D. Special Use Permit/Grants Regulations: USFS, BLM, BIA, USFWS

The Departments of Interior, Agriculture, and Transportation use Standard Form 299 for applications for land use authorizations. This form, with instructions, can be accessed at http://www.gsa.gov/portal/forms/download/117318.

Forest Service Special Use Permit Regulations 36 CFR part 251

36 CFR §251.54(e) Initial and Second-Level Screening

USDA Forest Service Screening Criteria

The USFS must consider the following initial and second-level screening criteria (36 CFR §251.54(e)) to determine if the USFS will accept an application for use of National Forest System (NFS) lands. The USFS has provided additional guidance for understanding the criteria in italics (pers. comm. J. Perry, USFS Lands and Realty Management, 5/29/2015; not in original regulations):

(e) Pre-application actions— (1) Initial screening. Upon receipt of a request for any proposed use other than for noncommercial group use, the authorized officer shall screen the proposal to ensure that the use meets the following minimum requirements applicable to all special uses:

(i) The proposed use is consistent with the laws, regulations, orders, and policies establishing or governing National Forest System (NFS) lands, with other applicable Federal law, and with applicable State and local health and sanitation laws. *The proposal for occupancy and use of NFS lands must be consistent with the laws, regulations, orders, and policies establishing or governing NFS lands, with other applicable Federal law, and with applicable State and local health and sanitation laws.*

(ii) The proposed use is consistent or can be made consistent with standards and guidelines in the applicable forest land and resource management plan prepared under the National Forest Management Act and 36 CFR part 219. *The Forest Service reviews the proposal to ensure it is consistent or can be made consistent (e.g., adjust the timing of construction, location of improvements) with the applicable forest land and resource management plan.*

(iii) The proposed use will not pose a serious or substantial risk to public health or safety. *The proposed use would be screened to ensure that the use itself or the construction would not pose a serious or substantial risk to public health or safety.*

(iv) The proposed use will not create an exclusive or perpetual right of use or occupancy. *The Forest Service must ensure that no authorized use*

unreasonably competes with or interferes with the continued or future land use by other entities when issuing a land use authorization. Rights-of-ways and corridors may continue to be used by holders of current land use authorizations and other new users, as appropriate. At the conclusion of the land use authorization, all improvements (above and below ground) must be removed from NFS land, unless otherwise agreed to in writing, by the authorized Forest Service officer.

(v) The proposed use will not unreasonably conflict or interfere with administrative use by the Forest Service, other scheduled or authorized existing uses of the National Forest System, or use of adjacent non-National Forest System lands. *The Forest Service must ensure that any proposed occupancy and use of NFS lands would not conflict or interfere with administrative use by the Forest Service, or other scheduled or authorized existing uses.*

(vi) The proponent does not have any delinquent debt owed to the Forest Service under terms and conditions of a prior or existing authorization, unless such debt results from a decision on an administrative appeal or from a fee review and the proponent is current with the payment schedule. *Any debts owed to the Forest Service by the proponent would be addressed in the review of the SF-299 land use application.*

(vii) The proposed use does not involve gambling or providing of sexually oriented commercial services, even if permitted under State law. *Deployment and maintenance of broadband into rural areas does not directly involve gambling or sexually-oriented commercial services. The USDA Rural Utilities Service or its borrowers have no authority or control over the subsequent uses of the telecommunication services provided by the infrastructure; this criterion would therefore likely not apply.*

(viii) The proposed use does not involve military or paramilitary training or exercises by private organizations or individuals, unless such training or exercises are federally funded. *This criterion would likely not apply.*

(ix) The proposed use does not involve disposal of solid waste or disposal of radioactive or other hazardous substances. *The proposed use may not involve the disposal of solid waste or disposal of radioactive or other hazardous substances. All materials and other equipment are removed and disposed of according to the authorization, law, and regulation during construction, operation, and removal of broadband infrastructure.*

(2) Results of initial screening. Any proposed use other than a noncommercial group use that does not meet all of the minimum requirements of paragraphs (e)(1)(i)-(ix) of this section shall not receive further evaluation and

processing. In such event, the authorized officer shall advise the proponent that the use does not meet the minimum requirements. If the proposal was submitted orally, the authorized officer may respond orally. If the proposal was made in writing, the authorized officer shall notify the proponent in writing that the proposed use does not meet the minimum requirements and shall simultaneously return the request. A rejection of a proposal is not administratively appealable.

(5) Second-level screening of proposed uses. A proposal which passes the initial screening set forth in paragraph (e)(1) and for which the proponent has submitted information as required in paragraph (d)(2)(ii) of this section, proceeds to second-level screening and consideration. In order to complete this screening and consideration, the authorized officer may request such additional information as necessary to obtain a full description of the proposed use and its effects. An authorized officer shall reject any proposal, including a proposal for commercial group uses, if, upon further consideration, the officer determines that one or more of the following criteria applies:

(i) The proposed use would be inconsistent or incompatible with the purposes for which the lands are managed, or with other uses. *The proposed use must be consistent with the purposes for which the lands are managed, or with other uses.*

(ii) The proposed use would not be in the public interest. *The proposed use of NFS lands for deployment of broadband to rural areas is intended to protect the public interest by improving the quality of life, and supporting community education, medicine, and the local economy. NFS lands provide essential opportunities for locating and deploying broadband infrastructure in the public interest and effectively meeting the federal government's objectives.*

(iii) The proponent is not qualified. *The FS evaluates the qualifications of applicants prior to accepting an application for review.*

(iv) The proponent does not or cannot demonstrate technical or economic feasibility of the proposed use or the financial or technical capability to undertake the use and to fully comply with the terms and conditions of the authorization. *The FS evaluates the qualifications of applicants prior to accepting an application for review.*

(v) There is no person or entity authorized to sign a special use authorization and/or there is no person or entity willing to accept responsibility for adherence to the terms and conditions of the authorization. *The applicant must have a person or entity that is authorized to sign and commit to adhering to the terms of any land use authorization.*

Pre-Application Process 36 CFR §251.54

(a) Early notice. When an individual or entity proposes to occupy and use National Forest System lands, the proponent is required to contact the Forest Service office(s) responsible for the management of the affected land as early as possible in advance of the proposed use.

Additional information may be obtained at the FS website for special uses for communication sites:

http://www.fs.fed.us/specialuses/special_comm.shtml

Bureau of Land Management (Federal Land Policy Management Act (FLPMA; 43 CFR part 2800 Rights-of-Way) and Part 516 DM Ch. 11

The BLM must consider the following screening criteria (43 CFR §2804.26) to determine if the BLM will accept an application for use of lands under the jurisdiction of the BLM. The BLM evaluations for the following criteria are similar to those of the FS discussed above.

A ROW application may be denied for any one of the following reasons (43 CFR §2804.26):

(a) BLM may deny your application if:

(1) The proposed use is inconsistent with the purpose for which BLM manages the public lands described in your application.

(2) The proposed use would not be in the public interest.

(3) You are not qualified to hold a grant.

(4) Issuing the grant would be inconsistent with the Act, other laws, or these or other regulations.

(5) You do not have or cannot demonstrate the technical or financial capability to construct the project or operate facilities within the right-of-way.

(6) You do not adequately comply with a deficiency notice (see § 2804.25(b) of this subpart) or with any BLM requests for additional information needed to process the application.

--Serious environmental consequences may occur from the proposed project that cannot be mitigated.

What is the objective of BLM's right-of-way program? §2801.2

It is BLM's objective to grant rights-of-way under the regulations in this part to any qualified individual, business, or government entity and to direct and control the use of rights-of-way on public lands in a manner that:

(a) Protects the natural resources associated with public lands and adjacent lands, whether private or administered by a government entity;

(b) Prevents unnecessary or undue degradation to public lands;

(c) Promotes the use of rights-of-way in common considering engineering and technological compatibility, national security, and land use plans; and

(d) Coordinates, to the fullest extent possible, all BLM actions under the regulations in this part with state and local governments, interested individuals, and appropriate quasi-public entities.

11.3 BLM Guidance for External Applicants

A(1) For all external proposals, applicants should make initial contact with the Responsible Official (District Manager, Field Manager, or State Director) responsible for the affected public lands as soon as possible after determining the BLM's involvement. This early contact is necessary to allow the BLM to consult early with appropriate state and local agencies and tribes and with interested private persons and organizations, and to commence its NEPA process at the earliest possible time.

The BLM provides guidance, including for grants and applications for communication sites, at the following websites:

BLM communication site web site:

http://www.blm.gov/wo/st/en/prog/more/lands/communication_sites.html

Bureau of Indian Affairs (BIA) 25 CFR part 169 BIA Rights-of-Way Over Indian Lands

§169.3 Consent of landowners to grants of right-of-way.

(a) No right-of-way shall be granted over and across any tribal land, nor shall any permission to survey be issued with respect to any such lands, without the prior written consent of the tribe.

(b) Except as provided in paragraph (c) of this section, no right-of-way shall be granted over and across any individually owned lands, nor shall any permission to survey be issued with respect to any such lands, without the prior written consent of the owner or owners of such lands and the approval of the Secretary.

(c) The Secretary may issue permission to survey with respect to, and he may grant rights-of-way over and across individually owned lands without the consent of the individual Indian owners when

(1) The individual owner of the land or of an interest therein is a minor or a person non compos mentis, and the Secretary finds that such grant will cause no

substantial injury to the land or the owner, which cannot be adequately compensated for by monetary damages;

(2) The land is owned by more than one person, and the owners or owner of a majority of the interests therein consent to the grant;

(3) The whereabouts of the owner of the land or an interest therein are unknown, and the owners or owner of any interests therein whose whereabouts are known, or a majority thereof, consent to the grant;

(4) The heirs or devisees of a deceased owner of the land or an interest therein have not been determined, and the Secretary finds that the grant will cause no substantial injury to the land or any owner thereof;

(5) The owners of interests in the land are so numerous that the Secretary finds it would be impracticable to obtain their consent, and also finds that the grant will cause no substantial injury to the land or any owner thereof.

§169.4 Permission to survey.

Anyone desiring to obtain permission to survey for a right-of-way across individually owned, tribal or Government owned land must file a written application therefor with the Secretary. The application shall adequately describe the proposed project, including the purpose and general location, and it shall be accompanied by the written consents required by §169.3, by satisfactory evidence of the good faith and financial responsibility of the applicant, and by a check or money order of sufficient amount to cover twice the estimated damages which may be sustained as a result of the survey.

§169.5 Application for right-of-way.

Written application identifying the specific use requested shall be filed in duplicate with the Secretary. The application shall cite the statute or statutes under which it is filed and the width and length of the desired right-of-way, and shall be accompanied by satisfactory evidence of the good faith and financial responsibility of the applicant.

Subpart D §169.26 Telephone and telegraph lines; radio, television, and other communications facilities.

(a) The Act of February 15, 1901 (31 Stat. 790), as amended by the Act of March 4, 1940 (54 Stat. 41; 43 U.S.C. 959); the Act of March 4, 1911 (36 Stat. 1253), as amended by the Act of May 27, 1952 (66 Stat. 95; 43 U.S.C. 961); and the Act of March 3, 1901 (31 Stat. 1083; 25 U.S.C. 319), authorize right-of-way grants across tribal, individually owned, and Government-owned land for telephone and telegraph lines and offices, for poles and lines for communication purposes, and for radio, television, and other forms of communication transmitting, relay, and

receiving structures and facilities. Rights-of-way granted under these acts shall be subject to the provisions of this section as well as other pertinent sections of this part 169. Except when otherwise determined by the Secretary, rights-of-way granted for such purposes under the Act of February 5, 1948 (62 Stat. 17; 25 U.S.C. 323-328), shall also be subject to the provisions of this section.

(b) A right-of-way granted under the said Act of March 4, 1911, as amended, shall be limited to a term not exceeding 50 years from the date of the issuance of such grant.

(c) No right-of-way shall be granted for a width in excess of 50 feet on each side of the centerline, unless special requirements are clearly set forth in the application which fully justify a width in excess of 50 feet on each side of the centerline.

(d) Applicants engaged in the general telephone and telegraph business may apply for additional land for office sites. The maps showing the location of proposed office sites shall be filed separately from those showing the line of route, and shall be drawn to a scale of 50 feet to an inch. Such maps shall show enough of the line of route to indicate the position of the tract with reference thereto. The tract shall be located with respect to the public survey as provided in §169.8, and all buildings or other structures shall be platted on a scale sufficiently large to show clearly their dimensions and relative positions.

(e) Rights-of-way for poles and lines for communication purposes, and for radio, television, and other forms of communication transmitting, relay, and receiving structures and facilities, shall be limited to 200 feet on each side of the centerline of such lines and poles; radio and television, and other forms of communication transmitting, relay, and receiving structures and facilities shall be limited to an area not to exceed 400 feet by 400 feet.

USFWS National Wildlife Refuge System Special Use Permits 50 CFR parts 25, 26, 29

§25.41 Who issues refuge permits?

We authorize the refuge manager of the facility where an activity is to take place to issue permits required by this subchapter C unless the regulations in this subchapter C require the applicant to obtain the applicable permit from the Director or Secretary. In those situations, the refuge manager will so inform the applicant, giving the applicant all necessary information as to how and where to apply.

§25.44 Grant Permits for easement area uses

(b) We require permits for use of easement areas administered by us where proposed activities may affect the property interest acquired by the United States. Applications for permits will be submitted in writing to the Regional Director or a designee. We may grant special use permits to owners of servient estates, or to third parties with the owner's agreement, by the Regional Director or a designee, upon written determination that such permitted use is compatible. If we ultimately determine that the requested use will not affect the United States' interest, the Regional Director will issue a letter of non-objection.

§26.41. Determination of compatible use

The Refuge Manager will not initiate or permit a new use of a national wildlife refuge or expand, renew, or extend an existing use of a national wildlife refuge, unless the Refuge Manager has determined that the use is a compatible use. This section provides guidelines for making compatibility determinations, and procedures for documenting compatibility determinations and for periodic review of compatibility determinations. We will usually complete compatibility determinations as part of the comprehensive conservation plan or step-down management plan process for individual uses, specific use programs, or groups of related uses described in the plan. We will make all compatibility determinations in writing.

(a) What information do we include in a compatibility determination?

All compatibility determinations will include the following information:

(1) The proposed or existing use;

(2) The name of the national wildlife refuge;

(3) The authorities used to establish the national wildlife refuge;

(4) The purpose(s) of the national wildlife refuge;

(5) The National Wildlife Refuge System mission;

(6) The nature and extent of the use including the following: (i) What is the use? Is the use a priority public use?; (ii) Where would the use be conducted?; (iii) When would the use be conducted?; (iv) How would the use be conducted?; and (v) Why is the use being proposed?.

(7) An analysis of costs for administering and managing each use;

(8) The anticipated impacts of the use on the national wildlife refuge’s purposes and the National Wildlife Refuge System mission;

(9) The amount of opportunity for public review and comment provided;

(10) Whether the use is compatible or not compatible (does it or will it materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge);

(11) Stipulations necessary to ensure compatibility;

(12) A logical explanation describing how the proposed use would, or would not, materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose(s) of the national wildlife refuge;

(13) The Refuge Manager's signature and date signed; and

(14) The Regional Chief's concurrence signature and date signed.

(15) The mandatory 10- or 15-year reevaluation date.

(b) Making a use compatible through replacement of lost habitat values or other compensatory mitigation. We will not allow compensatory mitigation to make a proposed refuge use compatible, except by replacement of lost habitat values as provided in paragraph (c) of this section. If we cannot make the proposed use compatible with stipulations we cannot allow the use.

(c) Existing right-of-ways. We will not make a compatibility determination and will deny any request for maintenance of an existing right-of-way which will affect a unit of the National Wildlife Refuge System, unless: the design adopts appropriate measures to avoid resource impacts and includes provisions to ensure no net loss of habitat quantity and quality; restored or replacement areas identified in the design are afforded permanent protection as part of the national wildlife refuge or wetland management district affected by the maintenance; and all restoration work is completed by the applicant prior to any title transfer or recording of the easement, if applicable. Maintenance of an existing right-of-way includes minor expansion or minor realignment to meet safety standards.

50 CFR 29 Rights-of-Way General Regulations

29.21 (g) **Compatible means** that the requested right-of-way or use will not interfere with or detract from the purposes for which units of the National Wildlife Refuge System are established.

§29.21-1(a). No right-of-way will be approved unless it is determined by the Regional Director to be compatible.

***§*29.21-2. (a) Application.** (1) No special form of application is required. The application should state the purpose for which the right-of-way is being requested together with the length, width on each side of the centerline, and the estimated acreage. Applications, including exhibits, shall be filed in triplicate with the Regional Director for the region in which the State is located.

(a)(2)(ii)(D) (D) When an application is received, the Regional Director will estimate the costs expected to be incurred in processing the application. If the estimated costs exceed the payments under paragraph (a)(2)(ii) (A), (B), or (C) of this section by an amount greater than the cost of maintaining actual cost records, the Regional Director shall require the applicant to make periodic payments in advance of the incurrence of such costs by the United States except for the last payment which will reflect final reimbursement for actual costs of the United States in processing the application. Overpayments may be refunded or adjusted by the Regional Director as appropriate.

29.21-3(a) (a) Where the land administered by the Secretary is owned in fee by the United States and the right-of-way is compatible with the objectives of the area, permit or easement may be approved and granted by the Regional Director. Generally an easement or permit will be issued for a term of 50 years or so long as it is used for the purpose granted, or for a lesser term when considered appropriate.

29.21-4(a) Any right-of-way easement or permit granted will be subject to outstanding rights, if any, in third parties. (b) An applicant, by accepting an easement or permit agrees to such terms and conditions as may be prescribed by the Regional Director in the granting document. Such terms and conditions shall include the following, unless waived in part by the Regional Director, and may include additional special stipulations at his discretion.

29.21-5. (a) If construction is not commenced within two (2) years after date of right-of-way grant, the right-of-way may be canceled by the Director of the U.S. Fish and Wildlife Service.

Appendix E. Applicable Environmental Compliance Requirements in Five U.S. Territories and Commonwealths

States with environmental policy acts or "little NEPAs"

- **Arkansas**: Ark. Stat. Ann. §8-1-101 (1987)
- **California**: Cal. Pub. Res. Code §§21000 et seq. (West 1982)
- **Connecticut**: Conn. Gen. Stat. Ann §§22a-14 to 22a-20 (West Supp. 1974-75)
- **District of Columbia**: D.C. Code Ann. 1981 §6-981 et seq.
- **Florida**: Fla. Stat. §§380.92 et seq.
- **Hawaii**: Hawaii Rev. Stat. §§343-1 to 343-8 (1985)
- **Indiana**: Ind. Code Ann. §§13-1-10-1 to 13-1-10-8 (West 1987)
- **Maryland**: Md. Nat. Res. Code Ann. §§1-301 to 1-305 (1983 and Supp. 1987)
- **Massachusetts**: Mass. Gen. Laws Ann. ch 30, §§61-62H
- **Minnesota**: Minn. Stat. Ann. §§116D.01 et seq. (West 1977 and Supp. 1981)
- **Montana:** Mont. Code Ann. §§75-1-101 to 105; §75-1-201 (1981)
- **New York**: N.Y. Envtl. Conserv. Law §§8-0101 to 8-0117 (McKinney 1984)
- **North Carolina**: N.C. Gen. Stat. §§113A-1 to 10 (1978)
- **South Dakota**: S.D. Codified laws Ann. §§34A-9-1 to 34A-9-12
- **Virginia:** Va. Code §§10.1-1200 through 10.1-1212
- **Washington**: Wash. Rev. Code §§43.21C.010-43021C.910 (1974); Wash. Admin. Code R. 197-11
- **Wisconsin**: Wis. Stat. §1.11 et seq.; Department of Natural Resources WEPA rules are found in Wis. Admin. Code NR 150 01-40

States and District of Columbia with additional environmental review requirements

- **Arizona**: An Executive Order mandates that the Governor's Commission on Arizona Environment evaluate environmental problems, make recommendations to the Governor, and establish a clearinghouse for the

exchange of information relating to environmental problems and their solutions.

- **Delaware:** In the Del. Code Ann. Tit. 7, Chapter 66 concerns wetlands permits, and chapter 20, coastal zone permits.
- **Georgia**: The Code of Georgia provides that on certain types of actions on a case-by-case basis, the state may require that an environmental assessment be prepared.
- **Louisiana**: La. Rev. Stat. Ann. §30.2021 (West 1991) covers interstate compacts on environmental control, for which the Louisiana Department of Environmental Quality serves as a clearinghouse for all statements of environmental impact to be prepared or reviewed by state agencies (other than Department of Transportation and Development), in accordance with NEPA. The Department of Wildlife and Fisheries is responsible for review and comment on any EIS regarding fish and wildlife resources or their habitat, as well as the discharge of dredge and fill material into state waters.
- **Michigan**: Executive Order 1974-4 requires each state agency to prepare a formal environmental assessment for all major activities of the agency having a possible significant impact on the environment or human life. Executive Order No. 53 (1973) requires all state agencies and departments to submit to the Department of Environmental Protection a description of the environmental impact of all major construction projects.

Environmental Compliance Requirements in Five U.S. Territories and Commonwealths

The RUS Telecommunications Program can support the development of broadband infrastructure in the U.S. territories and commonwealths affiliated with the United States. The United States has military bases and civilian facilities within these territories, as well as a National Forest in Puerto Rico and National Parks and Marine Reserves. Each of these territories and commonwealths has local governance and environmental compliance requirements for infrastructure development that must be addressed during project planning and RUS application development. As with any project within the states, early engagement with the proper regulatory authorities and landowners is vital to successful project completion and avoidance of missteps in project timelines.

The following lists key information regarding environmental compliance requirements in Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, and Northern Mariana Islands:

A. Puerto Rico and U.S. Virgin Islands, an unincorporated territory of the Untied States in political union with the United States

Puerto Rico "little NEPA" law: P.R. Laws Ann. Tit. 12, §§1121-1127

- **Environmental Quality Board**

Regulations for the evaluation and processing of environmental documents are published by the Environmental Quality Board, Office of the Governor, Government of Puerto Rico, found at http://www.ecos.org/section/states/?id=PR

Address: P.O. Box 11488
Santurce, PR 00910
(787) 767-8181 ext. 3266

- **Environmental Protection Agency EPA**

The link to the EPA in Puerto Rico is http://www2.epa.gov/aboutepa/epa-puerto-rico

- **Coastal Zone Management**

  Puerto Rico Department of Natural and Environmental Resources
  Post Office Box 366147
  San Juan, PR 00936
  (787) 999-2200 ext. 2719

- **Airport Clear Zones & Accident Potential Zones, Federal Aviation Administration - Airports Division**

  Southern Regional Office
  1701 Columbia Avenue, Suite 540
  College Park, GA 30037
  (404) 305-6700 / Fax: (404) 305-6730

- **Federal Aviation Administration**
  Orlando Airports District Office - (Florida, Puerto Rico, and the U.S. Virgin Islands)
  5950 Hazeltine National Drive, Suite 400
  Orlando, FL 32822-5024
  (407) 812-6331 / Fax: (407) 812-6978

- **Clean Air Act**
  - **Virgin Islands Department of Planning and Natural Resources**
    45 Mars Hill
    Christiansted, St. Croix, VI 00802
    (340) 773-1082
  - **Virgin Islands Coastal Zone Management** Department of

Planning and Natural Resources

St. Croix Office
No. 45 Mars Hill
Rainbow Building
Frederiksted, VI 00840
(340) 773-1082

St. Thomas Office
Cyril E. King Airport
Terminal Building - Second Floor
St. Thomas, VI 00802
(340) 774-3320

- **Endangered Species**

USFWS Ecological Field Office, Puerto Rico

Boqueron Field Office
Carr 301, KM 5.1, BO Corozo
Boqueron, PR 00622

Rio Grand Field Office
Edificio Suarez
Calle Garcia De La Noceda Local No. 1
Rio Grande, PR 00745

B. American Samoa, an unincorporated territory under the jurisdiction of the United States

Information regarding environmental issues and permitting can be found at http://www.epa.as.gov/. Environmental regulations for American Samoa can be found at http://www.epa.as.gov/list-of-regulations.

C. Guam, an unincorporated territory of the United States

A summary of environmental regulations and key staff contacts for Guam can be found at http://epa.guam.gov/

The Guam Environmental Protection Agency (GEPA) has developed a short form of its Environmental Impact Assessment requirement for use by developers proposing projects or land use activities that may pose only insignificant environmental impacts.

D. Northern Mariana Islands, a former trust territory and now a commonwealth in political union with the United States

Environmental permitting regulations for the Commonwealth of Northern Mariana islands can be found at US EPA Region 9 http://www.epa.gov/region9/islands/northern.html. This includes a link to the CNMI Division of Environmental Quality (DEQ).

Appendix F. Stakeholder Interviews and Comments Report May 2015

Key Findings from Commenting Stakeholders (Scoping Report)
USDA Rural Utilities Service
Programmatic EA for Telecommunications Program
Providing Financial Support for Broadband Infrastructure to Rural Areas

Prepared by:
Judith Lee, Environmental Planning Strategies, Inc.
Robert Cunningham, Pathway Consulting Service, LLC

For:
U.S. Department of Agriculture
Rural Utilities Service

The USDA Rural Utilities Service (RUS) is preparing a Programmatic Environmental Assessment (PEA) for the broadband infrastructure program of the RUS Telecommunications Program. The Program provides financial assistance in the form of loans and grants to program applicants for the deployment and/or upgrade of broadband infrastructure serving rural America. The proposed PEA is intended to expedite the environmental review of these applications by providing analysis of impacts at the subprogram level. This approach is expected to improve efficiency and effectiveness of the RUS environmental review process while reducing overall project planning costs and time for the applicant and, hopefully, involved Federal agencies. RUS has found over many years that these projects typically involve disturbed rights-of-way or existing telecommunications poles having low environmental impacts.

To better understand the issues and challenges associated with program implementation, the contractors interviewed stakeholders, including Federal agencies, borrowers, industry organizations, and construction contractors during early 2015.

More detailed information can be found in the following attachments:

SUMMARY OF COMMENTS

RUS published a Request for Information (RFI) in the *Federal Register* on November 28, 2014 (see Attachment B). Commenting stakeholders either responded to the RFI or were interviewed by Environmental Planning Strategies, Inc. and Pathway Consulting Service, LLC to better understand the challenges and successes faced by applicants for RUS financial assistance for broadband infrastructure.

The primary comments expressed by program applicants involve federal/state agency and tribal government coordination. They include:

- Long time periods needed for agencies to provide approvals and issue land use authorizations for projects within existing rights-of-way and on existing poles, or upgrades and maintenance of existing systems (estimates from 2 - 8 years);
- Excessive studies required for projects with minimal potential for adverse environmental effects;
- Mitigation that does not add any additional level of environmental and cultural resource protection;
- Federal agencies requiring the preparation of Environmental Assessments (EAs) when a Categorical Exclusion (CX) could be appropriate; and, if a CX is used, agencies requiring the level of analysis, surveys, and studies typical of that for an EA;
- Agencies acting independently of each other on the same project, with a lack of a clearly-designated lead agency to assist applicants with the cross-agency permitting and consultation processes; and
- Agencies adding requirements and changing project design or location at the last minute, even after the conclusion of pre-application meetings or after the applicant has obtained approvals from others; these actions lead to delays, require modification to existing permits, and force program applicants to lose construction seasons and/or hire construction contractors at unreasonable rates.

Applicants and their consultants/contractors are also very concerned with RUS possibly requiring that all permits and authorizations be obtained prior to RUS approval of financial assistance. Most permitting agencies will not accept an application for consideration if financial support is not approved. RUS loan designs and grant applications, the documents on which RUS bases a preliminary financing decision, are broad and non-site specific when RUS makes a preliminary financing decision. The project is better defined when the program applicant requests RUS approval of construction contracts and/or funds advancement. Many applicants and consultants stated that requiring all permits to be in place before securing RUS loan approval would render the RUS program impossible to navigate and that they would be forced to seek funding elsewhere while loan rates are still low.

Program applicants and their consultants/contractors would like to complete projects for a reasonable cost while meeting construction and environmental protection objectives. However, program applicants need to know early in the planning process that the effort and mitigation required is commensurate with potential environmental impacts, that requirements will not change throughout or late in the process, and that permits can be obtained in a timely manner consistent with construction seasons, times, and costs. The costs of delays and unnecessary design and mitigation requirements can make a project no longer economically viable. Clients and customers will continue to be unserved or underserved.

Program applicants' frustration and sense of powerlessness in obtaining approvals and permits from federal and state agencies in a timely manner with practical and appropriate requirements were evident in almost every interview. A few interviewees were refusing to either use RUS programs or federal or Tribal/BIA lands, or both. Since applicants will need to work with the field

offices of federal agencies in the future, they are reluctant to push agencies because they do not want to jeopardize long-term relationships.

Federal agencies acknowledge that resource specialist and realty staffs are understaffed and have insufficient resources needed to prepare documentation and permits, conduct field reviews, and review documents prepared by program applicants and their consultants. They at times may lack personnel needed to prepare cost recovery agreements. Agency staff has minimal experience with broadband infrastructure construction technologies and their associated environmental effects to feel confident in their actions and decisions.

SUMMARY OF KEY ISSUES

1. Length of Time/Costs to Obtain Permits, Excessive Studies/Ineffective Mitigation

- Agencies may take years to identify additional surveys and mitigation that may not be commensurate with level of environmental effects caused by a project; sometimes mitigation causes more adverse environmental impacts than the project, such as installation of silt fencing when a cable is being sliced through soil with a vibratory plow and immediately backfilled. Applicants have no mechanism for challenging mitigation and little time for compliance because mitigation is identified at the last minute. These changes inserted after lengthy delays can also require new resource surveys, or changes to permits already obtained, such as county road permits.
- Delays or new requirements at the last minute (especially for federally listed species and historic property surveys) can cause missed construction or survey seasons; this increases construction costs substantially because local construction companies are already scheduled and construction materials already ordered that may need to change. Because of delays and limited construction seasons, little time is available to improve design after construction is underway.
- Federal land managing agencies and SHPOs often demand more extensive archeological surveys (Class III surveys and/or surveys required along the entire length of ROW) that are not commensurate with the potential risk; some SHPOs request surveys for 1 mile on either side of road for a project requiring a 2” inch trench/slit in road right-of-way (ROW). Federal land management agencies also use projects requiring special use permits to collect resource information not related to the project (USFS ROW regulations explicitly prohibit this approach; BLM ROW regulations explicitly allow this approach).
- Applicants cannot accurately plan for or predict processes and requirements because agencies or even intra-agency field offices are inconsistent. For the same project, different agencies may require different levels of surveys and/or the same data in different formats, so applicants and their consultants repeatedly rewrite reports and re-do surveys to meet these differing preferences. Approaches of field offices often are personality-dependent, so when a manager or specialist leaves, requirements may change, including actions in progress.
- Some federal agencies have the often-informal policy that national-level federal

managers cannot or should not influence field office processes and decisions to address delays and conflicts.

- Agencies have insufficient time, personnel, funds (and cost recovery takes too much effort to put in place), and sometimes, commitment to processing applications in a timely manner. Personnel are already fully scheduled with existing agency-sponsored projects that use Congressionally-appropriated funds with restricted deadlines. Agencies do not have the resources to complete work internally. Even if an applicant submits studies, surveys, and draft NEPA documents, the agencies may say they do not have the resources to review it. Few-to-no realty specialists are stationed at field offices to process the applications, and necessary realty and resource specialist personnel who leave are not replaced.
- Agencies may have more extensive environmental requirements for broadband projects (having minimal environmental effects) than for larger development projects (such as development of oil fields) that the broadband infrastructure may be serving. The serving utilities and the development that they service are often disconnected and evaluated separately.
- The objective should be a better feasible project, not perfect NEPA; focus on NEPA adds delays.
- Agency staff may not be familiar with broadband construction and installation technologies, thus requiring more extensive studies and NEPA analysis than should be necessary.
- Preparing EAs may be 10%-15% of the entire cost of a project, including construction costs; with added delays, these costs may make a project infeasible. These costs and delays may also put the program applicant at a competitive disadvantage with companies that do not use RUS funding or do not site projects on federal lands.
- Delays in issuing federal land use authorizations may result in the applicant being unable to draw down the RUS loan in the required 5-year time frame. Delays may also be so lengthy that the approval of an application may involve a part of the tenure of a term of the permit, requiring a new permit application almost upon use of a current permit.
- Working with Tribal governments and staffs may add additional layers of time, and often costs.
- The National Park Service (NPS) and U.S. Fish and Wildlife Service (USFWS) National Wildlife Refuges (NWR) very seldom grant authorizations for “new uses,” which can include new proposed actions within existing rights-of-way; the compatibility/consistency determinations are a very difficult standard to meet.

2. Use of Categorical Exclusions versus Environmental Assessments

- The field offices of all agencies are resistant to the use of CXs, even though suitable categories may exist for all agencies for actions proposed in disturbed ROWs, collocation on poles/towers, maintenance, and replacement of infrastructure. Agencies

produce mostly EAs; the few times agencies do use CXs, they require EA processes, times, and studies, resulting in little time/money savings.

- A USFS CX has a 5-acre limit on the amount of land that may be disturbed. The USFS typically calculates this area multiplying a 20-25 foot potential disturbance width by the length of the linear feature, meaning that the feature must be less than 2 miles long to not exceed the limit. The actual disturbance is between 2 to 6 inches, not including the vehicle tracks and restoration occurs immediately during construction.
- The U.S. Environmental Protection Agency (USEPA) or delegated state agency requiring Stormwater Pollution Prevention Plans (SWPPP) to manage soil erosion per the Clean Water Act use the same approach as the Forest Service to calculate the disturbance area, disregarding actual impacts and thereby requiring SWPPPs when the potential for soil erosion is minimal due to minimal ground disturbance, eliminating the possibility of using a CX.
- The NPS and NWR are reluctant to approve any infrastructure not directly related to their administrative activities or visitor service. The NPS does not have a definition of "disturbed lands," indicating a high potential for inconsistency on the determination of the level of impacts for environmental review and the appropriate level of documentation among individual national parks. The determination of whether or not to use a CX for a project should be based on its potential to adversely impact a resource identified in the agency's list of extraordinary circumstances and not just on the characteristics of a project.
- Field offices of federal agencies may be reluctant to use information and analyses from the RUS PEA, especially because many resist using CXs and insist on conducting their own surveys and preparing their own EAs.
- Federal agency unnecessary use of EAs rather than CXs may be due to a fear of litigation.

3. RUS Processes/Workflow

- RUS should continue to allow for approval of a loan package contingent on the applicant obtaining permits and approvals and not require that the applicant obtain all the permits and approvals before RUS loan approval. Applicants and their consultants made it clear that requiring the completion of all environmental reviews and permits before RUS loan approval will not work, and may be impossible – making RUS financing non-viable.
- Applicants, consultants, construction contractors, and agencies hope that the PEA will help improve processes at all levels.
- Program applicants and consultants identified workflow/timing issues that need resolution. They recognized that federal land-managing agencies may have at least a 2-year lead-time for approval of land use authorizations, and the company may try to approach the agency before the RUS loan approval is finalized. The agency often rejects the overture because the project is unfunded. If the company waits until the loan is in place, then it may take a considerable amount of time once the application is

submitted to get a response from the permitting agency.

- Many entities are pleased with the RUS field representatives, engineers, and cultural resource specialists, but all RUS staff are overworked and understaffed to provide full support to applicants as the lead agency. This can cause applications to be lost or delayed, and new staff may have different approaches and requirements than the previous staff on the same project.
- RUS letter templates for Section 106 consultation and notification are helpful. However, tribes do not understand the role of program applicants and consultants/contractors in these relationships and applicants and consultants may not understand the government-to-government relationship. These issues may complicate communications and increase the potential for delays.
- Applicants may get frustrated because RUS does not have the authority to dictate to other agencies how other agencies will implement its requirements, processes, and decisions to resolve issues.

4. Lead Agency for Broadband Projects

- A major challenge for applicants and their consultants is knowing which agency is the lead for the initiation, coordination, and conclusion of all permits, consultations, approvals, and actions. Program applicants have few means to successfully negotiate with agencies or prompt agencies to act.
- Agencies only look at and make decisions on their own portion of a project, without recognizing the context of their decision within that of the overall project need or design.
- RUS applicants are responsible obtaining permits and interacting with authorizing agencies, tribes, and SHPO; applicants feel powerless to facilitate. Program applicants have difficulties with the timely progress of agency decision making processes.
- RUS seldom has sufficient personnel to assist and provide guidance to applicants and their consultants attempting to navigate through agency processes on particular projects.

5. Pre-application Meeting

- Agencies may provide limited opportunities for pre-application meetings, and, despite stating that they want to be contacted prior to submitting an application and even before obtaining RUS funding, they often will not respond to requests to meet until after the official application has been submitted. Agencies may still create unpredictable changes and requirements after the meetings. Each request for and delivery of new information results in additional review time, usually at least 60-90 days after each deliverable, not including the time it takes for the applicant or its consultants to prepare the requested information.
- Several agencies, such as NPS and USFWS Refuges, have delegated full responsibility for responding to and processing applications to the field office/national park/wildlife refuge. Applicants can deal only with the field offices, and possibly the regional offices, reducing the influence of higher-level agency staff.

6. Mitigation

- Construction engineers have little involvement in the project design phase, but they are critical in identifying feasible design features and mitigation on the ground that was not foreseen during in-office project design. Once construction is in progress, there is not enough time to correct design flaws identified in the field.
- Program applicants find it difficult to know how to deal with mitigation for what land management agencies have called "potential habitat" and "future habitat" for listed species that are not currently using the habitat that may be present at the site, and for species that may be listed in the future.
- Based on policy, neither the NPS nor USFWS Refuges can allow applicants to use compensatory mitigation to make a project compatible or consistent with Park/Refuge purposes – projects must not adversely impact or impair sensitive resources.
- Standard mitigation, best management practices (BMPs) and standard operating procedures (SOPs), such as directional boring, collocating on existing poles, towers, and in disturbed ROWs, burying cable in conduit, plowing, and immediate rehabilitation of the site are the primary requirements for cable placement. Towers and microwave may have some site-specific issues that need more tailored mitigation.

7. Cost Recovery and Rental Fees

- Entities eligible for funding by RUS are exempt from land use rental fees per Federal Land Policy and Management Act (FLPMA) §504(g).
- Underfunded agencies may not have staff to process cost recovery agreements for processing land use authorizations.

8. Permits

- Applicants need new permits for using existing poles/towers permitted to another entity, as well as for capacity provided within existing cables owned/permitted by another entity.

9. Impacts, Databases, Section 106 (NHPA)

- Impacts of radio frequency (RF) emissions from wireless/microwave facilities on wildlife, insects, and people have not been studied in the US for over 10 years; most of the research is from Europe. People are concerned about RF impacts, but there are currently no conclusive research results.
- Databases available: The USFS tracks special uses through its PALS database. The U.S. Environmental Protection Agency (USEPA) has the NEPAssist database for identifying sensitive areas, but potential users must have a USEPA sponsor to access. The USFWS has IPaC for resource mitigation, species of concern, and impacts. The FCC has the e106 database for sensitive tribal resources, but only a few agencies have direct access because of the proprietary nature of the data.
- The FCC is working with the Advisory Council on Historic Preservation (ACHP) for developing processes for replacement of towers that did not originally have coverage under its current nationwide programmatic agreement and program comment. Towers

older than 50 years may also be eligible for the National Register of Historic Places (NRHP). FCC is also working to renew the Program Comment expiring in September 2015 and Programmatic Agreements (PAs) for collocation and placement in buildings.

- The USFWS' primary issues regarding installation of broadband infrastructure include impacts of towers on migratory birds (both providing perching habitat for predatory birds and mortality to migratory birds from attraction to lights causing collision with guy wires), spread of invasive species, impacts on listed species, tree removal during nesting season, towers in coastal areas, and towers making shadows that affect birds. The USFWS will provide information to assist RUS in analysis of impacts.

SUMMARY OF COMMENTER/INTERVIEWEE RECOMMENDATIONS

1. Design/Construction: Construction engineers request the opportunity to review of the entire length of a project to find "red flags" requiring design modification and to recommend effective and cost-effective mitigation measures.

2. Training: We found much interest by all interviewed entities for interagency training in technologies and associated impacts, agency processes, ROW and land use authorization regulations and processes, RUS loan design and environmental review processes, and Section 106 processes.

3. Section 106 (NHPA):

- Identify opportunities for Programmatic Agreements for loan packages, regional infrastructure impacts, and the RUS nationwide telecommunications program to both identify standard mitigation and levels of survey for various conditions.
- Identify opportunities for access to FCC e106 database by agencies and applicants currently excluded, including just identifying that sites are present, not types of sites and locations, to facilitate consultation with tribes.
- Program applicants and their consultants request that RUS bring company representatives to tribal meetings for more positive and productive meetings.

4. RUS processes:

- Contractors request that RUS have contractor construction engineers conduct a "constructability review" for feasibility, red flags, and design recommendations early in the submittal process.
- Program applicants request RUS assistance in determining appropriate levels of surveys and NEPA documentation early, perhaps pre-application.
- RUS needs to identify intra-department and inter-agency procedures for managing environmental review, permitting, consultation, and approvals for the entire project, with an assigned RUS environmental staff person for each project to assist the applicant and provide early information on requirements and realistic schedule timelines.
- RUS needs to provide templates and examples of letters and ERs so that applicants clearly know what RUS expects from them.

- RUS should allow loan package materials to be submitted digitally rather than by hard copy.
- RUS should conduct only one comprehensive review of the loan application package to determine if it is complete and, if not, what is needed to provide a completed loan application; sometimes RUS has several consecutive requests.
- RUS should provide a list of agency contacts for a particular state or region.

5. Pre-application Meetings, Surveys, Agency Coordination

- NPS and BIA should not require all locations to be recorded in metes and bounds or township/range, but should allow for the use of GPS data. Surveyors are extremely expensive and such data cannot be submitted to GPS databases.
- RUS should waive the need for analysis of alternative routes and technologies for new installation in existing transmission, distribution lines, or other disturbed ROWs.
- RUS should accept existing environmental surveys, including environmental justice (EJ) and historic structures, conducted within 5 or 10 years within the same ROW/area. Require new surveys only for protected species, jurisdictional wetlands, and archaeology.
- Applicant's consultants often must set up pre-application meetings and develop streamlined processes with the agencies, or nothing will get done in a timely manner.
- RUS national office staff and appropriate field office of the land management agencies for a particular project should coordinate early so that the RUS Environmental Report (ER), RUS CX, and RUS PEA can be prepared as acceptable to all agencies, and information and resources can be expeditiously shared to reduce or eliminate duplication of effort.
- Applicants must often engage both the tribes and the BIA for project consultations and permits.
- RUS and NTIA should maintain close working relationships on this PEA and other related activities.

6. Permits:

- Agencies could issue 20-30 year terms for broadband project land use authorizations.

7. Supplementing Agency Personnel:

- Applicants should hire consultants to prepare NEPA documents and conduct surveys, if allowed by the agency field office; some field offices have experienced consultants working in the agency office for support for NEPA as special use permitting.

Attachment A: List of Acronyms	
ACHP	Advisory Council on Historic Preservation
BIA	Bureau of Indian Affairs
BMP	Best Management Practice (protective measures for reducing or avoiding adverse impacts)

BOR	Bureau of Reclamation
CX	Categorical Exclusion
EA	Environmental Assessment
EJ	"Environmental Justice" (short for Executive Order 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" 2/11/1994
ER	RUS Environmental Report
FCC	Federal Communications Commission
FLPMA	Federal Land Policy and Management Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places (NHPA)
NWR	National Wildlife Refuge (U.S. Fish and Wildlife Service)
NTIA	National Telecommunications and Information Administration
PA	Programmatic Agreement (NHPA)
PEA	Programmatic Environmental Assessment
RF	Radio frequency
ROW	Right-of-way
RUS	Rural Utilities Service
SHPO	State Historic Preservation Officer
SOP	Standard Operating Procedures (protective measures routinely incorporated into design)
SWPPP	Stormwater Pollution Prevention Plan (Clean Water Act)
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

Attachment B: Request for Information

municipal solid waste receiving and processing building; processed refuse fuel storage building; boiler and steam turbine; emission control system; ash processing and storage building; and other associated infrastructure and buildings. Two other connected actions, which would be constructed by other utilities, include installation of an approximately 2.0-mile raw water line and construction of a 38 kilovolt (kV) transmission line approximately 0.8 miles in length. The connected actions will be addressed in the EIS.

Among the alternatives that RUS will address in the EIS is the No Action alternative, under which the proposal would not be undertaken. In the EIS, the effects of the proposal will be compared to the existing conditions in the proposal area. Public health and safety, environmental impacts, and engineering aspects of the proposal will be considered in the EIS.

RUS is the lead Federal agency, as defined at 40 CFR 1501.5, for preparation of the EIS. With this Notice, Federal and State agencies and federally recognized Native American Tribes with jurisdiction or special expertise are invited to be cooperating agencies. Such agencies or tribes may make a request to RUS to be a cooperating agency by contacting the RUS contact provided in this Notice. Designated cooperating agencies have certain responsibilities to support the NEPA and scoping process, as specified at 40 CFR 1501.6(b).

As part of its broad environmental review process, RUS must take into account the effect of the proposal on historic properties in accordance with Section 106 of the National Historic Preservation Act (Section 106) and its implementing regulation, "Protection of Historic Properties" (36 CFR part 800). Pursuant to 36 CFR 800.2(d)(3), RUS is using its procedures for public involvement under NEPA to meet its responsibilities to solicit and consider the views of the public during Section 106 review. Accordingly, comments submitted in response to this Notice will inform RUS decision-making during Section 106 review.

As applicable, the EIS will document changes in the affected environment and environmental consequences that may have occurred since the PRIDCO-prepared Final EIS was published in 2010 and USEPA's PSD permit action. The PRIDCO-prepared Final EIS is available in both Spanish and English for review at the addresses provided in this Notice. USEPA PSD permit actions are available for review at the address provided in this notice. RUS's EIS will incorporate this documentation by reference and focus on those topics that have changed since PRIDCO's Final EIS was published. RUS's Draft EIS will be available for review and comment for 45 days. Following the 45-day review period, RUS will prepare a Final EIS. After a 30-day review period, RUS will publish a Record of Decision (ROD). Notices announcing the availability of the Draft EIS, Final EIS and the ROD will be published in the **Federal Register** and in local newspapers.

Any final action by RUS related to the proposal will be subject to, and contingent upon, compliance with all relevant executive orders and federal, state, and local environmental laws and regulations in addition to the completion of the environmental review requirements as prescribed in RUS's Environmental Policies and Procedures, 7 CFR part 1794, as amended.

Dated: November 19, 2014.

Mark S. Plank,

Director, Engineering and Environmental Staff, USDA, Rural Utilities Service.

[FR Doc. 2014–28101 Filed 11–26–14; 8:45 am]

BILLING CODE 3410–15–P

DEPARTMENT OF AGRICULTURE

Rural Utilities Service

Environmental Review of Telecommunications Program Projects

AGENCY: Rural Utilities Service, USDA.

ACTION: Request for public comment.

SUMMARY: The Rural Utilities Service (RUS), an agency of the United States Department of Agriculture, hereinafter referred to as "agency," seeks public and Federal agency comments regarding the preparation of a Programmatic Environmental Assessment for the development of a more efficient and effective environmental review process for the RUS Telecommunications Program—an environmental review process that is commensurate with the potential environmental impacts of both wired and wireless projects financed by the agency. RUS is seeking comment from interested stakeholders to contribute to the development of agency procedures for implementing the environmental review procedures of the Telecommunications Infrastructure Loan Program, Farm Bill Broadband Loan Program, Community Connect Grant Program, and Distance Learning and Telemedicine Program. The proposed review process will support the agency's mission of facilitating the development of affordable, reliable utility infrastructure to improve the quality of life and promote economic development in rural America.

DATES: Interested parties must submit written comments on or before January 27, 2015.

ADDRESSES: Submit comments, identified by docket number RUS–14–Telecom–0008, by any of the following methods:

Federal eRulemaking Portal: http://www.regulations.gov. Follow instructions for submitting comments.

Postal Mail/Commercial Delivery/Hand Delivery: Michele Brooks, Director, Program Development and Regulatory Analysis, USDA Rural Development, 1400 Independence Avenue SW., STOP 1522, Room 5159, Washington, DC 20250–1522.

RUS will post all comments received without change, including any personal information that is included with the comment, on *http://www.regulations.gov.* Comments will be available for inspection online at *http://www.regulations.gov* and at the address listed above between 8:00 a.m. and 4:30 p.m., Monday through Friday, except holidays. A copy of this publication is also available through the Rural Development homepage at *http://www.rurdev.usda.gov/RDU_FederalRegisterPubs.html.* Additional information about the Agency and its programs is available on the Internet at *http://www.rurdev.usda.gov/home.html.*

FOR FURTHER INFORMATION CONTACT: Emily Orler, USDA, Rural Utilities Service, 1400 Independence Avenue SW., Stop 1571, Room 2244–S, Washington, DC 20250–1570, Telephone (202) 720–1414 or email to: *Emily.Orler@wdc.usda.gov.*

SUPPLEMENTARY INFORMATION:

Background

The RUS Telecommunications Program provides a variety of loans and grants to build and expand broadband networks in rural America. Loans to build broadband networks and deliver service to households and businesses in rural communities provide a necessary source of capital for rural telecommunications companies, broadband, wireless companies, and fiber-to-the-home providers. Grant funding is awarded based on a number of factors relating to the benefits to be derived from the proposed broadband network project, as specified in applicable program regulations.

Eligible applicants for RUS loans and grants include for-profit and non-profit entities, tribes, municipalities, and cooperatives. The agency particularly encourages investment in tribal and economically disadvantaged areas. Through low-cost funding for broadband infrastructure, rural residents

can have access to broadband services that will close the digital divide between rural and urban communities, that is sustainable over time, and is crucial for economic development. Once funds are awarded, RUS monitors the projects to make sure they are completed in accordance with program requirements. Each loan and grant program has different applicants, project eligibility requirements, and program objectives.

The Telecommunications Program includes the following programs:

Telecommunications Infrastructure Loan Program provides loans for a variety of applicable technologies, for the costs of construction, improvement, expansion, and acquisition (some restrictions apply) of facilities and equipment to provide telecommunications services in rural areas;

Farm Bill Broadband Loan Program provides loans for a variety of applicable technologies, for costs of construction, improvement, expansion, and acquisition (some restrictions apply) of facilities and equipment to provide broadband service to eligible rural communities;

Community Connect Grant Program provides grants to eligible applicants for broadband access to rural communities currently without broadband service. Priority is given to areas where development of new broadband services will improve economic development and provide enhanced educational and healthcare opportunities. The program serves the most rural, lowest income communities without existing broadband access; and

Distance Learning and Telemedicine Grant Program provides grants for distance learning and telemedicine in rural areas through the use of telecommunications, computer networks, and related advanced technologies to be used by students, teachers, medical professionals, and other rural residents. Grants are awarded based on rurality and economic need through a competitive process and may be used to fund telecommunications-enabled information, audio, and video equipment.

In accordance with the National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), the Endangered Species Act (ESA) and other applicable environmental statutes, regulations, and Executive Orders, RUS must evaluate the environmental impact of its actions prior to taking those actions. RUS actions include the approval of financial assistance for project proposals by eligible applicants within eligible service areas.

The application process for requesting financial assistance for the Telecommunications programs varies slightly from a competitive grant program, individual project proposals, or multi-year "loan design" applications. Accordingly, each program's application process and resulting environmental review process is administered differently. The agency seeks to synchronize future environmental review compliance processes for all Telecommunications Programs and develop a more efficient and effective environmental review process commensurate to the potential environmental impacts of Telecommunications Program projects.

The Programmatic Environmental Assessment of the Telecommunications Program will provide an analysis of the RUS administrative record of past Telecommunications Program projects regarding NEPA, NHPA, and ESA. The analysis will address telecommunication technologies and construction methods, and evaluate alternative program delivery processes for individual projects and loan design applications relevant to existing and future RUS Telecommunications Program projects. If appropriate, the Programmatic Environmental Assessment will provide a basis for preliminary environmental review decisions.

Request for Comment

Stakeholder input is vital to improving delivery of the Telecommunications Program to agency participants and the public. The following questions are intended to guide stakeholder comments; however, RUS welcomes pertinent comments beyond the scope of these questions. RUS is requesting comment and discussion from the following stakeholders:

Interested or Affected Citizens

1. What are your primary concerns with the construction of wired broadband infrastructure in or near road rights-of-way, on existing electrical distribution poles or towers, or on new poles or towers?

2. What environmental issues do you want studied as part of the environmental review of Telecommunications Program projects? Please address your recommendations for wired or wireless technology projects.

3. What environmental protection and design and construction standards would you like Telecommunications Program participants to use during project construction?

4. How would you like to be involved in RUS and applicant planning for broadband projects?

5. How would you benefit from broadband availability or improvements in your area?

Broadband Providers

1. What are your greatest challenges in completing environmental reviews, including NEPA, NHPA, and ESA for both wired and wireless technologies?

2. For projects requiring the use of Federal land, what are the greatest challenges in obtaining the necessary land use authorizations or permits?

3. What do you believe is a reasonable length of time for RUS to consider a completed loan application, including environmental reviews and compliance, before making a decision to fund a project?

4. What should RUS do to expedite the completion of environmental reviews and compliance during the review of project applications, particularly for projects that cross land with multiple ownership, *i.e.*, private, Federal, state, or tribal lands?

5. What additional guidance do you want from RUS field personnel to assist you in completing the necessary requirements for a loan or grant application, including environmental reviews and Federal land use permits if they are needed?

6. What environmental protection measures and/or design and construction standard operating procedures for environmental protection have you found to be most efficient and cost-effective?

Federal Land Management and Other Agencies as Appropriate

1. How and when would you like to be contacted regarding a pending Telecommunications Program project application that relates to or affects your agency's responsibilities?

2. Telecommunications Program projects at times require the use of Federal land, requiring authorization by the relevant Federal land management agency. The land use request prepared by the applicant is summarized in a SF–299 form with appropriate attachments. What information, studies, and reports are most important to you in fulfilling your agency's responsibilities for environmental review of the decision to authorize, modify, or deny a requested land use? Is there a difference in requested information if the proposal is a wired or wireless proposal?

3. If your agency requires an applicant to submit environmental information to

be evaluated during the consideration of a request to use Federal land, how is guidance provided to the applicant by your agency prior to completion of the SF–299? What role should the Telecommunications Program play in providing guidance to such applicants?

4. The Programmatic Environmental Assessment of the Telecommunications Program will outline the Federal land management agencies' categorical exclusions and procedures for identifying extraordinary circumstances. The RUS environmental document will also acknowledge that the use and occupancy of Federal land by some Telecommunications Program projects is necessary and, in particular circumstances with necessary authorizations, appropriate. What barriers do you envision in adopting a RUS environmental document in the consideration of your agency's decisions to authorize a special use permit by a Telecommunications Program participant?

5. How can RUS and other Federal agencies work together to share information as well as train managers and staff at the field levels regarding broadband issues and necessary environmental reviews and Federal decisionmaking, including land use authorizations?

Dated: November 4, 2014.

Jasper Schneider,

Acting Administrator, Rural Utilities Service.

[FR Doc. 2014–28100 Filed 11–26–14; 8:45 am]

BILLING CODE P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

In the Matter of: Lev Steinberg, 119 Mackenzie Street, Brooklyn, New York 11235; Order Denying Export Privileges

On February 25, 2014, in the U.S. District Court for the Southern District of New York, Lev Steinberg ("Steinberg") was convicted of violating the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)) ("IEEPA"). Specifically, Steinberg unlawfully, willfully and knowingly exported and attempted to export from the United States to Russia, items on the Commerce Control List, namely, an Eo-Tech 552 holographic weapons scope and other items, without first having obtained a license to do so from the United States Department of Commerce. Steinberg was sentenced to probation for a term of 12 months, criminal fine of $4000 and a $200 assessment.

Section 766.25 of the Export Administration Regulations ("EAR" or "Regulations") [1] provides, in pertinent part, that "[t]he Director of the Office of Exporter Services, in consultation with the Director of the Office of Export Enforcement, may deny the export privileges of any person who has been convicted of a violation of the Export Administration Act ("EAA"), the EAR, or any order, license or authorization issued thereunder; any regulation, license, or order issued under the International Emergency Economic Powers Act (50 U.S.C. 1701–1706); 18 U.S.C. 793, 794 or 798; section 4(b) of the Internal Security Act of 1950 (50 U.S.C. 783(b)), or section 38 of the Arms Export Control Act (22 U.S.C. 2778)." 15 CFR 766.25(a); *see also* Section 11(h) of the EAA, 50 U.S.C. app. § 2410(h). The denial of export privileges under this provision may be for a period of up to 10 years from the date of the conviction. 15 CFR 766.25(d); *see also* 50 U.S.C. app. § 2410(h). In addition, Section 750.8 of the Regulations states that the Bureau of Industry and Security's Office of Exporter Services may revoke any Bureau of Industry and Security ("BIS") licenses previously issued in which the person had an interest in at the time of his conviction.

BIS has received notice of Steinberg's conviction for violating the IEEPA, and in accordance with Section 766.25 of the Regulations, BIS has provided notice and an opportunity for Steinberg to make a written submission to BIS. BIS has not received a submission from Steinberg.

Based upon my review and consultations with BIS's Office of Export Enforcement, including its Director, and the facts available to BIS, I have decided to deny Steinberg's export privileges under the Regulations for a period of two (2) years from the date of Steinberg's conviction. I have also decided to revoke all licenses issued pursuant to the Act or Regulations in which Steinberg had an interest at the time of his conviction.

Accordingly, *it is hereby ordered:*

First, from the date of this Order until February 25, 2016, Lev Steinberg, with a last known address of 119 Mackenzie Street, Brooklyn, New York 11235, and when acting for or on his behalf, his successors, assigns, employees, agents or representatives (the "Denied Person"), may not, directly or indirectly, participate in any way in any transaction involving any commodity, software or technology (hereinafter collectively referred to as "item") exported or to be exported from the United States that is subject to the Regulations, including, but not limited to:

A. Applying for, obtaining, or using any license, License Exception, or export control document;

B. Carrying on negotiations concerning, or ordering, buying, receiving, using, selling, delivering, storing, disposing of, forwarding, transporting, financing, or otherwise servicing in any way, any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations; or

C. Benefitting in any way from any transaction involving any item exported or to be exported from the United States that is subject to the Regulations, or in any other activity subject to the Regulations.

Second, no person may, directly or indirectly, do any of the following:

A. Export or reexport to or on behalf of the Denied Person any item subject to the Regulations;

B. Take any action that facilitates the acquisition or attempted acquisition by the Denied Person of the ownership, possession, or control of any item subject to the Regulations that has been or will be exported from the United States, including financing or other support activities related to a transaction whereby the Denied Person acquires or attempts to acquire such ownership, possession or control;

C. Take any action to acquire from or to facilitate the acquisition or attempted acquisition from the Denied Person of any item subject to the Regulations that has been exported from the United States;

D. Obtain from the Denied Person in the United States any item subject to the Regulations with knowledge or reason to know that the item will be, or is intended to be, exported from the United States; or

E. Engage in any transaction to service any item subject to the Regulations that has been or will be exported from the United States and which is owned, possessed or controlled by the Denied Person, or service any item, of whatever origin, that is owned, possessed or

[1] The Regulations are currently codified in the Code of Federal Regulations at 15 CFR parts 730–774 (2014). The Regulations issued pursuant to the Export Administration Act (50 U.S.C. app. §§ 2401–2420 (2000)) ("EAA"). Since August 21, 2001, the EAA has been in lapse and the President, through Executive Order 13222 of August 17, 2001 (3 CFR, 2001 Comp. 783 (2002)), which has been extended by successive Presidential Notices, the most recent being that of August 7, 2014 (79 FR 46959 (August 11, 2014)), has continued the Regulations in effect under the International Emergency Economic Powers Act (50 U.S.C. 1701, *et seq.* (2006 & Supp. IV 2010)).

Attachment C: List of Commenting Stakeholders

Federal agencies:

- Federal Communications Commission (FCC)
- FirstNet
- National Telecommunications and Information Administration (NTIA)
- Bureau of Land Management (BLM)
- U.S. Forest Service (USFS)
- U.S. Fish and Wildlife Service (USFWS; included Migratory Birds, Ecological Services, and Refuges divisions)
- National Park Service (NPS)
- Bureau of Indian Affairs (BIA)

Industry groups:

- Association of Communications Engineers
- Power and Communication Contractors Association
- WTA: Advocates for Rural Broadband, Washington, D.C.

Current and former program applicants

- American Samoa Telecommunications Authority
- Georgia Transmission Corporation, Tucker, GA
- Mid-Rivers Telephone Cooperative, Bismarck, ND
- Sacred Wind Communications, Yatehey, NM
- Tabletop Telephone Company, North Fork, CA
- The Ponderosa Company, North Fork, CA
- Triangle Communications, Havre, MT

Consultants and contractors working for program applicants

- ACRS Telecommunications Consulting and Engineering, Oklahoma City, OK
- Heberly Engineering and Associates, Havre, MT
- Kadrmas Lee Jackson, Bismarck, ND
- Metcalf Archaeology, Bismarck, ND
- Mid-State Consultants, Nephi, VT
- Quality Services, Rapid City, SD
- RVW, Inc. Architectural Planning and Design, Columbus, NE
- Transcom, Salt Lake City, UT
- Vantage Point Solutions, Inc., Mitchell, SD

Attachment D. Interview comments Sorted by Topic. Interviews Conducted 2/25/2015 - 3/6/2015

Key: 1: Industry Group; 2: Current/Former RUS Program Applicant; 3: Consultants/ Contractors to Applicants; 4: Federal Agency

Length of time/costs to obtain permits	
1	Lots of work in preparing RUS loan application, with environmental review for the loan approval requiring rather broad descriptions of the project (almost a formality), with details for the project permits. Obtaining federal and state permits are difficult – some permits require approval of other permits before being considered, such as the State DOT needs the permit from DNR. States will not recognize work done on previous permits, with application needing to be site-specific, within feet. Despite work done for the RUS approval, work must be repeated in more detail for other permits.
1	It takes a long time to get permits, especially out west with Federal and Tribal permits, as well as state permits. Even with no issues, it takes 1.5 years to obtain approval from State Trust Lands to be in DOT ROW, even after the DOT has approved the permit. Great variability among field offices in Federal and state agencies everywhere. Even though staff and funding has been cut, Federal/state agencies do their own studies, not accepting company studies, even for fiber within disturbed ROWs. Same information has to be submitted in different formats for various permits.
1	Fed/State agencies, including SHPO, do not identify what is needed up front, then 30 days after submittal, want more and different information, repeatedly, with each additional request adding at least 30 days. Even if you work well with a local person, that person leaves and the next person often has a different perspective and requirements. Starting over is common.
1	If RUS states that all states have acceptable standards, then RUS would not have to add another step to the project after loan application approval. Don't add another step between site-specific design permits and actual construction, i.e., DNR/archaeological permits – allow project to proceed without additional permits.
1	Industry moves faster than the overall approval and permitting processes – this causes costly delays in construction bidding and initiation, and may lose the construction season for a year or more if delayed by permitting.
1	If agencies are involved, takes too long. Companies/cooperatives using RUS funds with its requirements and the agency permit requirements are at a competitive disadvantage to companies using open market funding because of costs and delays. Approx. 90% of projects are on state or county ROW with cable, power and gas already buried, but federal agencies are still requiring EAs.
1	RUS should establish clear points of contact for land management agencies and inform the applicants.
1	Because most broadband is placed either in already-disturbed road ROWs or on existing poles, RUS should be more flexible in the level of environmental review required so companies' limited resources and be used more efficiently. Conduct full reviews later in the process when detailed information on the project is more available to the applicant and permitting agencies, reducing the risk of misdirecting money on a project that may not be approved.
2	So much of service area includes federally-managed lands. Projects which cross these lands need land use authorizations: BIA, BLM, USFS, some private and state lands checker-boarded throughout. Each agency has its own requirements for permits (RUS is the most reasonable). Endangered species and archaeological studies for each permit substantially increase costs. In many cases, just replacing outdated cables in existing ROWs - BIA/BLM

	treats as new infrastructure that never had a permit. When acquired territory from Qwest, had 28 existing cabinets for electronic equipment that had been in place for decades that needed to be replaced with updated cabinets at the same site on federal lands – RUS used CX, BIA needed full environmental and archaeological surveys even over the objections of the Navajo Nation. Took a total of 3 years to replace the cabinets on site.
2	Most customers are Navajo, 40% on BIA trust lands. BIA field offices interpret the requirements differently. If the property is owned by the Navajo Tribal Authority (the Tribal-owned electric cooperative), the facilities are for only their use, with more hoops to collocate on their facilities.
2	For our design, we need tribal and BIA permits to survey, then discuss design with engineering staff at RUS provides guidance, starts the environmental process, then RUS reviews an environmental report (ER) and application for engineering, environmental, and financial feasibility. Then Tribal engagement notice to all tribes with interest in the area. The entire process takes a long time and is costly.
2	The entire process is costly. Someone needs to look at the overall costs for the process. Need a better way to manage taxpayer dollars. The major contributor to costs is doing the EAs, which is 10%-15% of total construction costs. Some operational support from the FCC, some from the state Universal Service Fund (USF). It is difficult to meet RUS and USFS expectations to make a reasonable rate of return to meet the loan requirements with these costs and delays. ROW fees and permit fees are out-of-pocket. Under RUS requirements, a borrower is supposed to draw down funds within 5 years, but sometimes need extensions because of other requirements and delays. Begin design for buildout and start application for ROW permit after loan agreement signed, which takes 2 years, then no time to meet deadline for drawdown of funds for the actual project. Takes 1.5-2 years to get approval from the Tribal Council if one person works on the application full time (costs out-of-pocket also), which can't be started without loan approval from RUS. Obtaining the ROW takes 6 months. Most rigid and unresponsive agency is the BIA; BLM is better, RUS is easiest.
2	Remove roadblocks that we deal with every year. Need to influence the Administration to extend broadband on federal lands substantially, create CXs for any fiber attached to existing poles on federal land - 60% of projects could be done in a couple of years with reduced installation costs. Some poles from the 1920s, no easement/ROW paperwork, so poles are in trespass, so borrower cannot use them for attaching fiber – the pole owner has to apply for a new easement, then an EA is done for permit approval, then the broadband utility borrower needs NEPA for the broadband installation. Grandfather in all existing infrastructure on federal lands, then make poles available to all utilities.
2	Have had issues with unnecessary delays and costs since becoming an RUS borrower with getting land use permits from federal and state agencies (USFS, BLM, SHPO). They worked with a local consultant that helped with getting permits, but the agencies don't want the same information in the same format on the same timelines. Even when agencies agree to be on a timeframe, schedules always slip. Takes at least 2 years to get a land use authorization, and as much as 8 years. Costs and time for archaeological surveys and reports to different agencies exceeds estimates, which affects the entire project. Different processes for adjacent USFS Ranger Districts on the same National Forest. Every state and federal agency is different – USFS, BLM, state, SHPOs, Tribal, including differences among field offices in the same agency. We want to do what is right and what is needed, but the process is too bulky and disorganized and takes too long. Needs to be streamlined. Have to request an amendment to the loan to cover the excessive and unpredictable costs. Unbearable in time and costs.
2	The county had an easement for a county road on a national forest in the Southwest and

	wanted to share it for broadband, but USFS said that a new permit would be required for placing broadband directly in the road, with full environmental studies.
2	Very frustrating for program applicants and contractors when they do not receive easements in a timely fashion, trying to foresee what is required in the future, since there have been no unforeseen issues from existing projects.
2	When personnel changes, the process starts over, reinterpretation of work already done, delays for the new person to review, changes in requirements. If higher priority project is submitted, then broadband projects drops back in the queue. The program applicant prepares the EA, including coordinating with 30-32 tribes, and getting a SWPPP; once the EA is submitted, more time for review and comments, and time slips even further, as drafts are revised and more comments. No value added, and ineffective mitigation required.
2	One permit took 8 years for approval. "How in the world can we do business when it takes 8 years for a project to be approved?" For a 100 mile project, the borrower was led to believe by the USFS that the Forest had no issues, so selected and contracted with a construction company, then the USFS added issues, the project was delayed for 4 years, which used up the time required to draw down the RUS loan.
2	Any place where constructing on Tribal lands, very difficult to get permits. Never successful in getting approval from a tribe for anything, even though the company has some native speakers. In addition to requiring all the studies, creates constantly moving target. Requests money for each application, with apparently arbitrary amount that can become hundreds of thousands of dollars. Found other ways to reach clustered developments. Roads transferred to the BIA allow utility corridors in easements, but if the design is not in the easement, then long time to get permits.
2	The USFS is very understaffed; they do not have the time to conduct the field surveys and prepare the environmental review, and do not have the time to review anything prepared by contractors for the program applicant. Would like option to know how long it would take the agency to conduct the environmental surveys and reviews or if the program applicant could contract it out and get a timeline on their review and approval to have some certainly in timeline on the date of permit issuance.
2	For one permit, it took 8 years to receive the permit, yet it was only good for 10 years, so need to start renewal almost upon receipt of the permit. Receive automatic 1-year extensions.
2	Some federal agencies do not want to coordinate NEPA and NHPA with RUS, and it takes too long to get permits
2	Because of delays and bureaucracy, often better to obtain public funding, with same or better rates than RUS. RUS is too frustrating, too clunky, takes too long. Federal land use authorizations are not as bad. No longer using RUS loans.
2	Takes too long – BLM says they must do their own EA, which they put on hold for a year until RUS and the SHPO processes were completed (4.5 months). After one year (application submitted in April, request not made until December, BLM required a paleontological study that they did not request at the beginning, requiring the program applicant to hire and pay for it, as BLM paleontologist doesn't go into the field. With the new requirement, BLM cannot say what types of mitigation may be required. BLM also did not want to even see the program applicant's protected species report because the Greater sage grouse is not yet listed, and BLM believed that the report would assume remain candidate species. BLM biologist assumes it will be listed and is requiring additional mitigation.
2	Agency national office managers and staff have no clue on what is happening at the field offices that the borrowers have to deal with. Federal agencies have no sensitivity of considerations of anything other than their own – the proponent has to help the manager

	manage his own unit. This PEA will have a good long-term effect by helping put better procedures in place. We hope someone in DC listens; this PEA interview is a good start.
2	Every new requirement from RUS and agencies adds months stretching to years. Replacement of copper with fiber used to take 2 years, now it takes 4 years, hamstringing the program applicants because they cannot get through the process in a timely manner.
2	Agencies need to provide the requirements at the beginning – do not request major changes and requirements at the last minute.
2	USFS, BLM, BOR, and NPS are especially slow. BOR took 3-4 months to approve a trench across their parking lot to their own building; NPS took 5 years, so rerouted ¾ mile around park in one year.
2	Difficult to find out what the agencies want up front, then getting it to them and waiting for the response in a timely manner. The approach is to get us something then they will let the program applicant know what else they need. Because of limited construction seasons, new requirements at last minute may require another year, more surveys, changing permits and agreements already obtained (i.e., county roads, state highways, private lands) to meet the new requirements – this happened with BLM 50 days from initiation of construction. No mechanism to question federal requirements, especially when they are not effective, or their requirements and mitigation forces cable installation into unsuitable places (sometimes the last choice location), increases costs to redesign and change permits, program applicants pays the cost, counties are delayed with their permitting, frustrating for everyone. As mitigation, BLM required the telecomm move 25 feet into the ROW because of fear of invasive weeds and potential habitat for sage grouse (none observed since 2009, but sagebrush present). County sprays weeds. Increases costs in hiring construction crews, making them sit idle, materials already ordered for original design, program applicants absorb the costs.
2	Do not want to elevate problem to higher BLM office because program applicant has to work with the field office staff for a long time and do not want to ruin relationships.
3	States operate differently – some are very supportive, some want nothing to do with broadband projects, and often personality dependent.
3	Some USFS permits take at least 2 years for plowing cable into existing ROWs with USFS land on either side of centerline. On one project, a field trip with USFS specialists helped expedite permit in 2 years. Some agencies ask for one thing, then keep requesting more consecutively, with associated review time for each request. Feels like they are trying to get rid of the applicant. Now try to avoid all federal land, even it is the most efficient route – takes too long and costs too much to use federal land.
3	The biggest problem is obtaining federal land use authorizations, and different agencies requiring different reports in different formats. Can RUS make agreements with federal land management agencies such as USFS, BLM, USFWS to expedite compliance and land use authorizations at national office level without having to obtain local permits?
3	RUS has variable times for loan approvals, but they are fairly quick. Agency field offices of other agencies highly variable.
3	Seasonal surveys can cause delays.
3	Federal agencies do not have time, staff or money, and this will get worse. Needs to be a priority to the USFS for the staff to work on it. Do not have time or staff to set up cost recovery agreements and accounts/codes.
3	It is challenging to work with the BLM, Corps of Engineers, USFS, and the USFWS to obtain land use authorizations. Each has their own processes for NEPA, Section 106, Section 7; they do not work together (including RUS); different NEPA thresholds for type of documentation – BLM and USFS prepared EAs, RUS prepares ERs for a CX. Each has a different management plan. More work is always requested, the agencies create confusion

	over the level of archaeological surveys needed. RUS offers guidance on level of Section 106 surveys, and we assume that what we do is sufficient for everyone, but it is never clear. For larger exchanges crossing state lines, have to work with multiple SHPOs and prepare individual reports for each state. Causes delays. It can take 6 months to even get a response from an agency. Counties respond much more quickly than federal agencies.
3	BLM and USFS are only concerned with the portion of project on their lands, and do not work with the RUS. They typically wait until RUS approves the loan before they will accept an application, then the time for issuing land use permits gets extended. Also no analysis of cumulative impacts.
3	USFWS does not tell you about wetlands/grasslands in FHA easements, easements not on record at courthouse, just at USFWS field office (although local offices may not know about the easement either). Inadvertently plowed through an FHA easement, USFWS held up construction, creating higher costs and delays
3	A common medicinal plant used by tribes brought up late in part of tribal consultation process, added two years to the approval. Tribes also wanted monitors for the plant throughout construction, and surveys on private land. Needed adjudication with RUS federal preservation officer who was very busy.
3	Biggest hurdle is trying to maintain a current list of federal, state, and local points-of-contact and knowing who to contact for what issue. Have to contact every POC individually to request input, process very slow and more cumbersome. Navy does not respond at all. Never had any red flags, just required SOPs and BMPs like replace ground cover, reseed, and restore someone's driveway.
3	If already a RUS borrower, expanding existing system in same disturbed ROWs (99.9% of new projects; multiple loan designs for same company) in franchise area uses the same information in previous ER, yet have to re-contact all the same agencies with project description, map. Typically a 60-90 day for any agency response, have to keep following up with contacts. In last 4 years, only 1 route has been approved in NW Texas, obtained 300 feet of private ROW to avoid steep rocky area. Have to do too much work for no additional benefit.
3	Difficulty getting multiple uses into a ROW permitted by the USFS – the USFS land use authorization was only for county road, but program applicant wanted to replace existing copper with fiber in ROW. USFS chose to do own environmental work, even though it was redundant for original project. Took 3 months.
3	For one project, SHPO refused to respond or acknowledge, RUS finally had to sternly step in after calling every day – 90 days after submittal, SHPO responded. This approach had political repercussions with SHPO.
3	Send cultural reports to everyone at same time: SHPO, USFS, BLM, BOR, state so hopefully can be processed by July-August. Approximately 5 months for RUS and SHPO. BLM will not start the permitting process until program applicant receives SHPO concurrence (Section 106). Still waiting for BLM permit in February for a project scheduled to begin construction in May for which the information was submitted the previous April for a project with no issues. The BLM did not want to see reports from the program applicant's consultant, wanted to do their own. BLM requested that the project be 10 feet outside the ROW on private, if refused, then to ROW, even if it is not conducive to burying cable.
3	A 60-day timeframe for RUS approval and 120 for agency land use authorization reasonable. If we knew what was needed up front, process could be coordinated so construction can start on time. But requirements at the last minute. After a pre-application meeting in March, another requirement the following January. BLM, BOR, and USFS are known for causing delays.
3	BLM requires metes and bounds surveying, which adds substantially more costs and time.

3	USFS has more processes and is more difficult to get a definitive decision than BLM. Agency processes personality driven. USFWS can take months.
3	All agencies are short-staffed, projects are taken in order, so it depends on the project's place in the queue. Try to make the project tied to the federal agency to get support.
3	Change in project creates need to change NEPA document when permit is already issued.
3	Focus should be on construction, not on NEPA, as the end point and objective. Focusing on NEPA adds delay. Make project feasible.
3	Each agency wants a different report with different formats, some different content for permitting and Section 106 (Corps, DNR, USFWS). Needs coordination and commensurate studies. Do not need six different formats six different times.
3	RUS takes 90 days for loan approval; need to tie with the ER within the 90 days. Applicant told to contact agencies directly, they are difficult to reach, have to push for response from agencies. Then say they need more information, and agency staff does not follow through. Do not want to bother them too much and to risk relationship.
3	Agency examples and templates keep changing, applies to all resources – need to redo work.
3	Getting a USFS or BLM permit can take over a year, causing excessive delays. Takes too long. Processes are not followed consistently, even among adjacent field offices, and the length of time it takes for the agency to determine its own requirements for the project is extensive. And not consistent. Example: USFS required Class III survey at the bottom of a canyon for aerial placement across the canyon.
4	FirstNet streamlining where possible, but delays and inconsistent requirements with federal agencies, especially those that have decentralized field offices.
4	Most decisions made by the USFS are special use authorizations. USFS Ranger Districts (RD) do not have realty specialists, staff moved without filling in behind them. USFS struggling with how to deal with this problem. Too much work at RDs, special use applications competing with scheduled forest projects that are not on program of work with hard targets. Special use program seldom a priority, not part of performance rating.
4	Much diversity on approaches among field offices of various agencies, with little ability of national offices to direct the work of field offices in implementation of broadband decisions. Some field offices focused on their decisions, not necessarily the overarching need for the project during ARRA projects. Takes too long, especially in the west with more federal land and tribal land. In areas with delays, once they understood the technologies, permits were issued more quickly.
4	By written policy, Refuge managers shall not permit use of NWR system lands unless the use meets compatibility standards (50 CFR 26.41), which means it is compatible with the mission of the NWR system and the purpose of the individual refuge. Each refuge was established with a particular purpose, such as protection of migratory birds, protection of threatened or endangered species, or protection of biodiversity. Meeting the compatibility standard is a very high bar and is very seldom met for new uses. Any proposed use, even within an area that is already developed, such as an existing right-of-way, is considered a new use subject to compatibility standards and are very seldom granted. Except subject to ANILCA in Alaska, new rights-of-way are generally not granted. The burden is on the proponent to provide evidence of meeting compatibility standard or avoid use of NWR system lands, and there are very few examples where this standard was met. Very rarely, the USFWS will consider land swaps, but these are extremely difficult.
4	Refuge manager should engage landowners for actions on lands adjacent to a specific Refuge to attempt to minimize potential impacts to the Refuge; however, the Refuge has no ability to directly influence what happens on lands not subject to USFWS jurisdiction.
Excessive Studies/Ineffective Mitigation	
1	Mitigation often used in avoiding a sensitive resource through direction boring, placing new

	cable next to existing cable in disturbed rights-of-way. May still have to do some level of listed species/cultural resources surveys, although some states may use surveys done previously for the same ROW if conducted within last 10 years, i.e., DOT did studies during road upgrade for ROW for original placement of fiber. If the study is older, they want a new one.
1	What can RUS do to simplify the entire process and when proposing to construct in disturbed ROWs? i.e., bald eagle nesting next to used road required a seasonal construction closure for one day's work, needed to conduct arch. survey and protect a county-maintained ditch. Sometimes SHPO wants trenching under existing development, like a road, to find out what might be there, even when directional boring would work. Mitigation almost never provides a benefit to sensitive resources; permitting agencies seem to believe that laying fiber is as destructive as other types of projects, i.e. gas pipelines or transmission lines, and they also apply mitigation for nonlinear projects to linear projects
1	Can RUS help with EPA/state requirements for mitigation for a Stormwater Protection Plan (SWPPP) needed for any action greater than 30 acres as currently applied? Because laying fiber disturbs several inches over many miles, and all sites are recovered as the fiber is installed – the cost is increased substantially, more disturbance with mitigation, no benefit.
1	Agency people often do not know the technologies associated with fiber cable, and believe that the ground disturbance (mostly 2-6 inches, almost always less than one foot in width) and impacts are higher. Silt fences for 2 inches of disturbance along the entire length even if a buffer exists between the water and the trench may be required, causing more impacts than the project, plus construction and maintenance costs for the fence, with no protection of resources. In American Samoa, mitigation monitors are available when needed, and do not hold up construction.
2	Monitors for archaeology required on site – the monitor looks into the trench/slit made by the plow, writes a report, or says that directional boring is required. Identified the areas with any possibility of sites and did those first so do not have to pay the monitor for the entire project. Try to mitigate sites efficiently. Very unpredictable what mitigation for archaeology or listed species will be required – a "mish-mash." SHPO wants at least a Phase I study; SHPO may not accept reports older than 10 years old. SHPO, DNR, and federal agencies sometimes want the entire length studied for archaeology and listed species.
2	Agencies do not understand the types of construction involved, and how construction design can mitigate impacts to listed species and archaeological sites, so they require ineffective mitigation.
2	One project involved placing fiber on another company's electrical poles that did not meet standards. USFS requested that the program applicant talk to the electric utility to find out if the program applicant could replace the pole, even though the utility had the easement, which was not appropriate and added additional time.
3	USFWS required moving burying beetles under an emergency take permit.
3	SHPO can request surveys for sites within one mile of the road for a 2-inch width of disturbance in disturbed ROW, using project to get unrelated information. Some states provide known archaeological site information, some do not.
3	What is appropriate review process when a program applicant needs a land use authorization or permit from the US Army Corps of Engineers, USFS, BLM, USFWS, BOR? We want to do what is needed, but no duplication or unnecessary work.
3	In one agency, one person's requirements contradicted another person's requirements; they did not understand the technologies.
3	Broadband projects already low impacts, make mitigation commensurate with level of impacts, try to avoid impacts. Monitors are costly.
3	SHPO wanted full survey along the entire length within 1 mile on each side of road – gets

	information for SHPO, but not helpful for project.
3	Even with mitigation technologies causing minimal impacts, SHPO still requires full Section 106 surveys; RUS has fewer environmental hoops. Land management agencies do not understand the technologies.
3	Some SHPOs unreasonably require extensive surveys for projects in disturbed ROWs. One SHPO wants every inch surveyed. If not surveyed in the past, then Class III survey required. Private landowners sometimes do not want surveys conducted on their lands.
3	Some requirements appear to be autocratic rather than a sincere effort to act as a steward of the lands for the public. There is absolutely no common sense in some cases.
3	Frankly, many of the rules applied to telecommunications projects are ridiculous, and none particularly helpful to projects with inherently low impacts. Always at the mercy of each agency as well as the agency's individual staff requirements.
4	NPS trying to maintain major involvement in tower siting, even if off NPS lands, in some cases 7 miles away, with concerns about visuals. Have to go out at night to see if tower can be seen from the national park.
Use of Categorical Exclusions v. Environmental Assessments	
1	RUS uses CXs for loan approval, but land management agencies use EAs. Sometimes the agency allows applicants to prepare EAs.
1	Approx. 90% of projects are on state or county ROW with cable, power, and gas already buried, but federal agencies are still requiring EAs.
2	BIA, USFS, BLM mostly require full EAs. BIA said that for them to determine if a CX is appropriate, they required full surveys and analyses, including for removing copper from existing poles and replacing with fiber, when the easement and poles had been in place for 35 years.
2	Agencies will not use CXs; only one used, after a long, drawn out process; may have saved some field monitoring, but permit still not issued in a timely manner.
3	Recommends that USFS/BLM evaluate the applicability of a CX based on impacts rather than the aspect of ROW (5 acre limit), because impacts are consistently over-estimated, requiring more surveys and analysis than is necessary and the 5 acre limit doesn't apply well to linear projects. 5 acres calculated using 15 feet wide (the width of tracked equipment, not the actual ground disturbance, which is about 2 inches maximum) by the length of the project, which unnecessarily causes agencies to prepare EAs.
3	CXs only used if very clear category; if not a clear category, the agency defaults to EAs. If a resource is present but not affected then a CX can be appropriate, but if cautious, concern with risk about sensitive resource, then EA. Field review can increase agency confidence in decision. If needs consultations, then the agency prepares an EA with no public involvement. Contractors can prepare NEPA documents, but sometimes agencies want to do it themselves. ER is sometimes sufficient for the agency EA for BLM, USFS, BIA and agency EAs may be sufficient for RUS ER.
3	Federal agencies in ND are overburdened with oil company permits, USFS keeps wanting complete NEPA with EAs, rather than CXs, even though no impacts, the staff wants proof.
4	BLM does FCC NEPA compliance for towers, applicant passes information to the FCC. Determining NEPA Adequacy (DNA) documents - checklist evaluation of an existing NEPA document prepared for a previous project to determine if impact analysis sufficient for current project, with justification. Previous document has to be newer than 10 years. Since BLM has a CX for work in existing ROW, sometimes a CX takes less time. Whatever the applicant can do to facilitate NEPA helps avoid delays, as NEPA drives time. Mostly EAs. Some offices do EA in-house. BLM interdisciplinary team determines the scope of issues and provides information to contractor. Each state has own environmental checklist.
4	For existing facilities, problem with USFS using EAs when should be CX.

4	NEPA is where everything gets bogged down in special use authorizations. USFS overdoes NEPA because of fear of litigation.
4	Many USFS sites are microwave wireless, because terrain makes fiber more expensive. Cell companies want their own buildings, but better to and will collocate on existing towers. Wireless needs 10'x10' structure/building for equipment. Should be CXs.
4	Difficult to make the 5-acre limitation for use of a USFS CX work for a linear feature.
4	Expedite CX approval through CEQ leadership.
4	Under ARRA, 17,000 projects in 2014, 14,000 projects in 2013, all but a few adverse impacts involved visuals, a few archaeological sites mitigated with recovery – good at minimizing and avoiding impacts. Because of a nationwide programmatic agreement (under Section 106), most projects do not get elevated to the national office, are worked out amongst SHPO, applicant and tribes. National office spot checks e106 database.
4	BIA has some CXs, need a common CX that would apply, perhaps facilitated by CEQ. BIA CX within existing ROW, service line agreements, substation, but can be elevated to EA. How does this work on Indian lands?
4	NPS does not have any CXs for new construction in areas previously disturbed, so must use EA. Takes 6 mo-1 year once application completed. Currently revising NPS guidance for CX for non-new construction in previously disturbed areas and installing on existing poles. Cannot envision a CX in areas not previously disturbed, as impacting parkland is an extraordinary circumstances increasing level to EA, but NPS considering relaxing restrictions in previously disturbed areas by this summer (NPS does not have a definition of "disturbed lands" – most parkland is not disturbed except for roads, ROW, parking lots). The NPS mandate is to preserve land in same or better condition, so could significantly impact non-disturbed parklands. RUS reviews general impacts at loan approval decision with ER, then NPS looks at site-specific impacts, with CX or EA. RUS is not the applicant. People often question NPS science and analyses, such as RF near birds, visual impacts, the PEA can assist with this. Cell tower decisions are case-by-case decisions. NEPA procedures to be revised in next 2-3 years.
RUS Processes	
1	Appreciate the opportunity to provide input – great relationship with RUS, good communication
1	Concern that RUS will require full detailed environmental review, reports, permits, and surveys before approving a loan package. That will make it almost impossible to get RUS loans. Recommend continuing to approve loans contingent upon doing the detailed work and obtaining the permits and approvals.
1	Update RUS guidance documents and use current mapping software.
2	If RUS requires all permits and approvals before issuing a loan, "we're not going to be able to do it." RUS is not going to see much borrowing. Need to get the loan approval before permits and easements.
2	Great relationships with RUS field reps and engineering staff who work with the program applicant directly
2	Believes that RUS should be able to review a completed loan application within 3 months – the program applicant has planned and constructed projects within existing ROW within one calendar year.
2	After RUS approves loan, lots of work to get the loan in place, with all the upfront costs and time, many program applicants are looking elsewhere for funding that has similar low interest rates. Gets the impression that RUS is putting hurdles and obstacles in place so program applicants will not use the RUS loan program.
3	The process RUS currently uses to manage loan applications is great, packaging 5 years of construction work plans under one loan, with a 5-year plan, then build in 5-year window,

	with all surveys, environmental reviews, and studies being done at the right time, not before loan approval. Changing the process to require all surveys, permits, consultations, and approvals to be completed before RUS issues the loan package would not work, is not reasonable. As long as RUS final approval/fund distribution is contingent on obtaining all requirements, that would work. The current process works in KS, NE, SD, CO, MO, IA, and NM.
3	Heard that RUS wants to review record search phase I report prepared for SHPO before sending it to SHPO, will add delay; also not clear if program applicant does Section 7 consultation with USFWS, then send final report to RUS or vice versa. Want to avoid duplication of effort.
3	With multiple projects in one RUS funding package, if one project held up, all are held up.
3	Concern with RUS considering requiring all permits, consultations before issuing loan authorization
3	Tribal notification – Tribes do not understand roles of contractors – contractors make initial contact, then contractor forwards to RUS – tribes do not like the additional step. Tribes can respond to either the contractor or RUS. Proponents are the primary POC for initial tribal notification. RUS wants all Tribes contacted at the same time so that the tribe can determine if it wants to work government-to-government or staff to staff level. Tribes tend to respond better with additional information about the project and Phase I surveys
3	Likes the idea of the PEA, and believes it will be helpful.
3	RUS scoping template letters for engaging tribes and RUS guidance on which tribes to engage is very helpful. RUS provides helpful post-approval guidance.
3	RUS must be prodded to find out status of a loan application, and once RUS asked the company to ask RUS on status. Some delays with environmental and technical reviews at RUS, and some papers got lost in the national office.
3	RUS policy is that program applicants and their consultants can submit Section 106 information to SHPO directly, without going through RUS prior review (2012 RUS delegation letter). Sometimes other agencies want to review before it goes to SHPO. Ask for guidance from RUS – they are very busy but helpful.
3	RUS field reps have little turnover in this area in last 25 years. RUS loan officers in the field try to help, but they do not have much environmental expertise, and local agencies are not familiar with federal requirements.
3	Several potential clients shy away from using RUS financing because of extended approval times by RUS and agencies
3	Grateful that RUS is doing this PEA, and they want to support making it successful.
3	RUS was allowed to obligate funds before ER completed and SHPO approval, approving multiple projects over multiple years, with rough costs and route as justification for the loan. Once the loan approved by RUS, engineers detailed the project for obtaining agency permits and approvals. Now, cannot get loan without SHPO concurrence, and cannot get SHPO approval without the loan. Asking for consistency and decisions that work.
3	RUS had staff assigned to each region who would look at submittals information and determine level of Section 106 survey appropriate and coordinate with SHPO. Those representatives are now gone, so the program applicants must communicate directly with SHPO (Dec. 2014). Approvals are starting to back up in RUS. Need to get construction bids in Jan-Feb so construction can start in May-June. If delays, then most of construction contractors already booked so higher prices are demanded.
3	Aerial plant collocated on existing poles, no environmental issues, usually a quick RUS turnaround
3	Must meet state SHPO requirements before the RUS will approve loan application and release funding. Each state has different requirements. Next to impossible in some states

	without large expenditures for surveys. At pre-loan stage, the detailed field engineering not completed, so difficult to get SHPO approval until detailed design. RUS does not require surveys for other resources.
3	95% of the time, RUS will not make a determination until the other federal agencies have cleared/approved the project (except once, when the BLM refused to approve the ROW grant until RUS had approved the ER). The RUS cannot dictate to or overrule another federal agency, even if requirements appear to be excessive. Too much overlap between RUS ER clearance and actual ROW procurement. RUS should be able to give ER clearance contingent on the borrower getting approval or being granted ROW from other federal agencies. Construction cannot be started until all permits secured.
3	RUS requirements sometimes murky and difficult to determine: what is needed, an ER? EA?
3	30-60 days is a reasonable time for RUS to consider an application, with a comprehensive list of information needed so everything can be corrected at the same time. It takes so long for RUS field reps to review the application that we need new signature documents prior to the loan being submitted to RUS national office. If delayed too late in the calendar year, then new financial information is needed. Frustrated and costly for the borrower.
3	RUS needs established and clear rules for environmental review. No consistency by RUS staff in application of CFRs, rules, and procedures, making it difficult for borrower/contractors to determine what will be needed. What works in one area doesn't work in another. Hopefully the new RUS environmental regulations will help. Right now, a moving target.
Lead Agency for Broadband Projects	
1	Great coordination among RUS field reps, but RUS field reps do not interact with the federal and state agencies – obtaining permits is a RUS borrower requirement. RUS mostly concerned with completed applications. When RUS tries to assist borrowers with obtaining permits, RUS field reps have the same problems with the agencies as the borrowers do.
2	No apparent lead agency – RUS defers to the borrower to get permits from other agencies, and each agency looks at their part of the project independently of the project as a whole.
2	Major challenge is knowing who the federal lead agency is responsible for the initiation, coordination, and conclusion of all permits, consultations, and actions. A non-federal entity cannot initiate or request actions from any federal agency without the assignment of a lead agency, yet program applicant must spend considerable time attempting to find the lead agency; would assume that the lead would be identified at the outset. It is unclear as to which federal agency should have the responsibility based on the application itself, and not which agency is "not busy." Lead agency differs among similar projects and the inconsistency creates confusion.
3	Determine who is lead agency when multiple agencies involved.
3	Biggest challenge is high turnover in RUS national office in the last couple of years, new RUS POC did not tell company, and project went into a "dark hole", also differences in standards among new and old staff. Want to clearly know what they need to do and who do they need to work with (chain of command and players) – both in RUS national office and field offices. Who is responsible for tribal contact – RUS or consultant/program applicant? And to what extent should they be involved?
3	No communication among agencies on which agency is the lead for a project. Uncertain who to work with for each project.
3	Lately, the process is getting more muddled and long, with RUS, BLM, BOR, USFS, State DNR, SHPO, etc. DOT will not issue permit until 100% of other work completed – permits and NEPA – they call themselves the "active agency" not the lead agency. Crossing the highway may be a very small part of the project, but a major decision and delay.
3	RUS is supposed to be lead agency, but held hostage by other agencies.

3	When more than one federal agency involved, no clear understanding of which agency is lead agency.
Pre-Application Meeting	
2	Agencies do not want to meet with the applicant, and won't respond until after the official land use application is submitted. The BLM was easier to work with, but that was perhaps because all the projects directly benefitted BLM.
4	Pre-application meeting: BLM provides guidance to applicant for NEPA compliance – BLM bring resource team and data, and applicant/contractor brings project description and route. Identify sensitive areas to avoid. Makes a big difference in time to process application when submitted. The time it takes depends on the degree of development of the project that the applicant provides – Proposed action in detail in Plan of Development (POD) list of content on BLM website. Part 7 of SF 299, if well-detailed and designed, BLM can provide immediate feedback. Also bring Class I surveys for Section 106. Review resource management plan (RMP) for project consistency, ROW exclusion areas, wilderness areas – avoid having to revise RMP to allow a project that is not consistent, which also needs NEPA. If application incomplete, BLM requests additional information in Letter of Inadequacy, try to have complete application so momentum, can improve timelines.
4	NHPA, Endangered Species Act biggest project-level issues. USFS accepts studies done by others, including NEPA documentation prepared by third party contractors for applicants at the pre-application phase. Face to face meetings with the applicant, contractor, RUS field rep and the USFS Ranger District personnel during the pre-application phase so that the USFS staff understands the details about the project works best. It is also helpful if the area RUS field rep contact the USFS. Determine if project consistent with land and resource management plan (LRMP).
4	USFS would like to be contacted prior to a proponent applying to RUS for a loan that would require use of National Forest lands. Allows the agency to consult with applicant regarding to compliance with laws, policies, and LRMP. Also requests consultation by RUS prior to RUS approval or disapproval of application for loan so that USFS can advise proponent on site-specific requirements, including possible prohibited areas. USFS may have areas where it may not authorize new projects, i.e. at some designated communications sites new construction for new wireless facilities may be prohibited due to collocation opportunities with existing facilities.
4	Proponent files a written proposal or present orally to the affected District Ranger or Forest Supervisor, meeting the requirements of 36 CFR 251.54 (lays out requirements for a completed application), including applicant's name and address, corporate information, technical and financial capability, and project description. USFS accepts the application only when the proposed used meets all initial and secondary level screening criteria. Proponent should provide as much clear detail in proposal to inform the USFS of what they want to do, where, and elaborate on details regarding short term and long term occupancy of use of National Forest lands. Identifies potential flaws.
4	For particularly sensitive areas, such as protected species, communications towers and birds, traditional cultural properties, sacred sites, medicinal plants, request a pre-application meeting to identify red flags and mitigation.
4	Decisions made by National Park Superintendent, so discuss project early, even before obtaining RUS funding approval. Let the Park assist applicant in planning the project to avoid pitfalls and make sure it is a viable project. Review the General Management Plan for the specific park and ensure that communications site locations are allowed. Applicant submits studies and surveys to NPS for NEPA. Applicant can facilitate discussions between NPS and SHPO.
4	Each NTIA project has environmental review in pre-work phase, looking for red flags,

	initial assessment on front end, then each project had CX (limited mostly to cable installed on new poles) or if needed EA, with mostly EAs. EAs are fairly large, not on the NTIA website.
4	For obtaining permits, start with USFWS field/refuge office, then regional office if need more help – national office cannot provide support. Develop relationship so field offices understand the project
4	If a proponent is considering a project requiring use of NWR system lands, it is critical to discuss this with the specific refuge manager early, if possible even before receiving or applying for RUS funding.
Mitigation	
1	Role of Design and Construction. Construction contractors have little involvement in the design phase, so sometimes contractors are challenged to implement projects. Engineering firms hire young people who do not spend time on site before designing the project and writing the applications. They do not understand the realities on the ground. Early engagement of construction engineers during design and during work with permitting agencies can help understanding project feasibility, get the design right for the conditions, and avoid unnecessary costs, such as unnecessary directional drilling in already disturbed ROWs when placing cable next to existing cable. Construction is 80% of the total costs, so construction engineers should be involved during design to keep costs reasonable. If companies can hire a construction company early, then there is time to fix flawed designs. With RUS funding and requirements for so many permits, there is no time to correct poor project design. Because of federal contracting rules, if construction contractors work on the design, they may be prohibited from bidding on the actual construction because of conflict of interest. If the construction company bids considering all necessary mitigation based on the realities of the sites, they may be at a competitive disadvantage than the companies who do not know what is needed and bid lower, resulting in cost overruns later.
2	Directional boring is a good avoidance mitigation, but very expensive – rerouting may be more effective.
2	Difficult to know what mitigation is reasonable for impacts to "potential habitat" and "future habitat" for listed species and what is protected today versus what could be protected in the future.
2	Mitigation includes conducting surveys to determine sensitive areas or requiring permits, determining equipment and materials needed, such as drilling lubricants for directional boring, using horizontal directional drilling under jurisdictional waters and wetlands to avoid impacts and minimize time-consuming Section 404 permits from U.S. Army Corps of Engineers
2	BMPs and SOPs from related construction activities are the most efficient and cost-effective mitigation. Field training, informal or formal, should be a requirements for all project personnel to effectively implement mitigation. Use of on-site monitors may be effective, but far too costly and in some instances causes unnecessary delays and complexities.
3	Agencies do not like to work up front and identify requirements; program applicant likes to coordinate early, use directional boring for USFWS and Army Corps of Engineers mitigation (or Corps nationwide permit #12), doing appropriate consultations; stay in roadway or public ROW, follow existing cable routes in already disturbed areas, seasonal construction, avoid removing trees (nests), stay in ditch if following blacktop.
3	Most projects have no impacts. Avoid waters of the US, remove any extra trench dirt so no discharge of dredged material or directional bore, plow noise no noisier than traffic already using the road. SWPPP: EPA calculates acreage by width times length, yet the small trench would not have any impacts related to stormwater runoff.
3	The nature of the work involving underground burial does not cause adverse impacts to

	endangered species and other resources, such as floodplains, wetlands, and cultural resources. Coordinate with RUS field reps. SHPO generally decides level of survey, and generally accepts RUS' level. SHPO recognizing that burying cable in existing ROW has a low level of risk.
3	Clients try to avoid going cross-country, on private lands because of cost of getting private ROW, areas with cultural resources and listed species. Cable has been in disturbed ROW for decades.
3	Mostly use directional drilling to avoid sensitive areas or plowing to cause the least damage.
3	Design project so minimal impact – plow, recover after plowing, reseed, directional boring under sensitive resources, careful not to unnecessarily impact resources.
4	NPS does not allow compensatory mitigation by policy – must not adversely impact the resource, not try to make up for adverse impacts – no impairment.
4	NPS prefers buried cable be located in conduit, easier to repair and lasts longer. Use directional drilling under national trails and other sensitive resources.
4	For project in California, construction workers were trained in and implemented mitigation measures, had checklists, walk-throughs, monitoring. Also needed compliance with CEQA.
4	USFWS prefers collocate on existing towers whenever possible, use monopole towers.
4	Will provide USFWS preferences for BMPs. USFWS wants to help design successful projects through advice on building sustainably in the right areas and minimizing impacts.
4	USFWS regulations do not allow compensatory mitigation to make a new use compatible.
Cost Recovery and Rental Fees	
2	BLM and USFS assess fees and cost recovery; state lands require certified surveys and assess annual fees. Have to pay fees to the state to house archaeological artifacts in a museum.
3	Cost recovery agreement takes time, has to be approved at agency regional level.
4	If program applicant has or is eligible for RUS funding, it needs to be identified on the easement application form, which is sent to the national office for coordination with RUS to confirm funding available or approved, then exempts land use fees. Determining if project eligible for RUS funding for rental exemption is big challenge for BLM. BLM currently working with RUS on this process.
4	Cost recovery fees to fund the processing of environmental analysis, decision, etc. by USFS as well as project monitoring likely to be assessed (USFS 36 CFR 251.58). FLPMA section 504(g) is explicit that entities eligible for financing may be exempt from a land use fee but not recovery fee.
Permits	
4	30 year term of grants typical for broadband projects in BLM.
4	Some projects have fiber hung on existing power lines, BLM grants for separate cables on same poles. But some power companies selling capacity on their existing cables for ISPs – needs new grant for co-use of existing capacity on same lines. Power companies do not want non-company people climbing their poles for liability reasons, so sell capacity so their service does not get interrupted.
4	Only one realty person per NPS region, as a collateral duty. The decision is made by the Park Superintendent before a permit expires, or by the Regional Director if it is a new proposal. Permits do not transfer without signatures of new party to ensure terms and conditions are understood and accepted.
Connected Actions	
3	Utilities service oil fields, yet broadband considered separately, and despite RUS attempt to get decisions at the same time. Lots of paperwork. Ending up building the project except for section on USFS lands for two years. Cannot serve customers.
Impacts, Databases, Section 106	

4	FirstNet will do analysis of radio frequency impacts, and will share information for RUS PEA. Most information from Europe, with little research on impacts to birds, bats, insects, people in US. Working closely with USFWS. Will share information with RUS.
4	Firstnet working with ACHP regarding FCC Program Comment for Section 106, especially for wires on existing poles. ACHP/FCC are currently meeting to determine full array of tools available for Section 106 compliance: Programmatic Agreement, Program Comment, Alternative Rule Development. The ACHP held a Section 106 Summit in 2014 for tribes, federal, state, and local agencies to provide clear understanding of proper Section 106 compliance, as tribes may have higher expectations beyond those required for compliance, while some agencies are not doing enough.
4	FAA changing requirements for lighting on towers to minimize impacts on migratory birds.
4	USFS tracking of special uses is in the PALS database, based on the SOPA is available.
4	ACHP issued FCC Program Comment for FCC processes for communications towers (up for renewal Sept 2015, expected to be extended with additional agencies). Everyone likes the nationwide programmatic agreement, which lays out requirements for specific Areas of Potential Effects (APEs) and limits size, limits ability of SHPOs to request unnecessary new surveys. Tribes concerned with effects of communications towers on their activities. Not applicable when communications towers placed in highly visible ridgelines.
4	FCC only does NEPA regarding authorization to construct a tower, not for the construction itself - agencies do their own NEPA for land use authorization for constructing towers. FCC rules to not apply to federal land and Indian reservation, so certain requirements of the national programmatic agreement and collocation do not apply. If on federal land, if RUS is lead agency, RUS just manages the overall process, but other agencies do their own authorization and permitting processes. RUS uses NPA as a standard. FCC is the expert agency on communications towers and encourages other agencies to "borrow" FCC processes. NPA limits surveys for placement of infrastructure in buildings, but requires archaeological studies for tower construction. FCC towers are expensive, high value and a huge business, do not want to collocate on non-compliant towers, so they are bringing many towers into compliance. Working with ACHP to determine what to do if evaluating a current tower that did not have Section 106 review performed when it was constructed.
4	FCC cannot give other agencies access to e106 database because must keep control of confidentiality and distribution of tribal proprietary information on sites. Program comment allows RUS, NTIA, FEMA and FCC to use the database. Other agencies must demonstrate to tribes that they can keep the information confidential.
4	FCC has engineers with expertise on the spectrum for where towers must be sited for communications and radio frequency characteristics. Current status of radio frequency impact in US not studied for 10 years in US, more recent studies in Europe.
4	FAA has interim policy that towers greater than 350 feet can turn off solid red lights, probably permanent in May 2015. Dr. Manville has updated guidance for tower lighting dated 2014, use that information, not the current USFWS guidance.
4	FCC Interim rule: Towers less than 200 feet are not registered with FCC – applicants self-certify with CX. Interim guidance – if tower 350 feet or greater, needs an EA; if less than 350 feet, CX unless very sensitive area, such as ridgeline. If greater than 200 feet, fails the FAA airport glide/slope test, NEPA requires notice for comments. Consistent with FCC PEA, the new guidance is refinement of previous Manville standards, involving lighting under towers and heat/motion sensors.
4	Some people have issue with expanding electricity to communications sites in underserved area with concerns about inducing growth.
4	Many towers built in the 1960s, need replacement or hardening. As towers age, may become eligible for listing on National Register of Historic Places.

4	Use USFWS IPaC and USEPAs NEPAssist (needs EPA sponsor) online databases/tools to identify sensitive areas.
4	Because national parks generate so much interest with constituents nationwide, local issues tend to elevate quickly. Often receive thousands of comments on proposals, think snowmobiles in Yellowstone Nation Park. Parks have to do a "compatibility analysis" – is the proposal compatible with the reasons for which the particular park was created? NPS does not have general guidance for broadband or telecommunications projects, but primarily issues are visual impacts, soundscape, wildlife, archaeology.
4	USFWS primary issues are effects of towers on migratory birds (latticework towers providing perching habitat for predators in areas lacking natural perching structures, killing migratory birds with lights and guy wires), spread of invasive species, impacts on listed species, impacts of tree removal during maintenance activities on nesting birds, tall towers, towers in coastal areas with many birds, microwave towers making shadows that birds do not like.
4	Use IPaC database to determine species of concern ecos.fws.gov/ipac Information Planning and Conservation also NEPAssist database.
Recommendations	
Recommendations: Easements and Design/Construction	
1	To avoid unnecessary mitigation, the construction engineering company should review the entire route with the borrower before permits are obtained with conditions and mitigation to identify mitigation for appropriate resource protection and commensurate costs with rationale, such as using temporary mats across small wetlands rather than directional boring, seasonally adjusting crossing ephemeral streams so to use dryland technologies. Decisions on permit conditions are made by people who do not understand technologies, have never seen a vibratory plow, directional drill, etc. at work, and do not understand the low level of impacts; have "no skin in the game" often make decisions based on looking at maps and Google Earth, with no idea of conditions on the ground. Approx. 95% of projects use plows inserting no more than 2" conduit (sometimes smaller) and directional drilling with very few impacts. For aerial placement on existing poles, most of the project time is "make ready" looking at each pole, condition, age, space for new line, identify which poles need to be replaced to bring up to code by the power company. If it is too expensive, the fiber is just placed underground. It can cost $20,000-30,000 to replace one structure.
2	If the infrastructure easements are for electric rather than communication, then different set of CFRs. This company worked with the EO Working Group, made recommendation: change all current easements to utility easements so that easement would be automatically available to all utilities.
Recommendations: Training	
1	RUS should provide/support training for federal/state agencies and borrowers on broadband construction technologies and their associated impacts, and which BMPs are effective under which conditions.
1	RUS needs to identify how they can provide approvals more quickly, with less unnecessary mitigation, more flexibility for design modifications during construction to fit the conditions and keep the project moving, conduct "constructability review" during loan application so that RUS loans more desirable, especially when market rates increase to make RUS loans more competitive; work with applicants and contractors better. Identify how construction engineers can be involved during design. Train RUS, borrowers, agencies on technologies and impacts so fewer unnecessary studies and ineffective mitigation.
2	Provide RUS training related to loan design (similar to RUS Form 515A contract training) and RUS loan training. Training should include a checklist of items needed to have the loan design accepted by RUS; and guidance from RUS on what environmental/cultural reviews

	would be required for a project and develop a plan for dealing with any known agency issues that need to be considered.
3	Training by RUS and state agencies (SHPO) for consultants on RUS and SHPO processes, Training for federal authorizing agency on RUS process, construction technologies
3	Training for agencies needed.
3	RUS needs to provide training to all RUS field personnel.
4	BLM provides training on fundamentals of the ROW program
4	BLM would like RUS to provide training for BLM field offices and RUS to understand broadband technologies and NEPA, BLM can work with RUS to develop curriculum.
4	RUS could train USFS field personnel on broadband technologies and projects.
4	Joint RUS/USFS training needed for local ranger districts on broadband technologies and NEPA processes
4	Written direction from USFS national office might be helpful.
4	NTIA recommends RUS providing training on fiber construction technologies, ESA, Section 106, and wants to be involved.
4	Training in Effects Pathways is available from the USFWS.
Recommendations: Section 106	
2	Lessons learned: Deal with tribal Governments early, respectfully, honestly, bring in RUS and cooperative representative to meet with Tribe at the same time, which makes the meetings more positive
2	RUS federal preservation officer kick started a languishing project by negotiating a PA with a SHPO, but it took a while because RUS could not work on it full time. Tribal and SHPO consultation letter templates developed by RUS very helpful, needs to be broadened to be applicable to federal agencies.
3	Need nationwide programmatic agreement for RUS Telecommunications Program to make mitigation more consistent and efficient.
3	Need tribal notification process similar to FCC's e106 database.
3	Directional boring not often used as archaeological mitigation because not sure how deep or exact location because of "wiggling". Work out the best path through the site in consultation with SHPO for avoidance.
3	Need nationwide or regional programmatic agreement for RUS Telecom Program.
3	Ask for a meeting between RUS and tribe to talk about projects, and ensure that broadband projects are included. Whenever possible, place fiber next to or within existing cable.
3	Section 106 programmatic agreement with pre-determined levels of review would be helpful if this is even possible and agency cooperation can be obtained. Level of review should be lower in disturbed ROWs, but not all agencies see it that way. If fiber installed in existing ductwork or aerial system, then the process should be very simple.
4	FCC e106 database: even though most other agencies cannot access, can FCC just say whether there are sites without identifying type and location?
Recommendations: RUS Processes	
1	RUS should have a line item in the application for a constructability review by the RUS engineers to verify feasibility.
1	RUS should consider using digital public notification processes, rather than just newspaper notices.
2	Requests assistance from RUS on level of environmental surveys needed, such as GIS data from federal/state agencies or field surveys; as well as level of NEPA documentation (project description, ER, EA, EIS)
2	Biggest challenge is knowing what the specific requirements are and level of detail expected in order to submit a completed application. Considering the cost, it would be helpful to have report templates, examples, and FAQs for reference to expedite the process and reduce the

	repeated draft and rework process, causing delay.
2	RUS should develop intra-department and interagency procedures to efficiently and effectively manage the environmental review, permit, consultation, and approvals that are required prior to construction. Assign a RUS environmental staff person to each project to actively engage in borrowers/owners project meetings and discussions, to provide assistance for environmental approvals, and to assist with roadblocks and jeopardy issues to minimize delays and to meet schedules.
2	RUS must give timely information on requirements, with realistic expectations on how long the process will take, recognizing that RUS has fewer people with increased workload. RUS used to have 6-7 environmental staff, now has 3, with everything having to go through the RUS national office.
3	Need to tie RUS down for their decision on the completed application, too unpredictable, and very difficult. Need a pre-committee meeting of the engineers and loan officers to determine what the RUS committee needs so proponent can submit a completed application first try. Use a pre-application process, so loans can be approved in less than the 6 months to a year it takes now.
3	Need access to RUS templates and examples for completed and approved ERs to ensure complete and avoid redrafting. Also list of different permits required. Some RUS templates change with no reasons provided.
3	RUS receives some of the tribal responses, did not tell company of responses or content. RUS does not respond to company of RUS review of class III report, just that it has been received. Since not clear on processes and when processes/standards change, consultant cannot advise and serve client in quality manner. RUS needs a process guidebook.
3	Allow loan package submittals to RUS to be .pdf digital form.
3	It would be helpful if RUS previewed the application to determine if application is complete and will move forward – several sent back for minor missing data. Also, allow electronic submittals as .pdf or CD.
3	Consider a blanket CX for repeat borrowers in same area and omit requirement for new ER. If updating in same area, be allowed to send same ER. An exception would be if existing borrower purchases another franchise area and connects it to their original network, an ER might be helpful. One company had 13 projects in the same foot print, with 13 identical ERs. If new area, then new ER necessary.
3	RUS needs to provide a list of agency contacts in the area that they want involved.
3	Wants to be able to submit environmental information to RUS on-line.
Recommendations: Pre-application Meeting, Surveys, Agency Coordination	
2	For NPS and BIA permits, do not require all locations to be recorded in metes and bounds, but accept field GPS shape files. Surveyors are extremely expensive and metes and bounds make no sense.
2	For new installation within existing transmission or distribution line or other utility or transportation ROWs, waive the need for a study of alternatives for route or installation methods.
2	Accept environmental surveys conducted within 5 years of the new broadband project.
2	Require new surveys only for protected species, jurisdictional wetlands, and archaeology; waive requirements for historic structures and EJ surveys when operating within existing ROWs with no new visual or economic impacts
2	Agencies must coordinate so program applicants can know requirements and standards up front, and have consistency among agencies and units.
3	Pre-application meeting is responsibility of lead agency, but the consultant sets it up, or it will not happen. Consultants also have to drive the process or it will not happen. Build relationships, trust with the agencies, so it is easier to set up meetings and move the process

	forward. Pre-application meeting extremely valuable.
4	FirstNet: First 5 PEIS for 5 regions since regions are different (first draft next year), with 35 agencies (including RUS) invited to be cooperating agencies, hoping to begin communication; 848 letters sent to tribes to begin informal consultations, at least 25 have responded to date; FirstNet's Tribal Liaison is meeting with individual tribal leaders, as a cooperating agency, RUS is invited. Projects are CXs, Records of Consideration, or EIS, tiered to regional PEIS.
4	USFS and RUS should coordinate processing efforts so that a CX, EA, EIS is acceptable to both agencies on whether or not to authorize land use, including sharing resources and working in partnership to eliminate duplication of effort. USFS must still make its own decision. Unlikely that PEA can be used to make site-specific decisions. Local USFS official makes the determination on appropriate level of NEPA documentation for land use authorization decision based on scope of activity, site-specific conditions, and consistency with law, regulation, and LRMPs. The programmatic EA can disclose the necessity for the project, but unless the applicant has consulted with the USFS prior to RUS making a funding decision, there should be no assumption that the USFS can make a decision. The FS must still make its own decision under a separate determination independent of the RUS PEA. The USFS strongly encourages RUS to contact the appropriate USFS environmental staffs responsible for NEPA to obtain information that may make the assessment more robust for consideration.
4	USFS proposed that the affected agencies meet semi-annually or annually to discuss issues and develop streamlines processes to provide better customer service and ensure rural communities have access to reliable broadband service. It may be beneficial to develop a MOU between the USFS and RUS.
4	Proponents must be aware that in many cases they must engage both the tribes and the BIA to avoid unnecessary delays. Normally tribes coordinate with RUS in a government-to-government relationship.
4	RUS and NTIA are not competitors and do not build in the same areas. No NTIA project funding foreseen since ARRA closed. NTIA is a principal advisor to the president on internet/broadband issues (subject matter expert for broadband), manages the federal spectrum, and coordinates with FCC. Developing a local/tribal broadband toolkit for communities. NTIA wants to maintain a close relationship with RUS, as RUS is a key funding agency. NTIA provided training to communities and invited RUS – working on getting users online and using internet for economic development, workforce, education, to help keep young people in home communities. If NTIA received another infrastructure project, would coordinate with RUS. NTIA definitely interested in RUS PEA.
Recommendations: Technologies	
1	Towers: wireless and telecommunications towers – many wireless for broadband are collocated on existing towers, almost no impact. Even when a tower or pole is used with solar panel, the signal has to be collected and sent through fiber. With more LTE and higher speeds and more video streaming, more towers and fiber needed.
2	Using RUS funding, constructs underground and aerial broadband within their existing ROWs and on their own poles. For underground, primarily uses horizontal directional drilling (up to 10 feet deep with 1.25 inch conduit) and vibratory plowing (depth of 3-4 feet in narrow trench with immediate backfilling).
4	FirstNet infrastructure available to RUS borrowers for leveraging into rural areas and vice versa – FirstNet is also required to facilitate broadband for first responders into rural areas. FirstNet managed by a Board. FirstNet is a licensee of FCC. RUS is different from FirstNet, as RUS is not the owner or investor in the networks. USDA is an enterprise partner of FirstNet, and part of USDA/FirstNet Coordinating Council. RUS/FirstNet:

	Facilitate with low interest loans to help tap into affordable debt to meet economic goals to bring in business, keep young people in community. FirstNet towers need fiber backhaul for traffic between towers to meet challenges from buildings/line of sight. 8. Pilot projects for FirstNet: NJ, CO, NM, LA region (Los Angeles NF)
Recommendation: Permit Terms	
4	USFS could issue 20-30 year term permits, with the term in the SUP.
Recommendations: Supplementing Staff	
3	In Utah, AZ, TX, CA, lots of Federal land - USFS, BLM, and BIA. Company provides third party support to agency, has office in BLM, helps with NEPA and writing permits. Works with BLM western region, reviewing all NEPA, cultural resource, and biology documents.
4	BLM has fewer staff, less money to work on applications, field offices cannot backfill realty and resource positions, even with category 6 cost recovery, not enough staff. If applicants hire contractors to conduct resource surveys, cost recovery amounts decreased.

Attachment E: Written Comments

GeorgiaTransmission

Georgia Transmission Corporation
2100 East Exchange Place
Tucker, GA 30084-5336
phone 770-270-7400
fax 770-270-7872

January 27, 2015

Michele Brooks
Director, Program Development and Regulatory Analysis
USDA Rural Development
1400 Independence Avenue SW
Stop 1522, Room 5159
Washington, D.C. 20250-1522

Re: Comments on Environmental Review of Telecommunications Program Projects

This document provides comments in response to the Request for Public Comment put forth on November 28, 2014 by the Rural Utilities Service (RUS) in the U.S. Department of Agriculture. RUS is seeking public and Federal agency comments regarding the preparation of a Programmatic Environmental Assessment for the development of more efficient and effective environmental review process for the RUS Telecommunications Program.

Georgia Transmission Corporation (GTC) is a not-for- profit electric cooperative owned by 38 of the 41 electric membership cooperatives (EMC's) in Georgia. GTC owns approximately 3,000 miles of transmission lines and 600 transmission and distribution substation.

GTC appreciates the opportunity to comment on RUS's proposed Programmatic Environmental Assessment for Telecommunications Projects and is providing comments as a Broadband Provider Stakeholder. In addition to the construction, operation and maintenance of electrical facilities, GTC has constructed several fiber optics projects on new and existing transmission line rights-of-ways and has used RUS's funds to finance these construction loans. In the future, GTC anticipates constructing, operating and maintaining a significant number of fiber optics projects and intends to seek RUS funds for these future projects.

Primarily, GTC has installed fiber optics (both above and underground) within their existing transmission line rights-of-ways. Above ground fiber optics installations have included removing the existing transmission line shield wire and replacing it with Optical Ground Wire (OPGW). Typically, the OPGW has been composed of a core of 96 count single-mode fiber optics wire surrounded by steel and aluminum wires.

GTC has used two methods of underground fiber optics installation: Vibratory Plowing and Horizontal Directional Drilling. In the Vibratory Plowing method, the conduit or fiber optics cable is plowed-in to a depth of 3- 4 feet in a narrow trench. The trench is backfilled and compacted. In the Horizontally Directional Drilling method, a small bore hole is drilled (typically up to 10 feet in depth) and 1.25" High Density Plastic (HDP) is pulled thorough the borehole. Then, the fiber optic is "blown" inside the conduit using compressed air.

1

1. **What are your greatest environmental challenges in completing environmental reviews including NEPA, NHPA and ESA for both wired and wireless technologies?**

    a. Typically, GTC's projects occur within existing transmission line rights-of-way. If the fiber optics project is being done concurrently with the construction of a new transmission line, GTC will have conducted environmental surveys to identify threatened or endangered plant/animal species, jurisdictional features such as waters and wetlands, archeological sites, historic structures and Environmental Justice surveys for the transmission line project.

    In the case of an existing transmission line, these surveys maybe out of date (especially protected species surveys and jurisdictional feature surveys) or the transmission line is so old, it may pre-date the requirements of NEPA, NHPA and ESA.

    b. Given the compressed schedules of the construction of these fiber optics projects, not to mention their modest budgets, conducting these field surveys can be very challenging.

    c. For new fiber optic installation within existing transmission or distribution line rights-of-ways or along other linear corridors, such as road, railroads, pipelines, etc., GTC requests that RUS consider the following:
        i. Waive the need for a Study of Alternatives for the proposed route and/or the installation methods.
        ii. On new or existing electrical facilities, accept environmental surveys conducted within five years of the new fiber optics project.
        iii. Require new environmental surveys only for Protected Species, Jurisdiction Features and Archaeology.
        iv. Waive the requirement for Historic Structures and Environmental Justice surveys. In each case, by staying within an existing transmission line right-of-way, no new visual or economic impact would occur.

2. **For projects requiring the use of Federal land, what are the greatest challenges in obtaining the necessary land use permits?**

    a. Lack of willingness by some federal agency to coordinate NEPA and NHPA requirement with RUS.
    b. Length of time to acquire a permit from a Federal Agency.

3. **What do you believe is a reasonable length of time for RUS to consider a completed loan application, including environmental reviews and compliance, before making a decision to fund a project?**
    a. In general, GTC has planned and constructed fiber optics project within one calendar year. Given that the schedules are compressed on these projects and that the work primarily is being done within existing rights-of-way, GTC would hope that review time for a completed loan application could be done in no more than three (3) months.

4. **What should RUS do to expedite the completion of environmental reviews and compliance during the review of project applications, particularly for projects that cross land with multiple ownerships, *i.e.*, private, Federal, state or tribal lands?**
    a. GTC requests that RUS use expedited, coordinated interagency review on these projects. Authority for this type of expedited review comes from the following federal directives and Executive Orders:
        i. *2009 Agency Memorandum of Understanding Regarding Coordination in Federal Agency Review of Transmission Projects.*
        ii. Executive Order 13604 "*Improved Performance of Federal Permitting and Review of Infrastructure Projects*" March 22, 2012.
        iii. Executive Order 13616 "*Accelerating Broadband Infrastructure Deployment*", June 14, 2012.

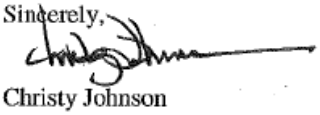
5. **What additional guidance do you want from RUS field personnel to assist you in completing the necessary requirements for a loan or grant application, including environmental reviews and Federal land use permits if they are needed?**
    a. Assistance from RUS personnel regarding what level of environmental surveys are needed. Are there cases where "desk top" Geographical Information Systems (GIS) data from Federal and State Agencies would be sufficient?
    b. Assistance from RUS personnel regarding the appropriate level of environmental documentation i.e., Project Description, Environmental Report, Environmental Assessment, Environmental Impact Statement.

6. **What environmental protection measures and /or design and construction standard operating procedures for environmental protection have you found to be most efficient and cost-effective?**
    a. Conducting environmental surveys (ecology, jurisdictional waters and wetlands and archeology) to determine areas that need protection and/or permitting.
    b. Determining equipment and material needed for construction work (i.e. types of drilling lubricants for underground boring)

c. Using Horizontal Directional Drilling under jurisdictional waters and wetlands to avoid impacting these drainage systems and to minimize time consuming permits from US Army Corps of Engineers.

Georgia Transmission Corporation appreciates this opportunity to comment on the U.S. Department of Agriculture (USDA) Rural Utilities Service (RUS) request for public comment and hopes this information will enable RUS to evaluate the impact of the proposed regulations on electrical membership cooperatives.

Sincerely,



Christy Johnson
Group Lead Siting and NEPA Compliance
Environmental Services
Georgia Transmission Corporation

Cc:
R. Vince Howard

Bcc:
John Raese

4

MID-STATE CONSULTANTS

January 22, 2015

Michele Brooks, Director
Program Development and Regulatory Analysis
USDA Rural Development
1400 Independence Avenue, SW
Stop 1522, Room 5159
Washington DC 20250-1522

Dear Ms. Brooks,

Enclosed are comments in regards to the Rural Utilities Service Request for Information, Environmental Review of Telecommunications Programs. These comments were prepared by staff of our firm.

We appreciate the opportunity to provide these comments for review.

Kindest regards

Susan Creer
Operations Specialist

Enclosures

PROVIDING COMMUNICATION
SYSTEMS ENGINEERING

CORPORATE OFFICE
1475 NORTH 200 WEST
POST OFFICE BOX 311
NEPHI, UT 84648
TEL: (435) 623-8801
FAX: (435) 623-8810

REQUEST FOR INFORMATION: Environmental Review of Telecommunications Program Projects:

As a representative of an engineering firm that provides services for several RUS borrowers, these are my comments:

1. What are your greatest challenges in completing environmental reviews including NEPA, NHPA, and ESA for both wired and wireless technologies?

   Frankly, the difference in what you are required to do "by State" or area is one of the biggest issues in my opinion. What one state requires is totally different than what another state requires. And, with the new RUS Guidelines for Loan Applications – we are stuck having to at least "try" to meet the State requirements before the RUS will approve the loan application and release funding.

   The requirement to obtain SHPO concurrence during the pre-loan phase is next to impossible (in some states) without the applicant having large expenditures for survey work. And the other question, "What do they survey?" During the pre-loan phase, in most cases the detailed field engineering has not been completed and so the routes for construction have not been fully developed.

   Some State Historic Preservation Offices require extensive survey work which seems unreasonable. For example: many states will not require survey work when facilities are being placed within previously disturbed highway right-of-way. The State of Montana wants every inch surveyed. If it is has not been surveyed in the past, then a Class III survey is required before clearance will be given by the agency. Very often, private landowners do not want surveys conducted on their property. Other state agencies also require survey work before they will issue a permit, but the RUS does not require the approval from all permitting agencies before issuing clearance.

   Obviously the other big issue is what federal entities are present within the project area. Getting a Forest Service or Bureau of Land Management permit can take up to a year or more (from our experience in the West). The excessive length of time required for review and approval from federal agencies such as the BLM and Forest Service definitely causes delays. If there are guidelines that the agencies follow, they do not appear to be applied uniformly. Until the application is submitted, we have no idea what will be required. Just the length of time required for the agencies to determine their own requirements is extensive. Once a response is received, the requirements sometimes seem excessive. Example: Forest Service required the bottom of a canyon ravine to be surveyed (Class III) for aerial placement across a canyon.

In my experience, the RUS will not make a determination until the other federal agencies have cleared or approved the project. This has been true in my experience about 95% of the time. The exception was one project in Montana where the BLM refused to approve the ROW Grant until the RUS had given ER clearance. The RUS also typically cannot or will not overrule or dictate to another federal agency, even if their requirements appear to be excessive. I think there is possibly too much overlap between ER Clearance by the RUS, and actual Right-Of-Way procurement. The RUS should be able to give ER clearance contingent on the borrower getting approval or being granted rights-of-way from other federal agencies in the project area. Obviously, construction cannot be started until all permits have been secured.

We have gone from one extreme to the other. In the past, we corresponded with all of the agencies when putting together the Loan Application. In the end in most cases, the RUS gave approval with the understanding that site-specific environmental review would still be needed. Then we were allowed to submit the Generic ER for loan application approval – again with the understanding that site-specific environmental review would be completed. The new requirement to gain environmental clearance prior to the loan application being approved is desirable, but not easily achieved.

There is also confusion regarding exactly what is needed – is it an ER? Is an EQ? The RUS requirements are sometimes murky and difficult to determine.

2. **For projects requiring the use of Federal land, what are the greatest challenges in obtaining the necessary land use authorizations or permits?**

   Again, the excessive amount of time required. Often, the federal agencies state that they have a 'lack of personnel or time' for agency review. Also, the work required varies greatly from one office to another depending on the experience of the field office staff. There is little or no consistency and we are at the mercy of the experience of the staff we end up working with. Additionally, some of the requirements appear to be autocratic rather than a sincere effort to act as a steward of the lands for the public. There is absolutely no common sense in some cases.

   When more than one federal agency is involved, no clear understanding exists regarding which agency will take the role of 'lead agency'.

3. **What do you believe is a reasonable length of time for the RUS to consider a completed loan application, including environmental review and compliance, before making a decision to fund a project?**

   30 to 60 days. And, the entire application should be reviewed in detail from start to finish and then a comprehensive list of items sent to the potential borrower for correction so that hopefully everything can be corrected at the same time.

While I understand the workload of field staff, it has already been our experience that it takes so long for the GFR to review the loan application that we are required to obtain new signature documents prior to the loan being submitted to Washington DC. If the submittal is delayed to late in the calendar year, then new financials are also needed. All of this is frustrating and costly for the potential borrower.

4. What should RUS do to expedite the completion of environmental reviews and compliance during the review of project applications, particularly for projects that cross land with multiple ownership, i.e., private, Federal, state or tribal lands?

   The idea of having a programmatic agreement in place with pre-determined required levels of review should assist in this regard if this is even possible and agency cooperation can be obtained. For example: if the project is being constructed entirely along a pre-disturbed highway ROW, then the level of review should be less than needed for a project being constructed across lands that have not been previously disturbed. Not all agencies see it that way. For projects where fiber will be installed in existing ductwork, there should be a simple system to submit the project and have it approved. Aerial projects using existing poles should also have an easy approval method.

   The problem is gaining cooperation from the other governing agencies.

   We have also been hearing for some time that a system would be created to allow environmental information to be submitted online. I am unfamiliar with working in the FCC system that apparently allows tower approval; and I have not heard of any other online system for ER submittal.

5. What additional guidance do you want from RUS field personnel to assist you in completing the necessary requirements for a loan or grant application, including environmental reviews and Federal land use permits if they are needed?

   The RUS needs to have established and clear rules for environmental review and training should be provided to all of the RUS field personnel. Right now, there are varying levels of what is required by each individual field staff member.

   The same is also true for the in-office environmental staff. What one environmental specialist requires is not the same as what another staff member requires.

   In general, there doesn't appear to be consistency in the application of the CFRs, rules and procedures with the Agency. This makes it difficult for the borrower as well as their engineering firm to determine what will be needed. What typically works in one area, does not work in another.

3

We have yet to see the new RUS environmental procedures which will hopefully shed some light on what is actually required. Right now, it seems like a moving target.

Even when clear guidelines are provided, it seems likely that the GFRs will interpret and apply them non-uniformly (the same as now).

6. **What environmental protection measures and/or design and construction standard operating procedures for environmental protection have you found to be most efficient and cost-effective?**

   Frankly, many of the rules as applied to telecommunications projects are ridiculous and I haven't found any of them to be particularly helpful. The majority of these projects have very low potential of causing irreparable harm to the environment; and no 'standard' appears to exist that is always efficient and cost-effective. Instead, we are always at the mercy of each agency as well as the agency individual staff requirements.

Request for Information: Programmatic Environmental Assessment for the Telecommunications

1. What are your greatest challenges in completing environmental reviews, including NEPA, NHPA, and ESA for both wired and wireless technologies?

Our biggest challenge in completing environmental reviews involves the preparation of the Environmental Report (ER). Specifically, there are financial and engineering challenges that arise when trying to prepare the document prior to the approval of the loan.

This report must be sufficiently detailed to allow the RUS to determine the environmental effects of the proposed project. To meet these requirements a great deal of effort goes into preparing each inter-agency correspondence. It typically takes an agency at least 30 days to respond to each request. One of the issues, is that we are often not able to provide the agencies with sufficient information for them to conduct their full environmental review. These agencies need detailed specifics rather than general information. At the time the ER is prepared only general information is known about the project. No detailed engineering or design has taken place. As a result, a typical response is that more information is needed. In order to provide them with this, field staking must first be completed and the necessary environmental surveys (rare species surveys, wetland delineations, etc.) performed. However, our clients often don't have the necessary financial resources to begin this process, which is the very reason they are applying for a loan in the first place.

The overall purpose of the ER is for the RUS to determine the projects total impact on the environment and help determine if any extraordinary circumstances exist. However, based on the reasons mentioned above, this document is often insufficient in helping making the necessary determinations. As a result, the RUS is often required to wait until more comments are received from the agencies and this can only occur when project engineering and design are complete.

To summarize, the ER is required to be submitted during the initial application process yet requires information that is often not obtained until months down the road when federal, state and local permits are being obtained. Although beneficial in some regards, changes in the ER requirements need to be made. General comments can certainly be made for each of the key environmental resources (end/thr species, wetlands, archaeological/historical, etc.), explaining how the project will mitigate any impacts, but specific detailed comments regarding them are simply not available at this stage in the process. It would be a great benefit to our clients if the loan could be approved based on the general ER comments with an understanding that all environmental compliances will be met. Specific environmental concerns will be addressed and resolved through the federal, state and local permit process.

SHPO (NHPA):

All Federally funded projects require a Section 106 Review. Typically, RUS requires a "Class 1 Cultural Resource Inventory" or "records search" that identifies archaeological/historical sites within or near the project route. Part of this search involves accessing SHPO's GIS database and the National Register of Historic Places (NRHP). However, in some states we are not able to access their databases and as a result SHPO must perform this search. This information is then submitted to SHPO for review and comments. Each correspondence with SHPO takes at least 30 days for a response.

The initial comments received from SHPO typically request that staking sheets be submitted for review so they can make a determination of which sites are most likely to be impacted by construction. However, as previously mentioned, this is an issue as our clients may not have sufficient funds to complete this prior to loan approval. This can have a huge delay on the overall project. Even when field staking is complete it will take another 30 days just to get a response from SHPO.

It's very rare that a project does not have any archaeological/historical concerns. As a result, SHPO typically requests that an archaeological records check/literature search be completed along with any necessary field surveys. We are required to hire an archaeologist who often takes a month or more to compile his search results and field work into a report. This report must then be sent to SHPO for review. It often takes SHPO another month at least to respond. Sites are either cleared by SHPO, where work can occur as planned or an archaeologist may be required to monitor construction in questionable areas.

Overall, this process is one of the most challenging, time consuming and expensive reviews we face. It requires the back and forth approval of both RUS and SHPO as each agency seeks the others approval. RUS will not issue the loan until Section 106 compliance has been met. Construction approval often takes several months to complete. This is often one of the last permits to be approved.

USFWS (ESA):

All Federally funded projects require a Section 7 consultation. Depending on the state you are working in this process is either completed using the online self-assessment tool or by submitting project information to the local USFWS office. When a project is submitted to a local office it typically takes 30 days to receive comments.

The main concern here is with the Karner blue butterfly (KBB) and the impacts is has on Wisconsin projects. The USFWS has created a high potential range (HPR) for the butterfly, which is an area where the probability of the Karner blue butterfly occurring is 50% or greater. When a project falls within this HPR then the project must be concerned about the KBB. Survey protocols established by the DNR must be followed and can include surveys by a qualified biologist for the butterflies host plant, lupine. Lupine can be reliably surveyed for from green-up (usually beginning mid-May) until July 31. If lupine is identified in sufficient quantities, then that can trigger adult butterfly surveys. Three adult butterfly surveys must be conducted during the two peak flight periods which occur late May - early June and late July - early August.

In some instances, the USFWS has allowed us to forgo the adult surveys if several conditions are met. This includes boring all lupine plants (at a depth of 4'), flagging all lupine in the field, and informing the contractor of the KBB issue. However, these mitigation measures aren't always satisfactory and are determined on a project by project basis by the USFWS. As a result, it is very difficult to plan projects when the KBB is involved. All of the surveys and mitigation measures are very time consuming and costly. The construction season is very limited and when the full survey protocols are required the entire summer can be spent on obtaining USFWS project clearance. Projects can be pushed out an entire year when some of the survey dates cannot be met. RUS typically requires USFWS clearance before the Loan application can be processed. As a result, this entire process can have a domino effect on the entire construction project causing significant and costly delays.

2. For projects requiring the use of Federal land, what are the greatest challenges in obtaining the necessary land use authorizations or permits?

For projects requiring the use of Federal land, the greatest challenge is obtaining land use authorizations/permits from the National Forest. The Forest Service is usually understaffed and has a backlog of permit applications making for long wait times. On average it typically takes at least 1 year to receive a special use permit. In one instance, a project intended to plow in 1350' of cable within a previously disturbed upland road right-of-way, and took a little over 5 months for the permit to be approved. In some instances, we have been told it will take a year for them to even start looking at the permit application.

The entire process is extremely time consuming and expensive. The Forest Service has their own resource specialists who all must provide comments on the project before final approval is granted. Some of the specialists can include a biologist, botanist, hydrologist, forest planner, and archaeologist. To help assist in their review we often send them comments/permits that we have received from other agencies. However, even though a lot of the same environmental concerns (end/thr species, wetlands, archaeological/historical) have already been addressed or surveyed for on an overall project basis, these specialists are required to conduct their own analysis. This often means that their own surveys must be conducted and sometimes these can only be conducted at certain times of the year which can cause significant delays.

The Forest Service can also request that an Environmental Assessment (EA) and Biological Evaluation (BE) be prepared for the project. These documents are very in-depth and can take months to prepare. We are often required to comment on irrelevant topics such as noise, recreation, visual quality and socio-economics. They also require comments on special concern species, which are not legally protected.

Overall, the Forest Service is basically like all of the other permitting agencies wrapped up into one, often requiring the same information but often scrutinizing each project in greater detail. Even once construction is granted there are certain mitigation measures the contractor must follow such as using a Forest certified seed mixture for erosion control purposes and washing equipment to prevent the spread of invasive species.

RUS typically cannot complete their review process until the Forest specialists have conducted their environmental reviews. It would be helpful if the RUS could work with the National Forest to make their review more efficient and less expensive being that both are federal agencies.

6. What environmental protection measures and/or design and construction standard operating procedures for environmental protection have you found to be most efficient and cost-effective?

The majority of fiber optic projects have a minimal impact on the environment as a result of their location. Most projects are taking place in road right-of-ways (ROW) that are often pre-disturbed in some way. Many have existing utilities, power poles, fences, signs, and other objects already existing within them. They are also typically regularly maintained (mowed) by the State, County or local governments throughout the year.

Construction practices have also improved over the years and the use of vibratory plowing and directional boring methods to place cable greatly reduces any environmental impact. Vibratory plowing is a trenchless installation method that only results in minimal surface disturbances that are easily restored. Directional boring allows for the complete avoidance of any environmentally sensitive areas. For example, all waterways are directional bored and wetland impacts are greatly reduced or avoided entirely by this method. Rare species habitat or species themselves can also be avoided using this. Although expensive, directional boring is a quick and efficient means to avoid environmental concerns and keep a project moving forward.

Other environmental protection measures can include route redesign such as switching sides of the road or moving hand hole/pedestal locations. Although possible, these options can be more costly and time consuming.

In some instances, permits may require environmental monitors (biologists/archaeologists) to be on site to monitor construction or clear an area before work begins. This is often very costly to our clients and is not something that is very practical.

RUS RFI: Programmatic Environmental Assessment for the Telecommunications

Broadband Providers

1. What are your greatest challenges in completing environmental reviews, including NEPA, NHPA, and ESA for both wired and wireless technologies?

One of our biggest challenge is knowing in advance by agency what the specific requirements are and the level of detail expected in order to fulfill these requirements and submit a complete application/report/etc. Given the cost involved, and it could be quite substantial, it would be helpful for each of these agencies to have report templates, forms, examples, and frequently asked questions and answers available for reference. This would help expedite the process and reduce the back and forth clarification and rework process which adds lag to project completion.

Another challenge is knowing which federal agency is the lead agency who is responsible for the initiation, coordination, and conclusion of all permitting/consultations and actions that are required. This is a critical element of the process. It is our understanding that a non-federal agent cannot initiate or request actions from any federal agency for environmental action without assignment from the lead federal agency. Without knowing who the lead agency is, a lot of time is spent unnecessarily attempting to find who the lead agency is. One would assume that depending on the nature of the request/application, a lead federal agency would be assigned at the outset accordingly.

For example, on the ASTCA BLAST project, the owner submitted an Army Corps Permit application and was told that the Corps would not be taking on the role as lead federal agency. The Corps engineer asked that we (owner) ask the RUS to take the lead in coordinating meetings and consultations among all federal agencies who have direct interest in the issuance of an Army Corps Permit. The Corps engineer stated that the Corps was too busy to initiate action and since the RUS is the approver of the BLAST project they should take the lead. The RUS was finally designated as the lead agency after many weeks of calls, discussions, emails, follow-ups, etc.

However, it is still unclear as to which federal agency should have the responsibility to be the lead agency based on the application itself rather than on which agency is "not busy". The lead agency differs among similar projects and the inconsistency creates confusion.

2. For projects requiring the use of Federal land, what are the greatest challenges in obtaining the necessary land use authorizations or permits?

NOT APPLICABLE to BLAST

3. What do you believe is a reasonable length of time for RUS to consider a completed loan application, including environmental reviews and compliance, before making a decision to fund a project?

No Comment - Was not on the BLAST project during the initial loan application phase.

4. What should RUS do to expedite the completion of environmental reviews and compliance during the review of project applications, particularly for projects that cross land with multiple ownership, *i.e.*, private, Federal, state, or tribal lands?

No Comment - Was not on the BLAST project during the initial loan application phase.

5. What additional guidance do you want from RUS field personnel to assist you in completing the necessary requirements for a loan or grant application, including environmental reviews and Federal land use permits if they are needed?

No Comment - Was not on the BLAST project during the initial loan application phase.

6. What environmental protection measures and/or design and construction standard operating procedures for environmental protection have you found to be most efficient and cost-effective?

BMPs and operating procedures from related construction activities have been found to be the most efficient and cost-effective implementation method for protection of the environment. Additionally, field training, informal or formal, should be a requirement for all operations personnel working on the project to effectively administer any type of environmental protection measures.

Use of on-site professionals strictly for monitoring compliance, though effective, is far too costly and in some instances causes unnecessary delays and complexity into a project.

7. Additional Comment: Post Loan Assistance

Since any post loan construction activity cannot proceed without the expressed written consent of the RUS Environmental Staff, it would be in the best interest of the RUS and borrowers (i.e., project owners) for the RUS to develop intra-department and inter-agency process and procedures to efficiently and effectively manage the environmental review, permit, consultation, and approvals that are required prior to the start of construction activity.

It would also be very beneficial for the RUS Environmental Staff to assign an environmental staff specialist to each project to actively engage in the borrowers/owners project meetings and discussions and to provide assistance in matters that require environmental approvals. The RUS Environmental Staff Specialist should also assist with any roadblocks and jeopardy issues to minimize delays and ensure project schedules are met.

United States Department of Agriculture | Forest Service | Washington Office | 1400 Independence Avenue, SW Washington, DC 20250

File Code: 2720
Date: January 27, 2015

Michele Brooks
Director, Program Development and Regulatory Analysis
USDA Rural Development
1400 Independence Ave. SW., Stop 1522
Room 5159
Washington, DC 20250-1522

Dear Ms. Brooks:

I am writing in response to docket number RUS-14-Telecom-0008 to submit Forest Service comments to Federal Register notice dated November 28, 2014 for the Rural Utilities Service Environmental Review of Telecommunications Program Projects. The pertinent questions and Forest Service responses are listed below:

1. How and when would you like to be contacted regarding a pending Telecommunications Program project application that relates to or affects your agency's responsibilities?

FS Response:
The Forest Service would like to be contacted prior to a proponent applying to RUS for a loan or grant funding for construction, improvement, expansion, or acquisition of wired or wireless infrastructure when such improvements occupy and use National Forest System lands. Early notice to the Forest Service allows the agency to consult with the applicant regarding consistency with laws, regulations, policies and the applicable forest land and resource management plan. The Forest Service also requests consultation by the RUS prior to a determination being made whether or not to fund a project. When consulted in the early stages of a proposal, the Forest Service may be able to advise the proponent on site specific requirements, including possible prohibited uses. There may be situations where the Forest Service may not authorize new construction, improvement, expansion, or acquisition. For example, at some designated communications sites new construction for wireless facilities may not be allowed due to co-location opportunities with existing facilities.

2. Telecommunications Program projects at times require the use of Federal land, requiring authorization by the relevant Federal land management agency. The land use request prepared by the applicant is summarized in a SF-299 form with appropriate attachments. What information, studies, and reports are most important to you in fulfilling your agency's responsibilities for environmental review of the decision to authorize, modify, or deny a requested land use? Is there a difference in requested information if the proposal is a wired or wireless proposal?

FS Response: Any proposed occupancy and use of a wired or wireless infrastructure on National Forest System lands requires a proponent to file a written proposal or present orally to the

District Ranger or Forest Supervisor having jurisdiction over the affected land. The proposal content must meet the requirements set out in 36 CFR 251.54 (e.g., proponents name and address, corporate information if applicable, technical and financial capability, and project description), and only when the request for proposed use meets the criteria of both the initial and second-level screening processes as described in this section, does the Forest Service accept the proposal as a formal application. The key is for proponents to provide as much clear detail in their proposal to inform the Forest Service of what they want to do, where they want to do it and elaborate on the details regarding the short term and long term occupancy and use of National Forest System lands.

There is not a difference to the Forest Service for wired or wireless proposals regarding the general information needs, except as previously noted above.

3. If your agency requires an applicant to submit environmental information to be evaluated during the consideration of a request to use Federal land, how is guidance provided to the applicant by your agency prior to completion of the SF-299? What role should the Telecommunications Program play in providing guidance to such applicants?

FS Response: Proponents are required to contact the Forest Service office(s) responsible for the management of the affected land as early as possible. Early notice allows the Forest Service to conduct a pre-application meeting with the proponent to provide them with information and advice on their specific proposal, including unique conditions or restrictions applicable to the area they propose to occupy and use. Proponents should take into account that if their proposal is accepted by the Forest Service and further processed as an application, that Cost Recovery fees to fund the processing (environmental analysis, decision, etc.) as well as the monitoring for a project are very likely to be assessed (36 CFR 251.58). The Federal Land Management Policy Act (FLPMA) at section 504(g) makes it explicit that entities eligible for financing may be exempt from a land use fee, but not a cost recovery fee.

The RUS Telecommunications Program can inform their applicants to consult with the land management agency prior to applying for financial assistance. This early coordination could help alleviate potential delays in approving applications and avoid authorizing financial assistance to an entity that cannot fulfill their obligations.

4. The Programmatic Environmental Assessment of the Telecommunications Program will outline the Federal land management agencies' categorical exclusions and procedures for identifying extraordinary circumstances. The RUS environmental document will also acknowledge that the use and occupancy of Federal land by some Telecommunications Program projects is necessary and, in particular circumstances with necessary authorizations, appropriate. What barriers do you envision in adopting a RUS environmental document in the consideration of your agency's decisions to authorize a special use permit by a Telecommunications Program participant?

FS Response: The Forest Service and RUS should coordinate processing efforts so that an environmental document (categorical exclusion, environmental assessment, or an environmental impact statement) is acceptable to both agencies to make a decision on whether or not to

authorize the occupancy and use of National Forest System lands. This would mean sharing resources and working in partnership to eliminate duplication of efforts. The Forest Service must still make its own decision.

It is unlikely that the programmatic environmental assessment can be utilized to make site specific decisions. While appropriate to disclose the Forest Service list of categorical exclusions and extraordinary circumstances; until a proposal has been submitted and accepted as an application can the local authorized officer make a determination as to the appropriate level of analysis necessary based on scope of the activity proposed, conditions on the ground, and consistency with law, regulation, policy and forest and grassland management plans. The programmatic assessment can disclose the necessity for the project, but unless the applicant to RUS has completed prior communication with the local Forest Service office and RUS has consulted with the Forest Service prior to making a funding determination; there should be no assumption that the Forest Service can make a decision. The Forest Service must still make its own decision under a separate determination from the programmatic assessment.

The Forest Service strongly encourages the RUS to contact the appropriate environmental analysis staffs responsible for NEPA to obtain information that may make the assessment more robust for consideration.

5. How can RUS and other Federal agencies work together to share information as well as train managers and staff at the field levels regarding broadband issues and necessary environmental reviews and Federal decision making, including land use authorizations?

FS Response: The Forest Service proposes that the affected agencies meet semi-annually or annually to discuss issues and develop streamlined processes to provide better customer services and ensure rural communities have access to reliable broadband services. It may also be beneficial to develop a Memorandum of Understanding between the RUS and Forest Service.

If you have any questions regarding our responses in this matter, please contact Joey Perry, Communications Site Program Manager of the Lands & Realty Management Staff at (530) 252-6699.

Sincerely,

/s/ Gregory C. Smith
GREGORY C. SMITH
Director of Lands & Realty Management

Before the
Rural Utilities Service
Washington, D.C. 20250

In the Matter of	)	
	)	
Environmental Review of	)	Docket No. RUS-14-Telecom-0008
Telecommunications Program Projects	)	
	)	

COMMENTS
of
WTA – ADVOCATES FOR RURAL BROADBAND

I. INTRODUCTION

WTA – Advocates for Rural Broadband (WTA) submits these comments to the Rural Utilities Service (RUS) on the subject of its Public Notice[1] seeking comment on the development of a more "efficient and effective environmental review process for the RUS Telecommunications Program" to "support the agency's mission of facilitating the development of affordable, reliable utility infrastructure to improve the quality of life and promote economic development in rural America."

WTA represents more than 280 small, rural telecommunications carriers providing voice, video and data services in the United States. WTA's members serve some of the most rural and hard-to-serve communities in the country and are on the forefront of bringing 21st Century telecommunications services to rural America. The rural, independent telecommunications providers represented by WTA have a long-standing relationship going back 75 years with RUS and its predecessor agency, the Rural Electrification Administration (REA). The vast majority of providers WTA represents were, at one time, RUS/REA borrowers and many of them continue to

[1] Rural Utilities Service, Environmental Review of Telecommunications Program Projects, 79 Fed. Reg.

borrow from RUS today. WTA members have a stake in making sure that the RUS telecom and broadband loan programs are both effective drivers of broadband in rural America and efficient, sustainable uses of taxpayer resources.

WTA understands the importance of protecting threatened and endangered species, preserving historically and culturally significant lands and structures, and safeguarding fragile ecosystems. These needs must be balanced with the public policy objective of ensuring all Americans have access to a modern and affordable communications network. If there are ways in which costs of building and maintaining a communications network can be reduced without sacrificing the important principles above, RUS should look to do so. In this spirit, WTA recommends that RUS consider the following reforms to its policies and practices as it implements aspects of the National Environmental Policy Act, the National Historical Preservation Act, the Endangered Species Act and other applicable statutes.

II. RUS SHOULD AVOID DUPLICATIVE ENVIRONMENTAL REVIEWS

When WTA members lay new fiber or embark on new construction it is almost always easier to do so along roads, where other infrastructure (drainage, conduit, power lines, etc.) has already been buried or constructed, or along existing rights-of-way. When it comes to well-used highways and roads, it is likely that the area around the road has been disturbed recently for other maintenance and construction purposes. It is also highly likely that anything of note under the ground has already been disturbed and that concerns about threatened or endangered species have been addressed. Therefore, RUS should be more flexible with environmental reviews in these situations so that companies' limited resources, that could be used to build out broadband, are not redirected towards superfluous administrative reviews.

While anecdotal, there is evidence for a greater need for flexibility. For example, one WTA member reported having to conduct an environmental review when seeking to lay conduit between a road and existing conduit. In another example, an applicant was seeking to cross a portion of Bureau of Land Management (BLM) land measuring less than 1500 feet, yet BLM requested a full biological survey of land covering five miles wide that had already been disturbed by previous infrastructure construction. WTA member companies have also reported incidences of an environmental review being required by RUS when they were seeking to place above-ground infrastructure near existing above-ground power lines. If the power lines were not disturbing the surrounding environment, it is not likely an additional piece of equipment would do so.

In addition, local departments of transportation often spray to keep foliage away from roads or take other actions to restrict the growth of unwanted vegetation. It is unlikely an endangered or threatened species is thriving in these situations, yet environmental reviews to determine whether species would be harmed are required.

It is fair to presume that recent environmental reviews have already been completed in the aforementioned circumstances; therefore, requiring RUS loan applicants to duplicate these reviews is an inefficient use of time and resources. RUS should use its discretion under NEPA and only require environmental reviews for areas of proposed construction where a previous environmental review has taken place so long ago that it would no longer be applicable or where there is no other prior human disturbances.[2]

[2] A WTA member company relates that its State Historic Preservation Office requires a review if there is no record of a previous review in the last 10 years.

III. RUS SHOULD PERMIT A MORE GENERAL REVIEW IN EARLY STAGES OF THE LOAN APPROVAL PROCESS

The cost of conducting an environmental review with all its potential considerations (threatened and endangered species, historical and cultural resources, wetlands, floodplains, fish and wildlife, aesthetics, etc.) is significant. In general, loan applicants must complete a full environmental review early on in the loan approval process. According to WTA members, however, this has not always been the case. In the past, RUS allowed a more general generic Borrower's Environmental Report (BER) to be submitted early in the loan approval process, but now requires a very specific full environmental review at that point in time. WTA recommends returning to the previous policy for two reasons.

First, from the applicant's and the permitting agencies' perspectives, it makes more sense to conduct the environmental review later in the loan process when more detailed information about the project requiring financing will be available to both the applicant and the permitting agencies, which will save time and money on both ends. For example, one WTA member related that early in the loan application process, it had yet to determine which side of a road it might lay fiber for a construction project it was considering. However, the side of the road mattered greatly to the permitting agency and as a result the telco/applicant had to spend more resources for a project still in the initial stages of being planned. If the applicant could have waited until later in the loan application process to contact the permitting agency, it would have saved both the applicant and the permitting agency valuable time and resources. An another instance, an applicant was told by the local State Historic Preservation Office that it would have preferred having been contacted later in the process with more detailed information rather than with less detailed information earlier on in the application process.

Second, if a full environmental review is delayed until later in the application process, the risks of sinking money into a review for a loan that ultimately does not get approved are lessened. WTA recommends altering the process to allow for a more general BER early in the loan application process and then, later on in the approval process, or even after loan approval but prior to disbursement of funds, a full environmental review would be required by RUS. This change has the potential to save applicants, RUS, other federal and local agencies, and other entities time and money.

IV. RUS SHOULD REVIEW PUBLIC NOTICE REQUIREMENTS

Section 1794.13 (7 CFR) rightly requires loan applicants to engage the public in the environmental review process and alert the public to the "nature, location, and extent of the proposal action and indicate the availability and location of additional information." The regulations require the publishing of information in newspapers along with "such other places as RUS determines." RUS proposes in its Programmatic Environmental Assessment (PEA) to create a more "efficient and effective environmental review process." In accordance with this goal, the proposed PEA would be a good opportunity to review and evaluate whether the current regulations and practices regarding public notices are the most effective way to reach the public. As information transitions away from print onto the Internet and other forms of electronic communications, RUS should consider whether publishing notices in the newspaper is the most effective way to reach the local community. For example, many towns and cities now alert their residents to civic functions, events, and important governmental changes using email.

In many small towns and rural areas, the newspaper might be the most effective way to notice the public, but RUS should, at the very least, consider alternatives during the process of its assessment of its regulations.

V. RUS SHOULD MAKE CHANGES TO PRACTICES TO ENSURE A SMOOTHER PROCESS

While not regulatory changes, *per se*, there are other adjustments to practices and procedures that WTA recommends RUS make.

a. RUS Guidance bulletins

It is important that the guidance bulletins created by RUS to help potential borrowers navigate the environmental review process are kept up to date. RUS Bulletin 1794A-600 is intended to assist applicants in preparing an environmental review, yet it does not appear to have been updated since 1998. There are undoubtedly resources that exist today that did not exist in 1998 that would be of assistance to borrowers in fulfilling their obligations regarding environmental reviews.

b. Mapping software

WTA recommends RUS review and reevaluate in which format it requires applicants to submit mapping data. According to experts WTA has consulted, there is a trend towards using Google mapping technology[3] both in the industry and in other federal agencies. While there are most likely pros and cons to any format, RUS should seek to keep up-to-date with industry trends and other federal agencies so that applicants are not required to use different mapping formats depending on with which agency they are dealing.

[3] Keyhole Markup language Zipped, or .KMZ

c. Lead Agency Delays

When projects are proposed for land managed by a federal entity (Bureau of Land Management, U.S. Forest Service, U.S. Fish and Wildlife, etc.) that entity is designated the "lead agency." WTA member companies have experienced significant delays when this designation has taken place. For example, one WTA member's loan application was delayed over a year after the U.S. Forest Service was designated the lead agency. In addition, applicants often do not know whom to contact at the other agencies to check on the status of their application. RUS should work with these other agencies to establish clear points of contact and make sure loan applicants are aware of these points of contact. WTA commends RUS for reducing the amount of time it takes to process a loan application over the last several years and encourages RUS to continue working with other federal agencies to lessen this time in order to promote and further enable the build-out of broadband in rural America.

VI. CONCLUSION

WTA applauds RUS' initiative to update its regulations and practices regarding environmental reviews. There is no reason why efficient broadband build-out in rural America has to come at the expense of the natural and built environment. The anecdotal evidence WTA has been able to glean from its members companies and other experts in the field points to a need for review and reform that would not compromise the principles outlined in the various applicable environmental statutes.

Respectfully Submitted,

WTA - ADVOCATES FOR RURAL BROADBAND
By: /s/ Derrick Owens

Derrick Owens
Vice President of Government Affairs
317 Massachusetts Avenue N.E., Ste. 300
Washington, DC 20002
(202) 548-0202
derrick@w-t-a.org

By: /s/ Eric Keber
Eric Keber
Director of Government Affairs
317 Massachusetts Avenue N.E., Ste. 300
Washington, DC 20002
(202) 548-0202
eric@w-t-a.org

Dated: January 27, 2015

Appendix G. Useful Databases, including Spatial Databases (GIS)

The White House Initiative Broadband Working Group GIS Database

The White House Initiative Broadband Working Group developed a GIS-based database that displays all GSA-owned buildings and lands where a commercial antenna installation may be sited, as well as point of contact (POC) information. This GIS database also displays layers offering visibility information related to national parks, protected wilderness areas, BLM lands and Areas of Critical Environmental Concern, road and boundary base maps, topographic maps, military lands, the National Park Service Spatially Explicit Regional Growth Model, national forests, and lands of tribal significance. (http://www.permits.performance.gov/broadband_map) (viewed 7/6/2015)

The White House Initiative Infrastructure Projects Broadband Inventory

http://www.permits.performance.gov/broadband_inventory?field_bi_responsible_agency_value=All&field_bi_resource_type_value=All&field_bi_function_value=All&field_optional_value=1 (viewed 7/6/2015)

This database provides a source of useful planning tools for broadband projects. In addition to links to agency regulations and guidance for obtaining permits, the site provides links to some relevant databases, including information on regulatory permits and consultations (http://www.permits.performance.gov/permit-inventory)

The site includes searchable information regarding:

- Bald and Golden Eagle Protection Act;
- Clean Water Act Section 404;
- Endangered Species Act, FWS and NOAA;
- National Pollutant Discharge Elimination System (NPDES);
- Rights-of-Way Authorization (FWS, BIA, BLM, BOR); and
- Special Use Permits (USFS, BLM).

FCC Tower Construction Notification System (TCNS)

http://wireless.fcc.gov/outreach/notification/TCNS_tribe.pdf

This system is an on-line password-protected system intended to advance the goal of the National Historic Preservation Act (NHPA) to protect historic properties, including tribal religious and cultural sites. Specifically, the system increases communication by providing federally-recognized Indian Tribes, Native

Hawaiian Organizations (NHOs) and State Historic Preservation Officers (SHPOs) with early notification of proposed towers in order to facilitate compliance with the Commission's Rules and Section 106 of the NHPA. The TCNS also enables the Commission to consult early on a government-to-government basis with federally recognized Tribes. The website allows users to:

- REPLY to Notifications: You may reply to a single notification you have received regarding proposed tower construction. You may also reply to multiple notifications at the same time. See http://wireless.fcc.gov/outreach/notification.
- SEARCH for Notifications: You may search the database for notifications based on several criteria, including structure location, date notification was filed, and notification ID number;
- UPDATE Contact Information: You may change the contact information for your Tribe or organization, i.e., name, address, phone number, and email;
- UPDATE Notification Preference: You may choose whether to receive initial notifications via email and/or letter, or not to receive them at all;
- UPDATE Final Request Preference: You may choose whether to receive final requests for indication of interest via email and/or letter;
- ADD Details: You may add language specifying your preferences and procedures. This language is sent by the system to all applicants who submit notifications that are sent to the Tribe or NHO; and
- VIEW Existing Area(s) for Notifications: You may view and update the specific areas, states, and counties for which you will receive notifications. These can be changed at any time. Tribes and NHOs who do not identify specific areas are notified of proposed tower constructions throughout the United States.

By participating in the TCNS, Tribes, NHOs, and SHPOs can help to ensure that they will be notified of proposed tower constructions in which they have an interest, and will not be notified of proposed tower constructions outside their geographic area of interest. By making themselves available to receive notification of proposed tower construction sites as early as possible, Tribes, NHOs and SHPOs can increase their ability to engage tower constructors and their consultants at an early date. Only Tribes, NHOs, and SHPOs, as authorized system users, will have access to the information relating to proposed tower construction sites.

FCC Application Packets for New Towers and Antenna Collocation, including Programmatic Agreements (viewed 7/6/2015)

http://transition.fcc.gov/Forms/Form620/620.pdf (new tower application packet)

http://transition.fcc.gov/Forms/Form621/621.pdf (antenna collocation)

National Wildlife Refuge Boundaries

http://www.fws.gov/gis/data/CadastralDB/ (viewed 6/7/2015)

Access to the boundaries and metadata required ArcGIS (free download at http://www.esri.com/software/arcgis/explorer).

USFWS Wetlands

http://www.fws.gov/wetlands/Data/Data-Download.html

This spatial database with metadata requires ArcGIS to download (free download at http://www.esri.com/software/arcgis/explorer). The information provided includes wetlands polygon, metadata, historic wetlands maps and metadata, and riparian polygon data, as a minimum.

Federal, State, and Tribal Historic Preservation Programs and Officers

(http://www.achp.gov/programs.html)

Tribal Contacts

https://wireless2.fcc.gov/TribalHistoricNotification/listTribes.htm (requires login; viewed 7/6/2105))

This list includes federally recognized tribes, with POCs and titles for tribes that have defined areas of interest for which they request to receive proposed tower construction notification. This list may be useful for non-tower projects also.

List of Helpful Resources for Section 106

(http://efotg.sc.egov.usda.gov/references/public/ND/Cultural_Resources.pdf)

A helpful list of resources for Section 106 of the National Historic Preservation Act.

Section 106 Guidance from the Advisory Council for Historic Preservation

http://www.achp.gov/usersguide.html (viewed 7/6/2015)

Website Includes:

- Regulations, process flowchart, explanatory material, and questions and answers;
- National Register Evaluation Criteria;

- Section 106 Applicant Toolkit;
- Integration of NEPA and Section 106 process flowcharts;
- Memo from the Advisory Council on Historic Preservation re: Limitation on the Delegation of Authority by Federal Agencies to Initiate Tribal Consultation Under Section 106 of the National Historic Preservation Act Dated July 1, 2011 (http://www.achp.gov/delegationmemo-final_7-1-11.pdf);
- CEQ's Handbook for Integrating NEPA and Section 106);
- Assistance with Initiating Consultation between Federal Agencies and Indian Tribes Regarding Federal Permits, Questions and Answers (http://www.achp.gov/docs/Assistance%20Agency%20Tribal%20Consultation%20Q&A.pdf);
- Section 106 Consultation Involving National Historic Landmarks; and
- Policy statement regarding Treatment of Burial Sites, Human Remains, and Funerary Objects for federal agencies (http://www.achp.gov/docs/hrpolicy0207.pdf).

National Broadband Map

(http://www.broadbandmap.gov/) (Viewed 7/6/2015)

This geospatial mapping database provides geospatial and data information including:

- Speed availability;
- Type of technology available (asymmetric XDSLm Symmetric XDSLm copper wire line, cable modem DOCSIS 3.0, cable modem other, fiber to end use, terrestrial fixed wireless (unlicensed) terrestrial wireless (licensed), and terrestrial mobile wireless);
- Number of broadband providers;
- Broadband provider service areas; and
- Broadband availability demographics by density, age, income, and education.

The data provides analyses for ranking areas by speed, availability, and broadband provider availability.

Public Land Survey Database

http://www.geocommunicator.gov/GeoComm/lsis_home/home/index.htm#plss (viewed 7/6/2015)

Exportable GIS shape files with embedded metadata by state, county, and individual townships.

USFWS IPaC (Information for Planning and Consultation)

An easy to use set of databases, including geospatial information, useful in supporting the integration of mitigation into project planning regarding threatened and endangered species, critical habitat, migratory birds, or other natural resources that may be impacted by a project. Resource maps provide geospatial information regarding wetlands and national wildlife refuges. The impact analysis portion is still being constructed, and will ultimately help evaluate connected actions associated with projects, and identify potential resource impacts and possible mitigation. The official list of threatened and endangered and other USFWS trust resources can be used to initiate informal Section 7 consultation as the basis for a Biological Evaluation. The website can also be used to initiate formal Section 7 consultation. The website mapper is easy to use.

USFWS Critical Habitat Portal

http://ecos.fws.gov/crithab/ (Viewed 7/6/2015)

This portal provides downloadable and detailed information regarding designated critical habitat for listed species, including:

- Critical habitat spatial data;
- Critical habitat metadata;
- *Federal register* documents related to designation of critical habitat; and
- USFWS species profile information.

Layers in the critical habitat spatial data include reference grids, political and land use boundaries, hydrography, critical habitat, street maps, and topography, as well as the ability to tailor maps to specific needs.

The information is not complete for every species. If needed information is not available for a species of interest, the website recommends contacting the applicable USFWS region.

Natural Resources Conservation Service Soil Survey Data and Maps

http://websoilsurvey.nrcs.usda.gov/app/ (viewed 7/6/2015)

This easy-to-use public website provides spatial maps and background information of soil surveys for user selected areas. The user identifies the area of interest (by address, county, rectangle or polygon) for the soil map of the area, and tabs provide access to detailed information on the most recent soil survey

and each soil's characteristics. Maps of interest can be downloaded as a file for later use.

Helpful Environmental Protection Agency Databases

Envirofacts

http://www.epa.gov/enviro/ (viewed 07/06/2015)

This is the searchable "master" site for access to all EPAs databases and mappers.

Enforcement and Compliance History Online (ECHO)

http://www.epa.gov/echo (searched 7/6/2015)

This database can be used to determine whether compliance inspections have been conducted by EPA or state/local governments, if violations were detected, and what enforcement actions were taken, as well as penalties assessed in response to violations in particular areas (searchable by city and state and/or zip code). Searches can be conducted by zip code, city, size of facility, type of data, and EPA cases. It also provides links to information about EPA regulatory authorities, laws, and science for subjects such as climate change, water quality, air quality, hazardous waste, health, pesticides, and sustainable practices.

Environmental Justice Screening Tool

http://www2.epa.gov/ejscreen (viewed 07/06/15)

http://ejscreen.epa.gov/mapper/ (viewed 07/06/15)

This is a searchable geospatial tool with analytic links that provides data on 2000 and 2010 census data, demographics, health risks, and air and water quality. The site will also provide a standard report that includes maps, comparable local, state, and federal indices for 12 environmental indicators and 6 demographic indicators, in tabular and graphic formats.

MyEnvironment

http://www.epa.gov/epahome/whereyoulive.htm (viewed 07/06/2015)

http://www.epa.gov/myenvironment/ (viewed 07/06/2015)

MyEnvironment provides a searchable database with geospatial data related to data that EPA collects regarding the Clean Water Act (dischargers, releases, and Total Maximum Daily Load (TMDL)), Clean Air Act, hazardous waste laws (Toxic Release Inventory, Resource Conservation and Recovery Act, brownfield properties, Toxic Substances Control Act, Toxic Release Inventory, etc.). It also provides analysis of cancer health risks from air, and state and national energy production and consumption data.

Surf Your Watershed

fpub.epa.gov/surf/locate/index.cfm (viewed 07/06/2015)

This website provides accesses to four spatial tools for identifying, displaying, and understanding the characteristics and the environmental health of nationwide, state, and local watersheds. Using zip code, stream name, watershed name, state, or city, the website identifies the 8-digit code for watersheds within the identified area, and provides information on water quality monitoring data, impaired waters (303(d)), USGS data on stream flow and water use data, and other related data.

NEPAssist

The complete database, which won an award from the CEQ, requires approval from specific EPA staff to access and use. However, the public can access NEPAssist at http://www2.epa.gov/nepa/nepassist. NEPAssist is a tool that facilitates the environmental review process and project planning in relation to environmental considerations. The web-based application draws environmental data dynamically from EPA Geographic Information System databases and web services and provides immediate screening of environmental assessment indicators for a user-defined area of interest. These features contribute to a streamlined review process that potentially raises important environmental issues at the earliest stages of project development.

Demographic and Community Information

www.city-data.com (viewed 02/03/2106)

This set of easily searchable databases, with maps, charts, and graphs (many interactive), quickly provides detailed information about towns and municipalities in each state, including demographics, schools, home assessments, building permits, city guides, recreation, crime, banks, jobs, and more.

Appendix H. USFWS Tower Guidelines for Protection of Migratory Birds

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Washington, D.C. 20240

In Reply Refer To:
FWSIFHC/DHCIBFA

Memorandum

To: Regional Directors, Regions 1-7

From: Director ***/s/*** **Jamie Rappaport Clark** SEP 14

Subject: Service Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers

Construction of communications towers (including radio, television, cellular, and microwave) in the United States has been growing at an exponential rate, increasing at an estimated 6 percent to 8 percent annually. According to the Federal Communication Commission's *2000 Antenna Structure Registry*, the number oflighted towers greater than 199'feet above ground level currently number over 45,000 and the total number of towers over 74,000. By 2003, all television stations must be digital, adding potentially 1,000 new towers exceeding 1,000 feet AGL.

The construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. Communications towers are estimated to kill 4-5 million birds per year, which violates the spirit and the intent of the Migratory Bird Treaty Act and the Code of Federal Regulations at Part 50 designed to implement the MBTA. Some of the species affected are also protected under the Endangered Species Act and Bald and Golden Eagle Act.

Service personnel may become involved in the review of proposed tower sitings and/or in the evaluation of tower impacts on migratory birds through National Environmental Policy Act review; specifically, sections 1501.6, opportunity to be a cooperating agency, and 1503.4, duty to comment on federally-licensed activities for agencies with jurisdiction by law, in this case the MBTA, or because of special expertise. Also, the National Wildlife Refuge System Improvement Act requires that any activity on Refuge lands be determined as compatible with the Refuge system mission and the Refuge purpose(s). In addition, the Service is required by the ESA to assist other Federal agencies in ensuring that any action they authorize, implement, or fund will not jeopardize the continued existence of any federally endangered or threatened species.

A Communication Tower Working Group composed of government agencies, industry, academic researchers and NGO's has been formed to develop and implement a research protocol to determine the best ways to construct and operate towers to prevent bird strikes. Until the research study is completed, or until research efforts uncover significant new mitigation measures, all Service personnel involved in the review of proposed tower sitings and/or the evaluation of the impacts of towers on migratory birds should use the attached interim guidelines when making recommendations to all companies, license applicants, or licensees proposing new tower sitings. These guidelines were developed by Service personnel from research conducted in several eastern, midwestern, and southern States, and have been refined through Regional review. They are based on the best information available at this time, and are the most prudent and effective measures for avoiding bird strikes at towers. We believe that they will provide significant protection for migratory birds pending completion of the Working Group's recommendations. As new information becomes available, the guidelines will be updated accordingly.

Implementation of these guidelines by the communications industry is voluntary, and our recommendations must be balanced with Federal Aviation Administration requirements and local community concerns where necessary. Field offices have discretion in the use of these guidelines on a case by case basis, and may also have additional recommendations to add which are specific to their geographic area.

Also attached is a Tower Site Evaluation Form which may prove useful in evaluating proposed towers and in streamlining the evaluation process. Copies may be provided to consultants or tower companies who regularly submit requests for consultation, as well as to those who submit individual requests that do not contain sufficient information to allow adequate evaluation. This form is for discretionary use, and may be modified as necessary.

The Migratory Bird Treaty Act (16 U.S.C. 703-712) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the Act has no provision for allowing an unauthorized take, it must be recognized that some birds may be killed at structures such as communications towers even if all reasonable measures to avoid it are implemented. The Service's Division of Law Enforcement carries out its mission to protect migratory birds not only through investigations and enforcement, but also through fostering relationships with individuals and industries that proactively seek to eliminate their impacts on migratory birds. While it is not possible under the Act to absolve individuals or companies from liability if they follow these recommended guidelines, the Division of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals or companies who have made good faith efforts to avoid the take of migratory birds.

Please ensure that all field personnel involved in review of FCC licensed communications tower proposals receive copies of this memorandum. Questions regarding this issue should be directed to Dr. Benjamin N. Tuggle, Chief, Division of Habitat Conservation, at (703)358-2161, or

Jon Andrew, Chief, Division of Migratory Bird Management, at (703)358-1714. These guidelines will be incorporated in a Director's Order and placed in the Fish and Wildlife Service Manual at a future date.

Attachment

cc: 3012-MIB-FWS/Directorate Reading File
3012-MIB-FWS/CCU Files
3245-MIB-FWS/AFHC Reading Files
840-ARLSQ-FWS/AF Files
400-ARLSQ-FWS/DHC Files
400-ARLSQ-FWS/DHC/BFA Files
400-ARLSQ-FWS/DHC/BFA Staff
520-ARLSQ-FWS/LE Files
634-ARLSQ-FWS/MBMO Files (Jon Andrew)

FWS/DHCIBFAJRWillis:bg:08/09/00:(703)358-2183
S:\DHC\BFA\WILLIS\COMTOW-2.POL

Attachment

Service Interim Guidelines For Recommendations On
Communications Tower Siting, Construction, Operation, and Decommissioning

1. Any company/applicant/licensee proposing to construct a new communications tower should be strongly encouraged to collocate the communications equipment on an existing communication tower or other structure (e.g., billboard, water tower, or building mount). Depending on tower load factors, from 6 to 10 providers may collocate on an existing tower.

2. If collocation is not feasible and a new tower or towers are to be constructed, communications service providers should be strongly encouraged to construct towers no more than 199 feet above ground level, using construction techniques which do not require guy wires (e.g., use a lattice structure, monopole, etc.). Such towers should be unlighted if Federal Aviation Administration regulations permit.

3. If constructing multiple towers, providers should consider the cumulative impacts of all of those towers to migratory birds and threatened and endangered species as well as the impacts of each individual tower.

4. If at all possible, new towers should be sited within existing "antenna farms" (clusters of towers). Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., State or Federal refuges, staging areas, rookeries), in known migratory or daily movement flyways, or in habitat of threatened or endangered species. Towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

5. If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be avoided. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.

6. Tower designs using guy wires for support which are proposed to be located in known raptor or waterbird concentration areas or daily movement routes, or in major diurnal migratory bird movement routes or stopover sites, should have daytime visual markers on the wires to prevent collisions by these diurnally moving species. (For guidance on markers, see *Avian Power Line Interaction Committee (APLIC).* 1994. *Mitigating Bird Collisions with Power Lines: The State of the Art in* 1994. *Edison Electric Institute, Washington, D.c.,* 78 *pp,* and *Avian Power Line Interaction Committee (APLIC).* 1996. *Suggested Practices/or Raptor Protection on Power Lines. Edison Electric InstituteiRaptor Research Foundation, Washington, D.C;* 128 *pp.* Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/. or by calling 1-800/334-5453).

7. Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above ground obstacles to birds in flight.

8. If significant numbers of breeding, feeding, or roosting birds are known to habitually use the proposed tower construction area, relocation to an alternate site should be recommended. If this is not an option, seasonal restrictions on construction may be advisable in order to avoid disturbance during periods of high bird activity.

9. In order to reduce the number of towers needed in the future, providers should be encouraged to design new towers structurally and electrically to accommodate the applicant/licensee's antennas and comparable antennas for at least two additional users (minimum of three users for each tower structure), unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.

10. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.

11. If a tower is constructed or proposed for construction, Service personnel or researchers from the Communication Tower Working Group should be allowed access to the site to evaluate bird use, conduct dead-bird searches, to place net catchments below the towers but above the ground, and to place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.

12. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

In order to obtain information on the extent to which these guidelines are being implemented, and to identify any recurring problems with their implementation which may necessitate modifications, letters provided in response to requests for evaluation of proposed towers should contain the following request:

> "In order to obtain information on the usefulness of these guidelines in preventing bird strikes, and to identify any recurring problems with their implementation which may necessitate modifications, please advise us of the final location and specifications of the proposed tower, and which of the measures recommended for the protection of migratory birds were implemented. If any of the recommended measures can not be implemented, please explain why they were not feasible."

TOWER SITE EVALUATION FORM

1. Location (Provide maps if possible):
   State:_____County:_____ Latitude/Longitude/GPS Grid:_____
   City and Highway Direction (2 miles W on Hwy 20, etc.)_____
   _____

2. Elevation above mean sea level: _____

3. Will the equipment be co-located on an existing **FCC licensed** tower or other existing structure (building, billboard, etc.)? (y/n)_____ If yes, type of structure:_____
   If yes, no further information is required.

4. If no, provide proposed specifications for new tower:
   Height: _____ Construction type (lattice, monopole, etc.):_____
   _____
   Guy-wired? (y/n)_____ No. bands:_____ Total No. Wires:_____
   Lighting (Security & Aviation):_____
   _____
   _____

If tower will be lighted or guy-wired, complete items 5-19. If not, complete only items 19 and 20.

5. Area of tower footprint in acres or square feet:_____

6. Length and width of access road in feet:_____

7. General description of terrain - mountainous, rolling hills, flat to undulating, etc. Photographs of the site and surrounding area are beneficial:
   _____
   _____
   _____

8. Meteorological conditions (incidence of fog, low ceilings, etc.):_____
   _____

9. Soil type(s):_____

10. Habitat types and land use on and adjacent to the site, by acreage and percentage of total:
    _____
    _____
    _____

_____

11. Dominant vegetative species in each habitat type:_____
_____
_____
_____
_____

12. Average diameter breast height of dominant tree species in forested areas:_____
_____
_____

13. Will construction at this site cause fragmentation of a larger block of habitat into two or more smaller blocks? (y/n)_____ If yes, describe:_____
____
_____

14. Is evidence of bird roosts or rookeries present? (y/n)_____ If yes, describe:_____
_____

15. Distance to nearest wetland area (forested swamp, marsh, riparian, marine, etc.), and coastline if applicable:_____

16. Distance to nearest telecommunications tower:_____

17. Potential for co-location of antennas on existing towers or other structures:_____
_____

18. Have measures been incorporated for minimizing impacts to migratory birds? (y/n)_____
If yes, describe:_____
_____
_____
_____

19. Has an evaluation been made to determine if the proposed facility may affect listed or proposed endangered or threatened species or their habitats as required by FCC regulation at 47 CFR 1.1307(a)(3)? (y/n) _____ If yes, present findings:_____
_____
_____
_____

20. Additional information required:

Appendix I. National Historic Preservation Act Templates

8.1.1 Template of Pre-application Notification of Proposed Section 106 Undertaking

[date]

[SHPO Name
Title
Address]

Subject: Pre-Application Notification of Proposed Section 106 Undertaking
[Borrower]
[Project Name]
[County(s), State]

Dear [Name]:

[Borrower] intends to seek financial assistance from the USDA Rural Utilities Service (RUS) for the [Project Name and brief description] (the Project). RUS may fund the Project, thereby making it an undertaking subject to review under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470(f), and its implementing regulations (36 CFR Part 800). The project involves [provide a description of the project, including the design specifications, the required disturbance, whether new or existing utility ROW will be used, overhead or underground, whether or not there will be new ground disturbance or if area has had previous ground disturbance]. The recommended area of potential effects (APE) is defined as [describe the area of potential disturbance = the width/length of the right-of-way or building/structure footprint].

The enclosed archeological site record search for the project's area of potential effects (APE), was conducted on [date]. The records search [describe the findings of the records search – if there are any sites, list the site numbers]. No other sites were identified as a result of the records search.

[If additional survey is required, describe it here.]

On [date], [borrower/consultant] notified the [list tribes, use http://egis.hud.gov/tdat/Tribal.aspx to search for tribes to consult by county] about the project. [Describe the response from the tribes. If a tribe responds with concerns, please send copy of letter to RUS point of contact].

Proposed Finding of Effect

Based on an analysis of the enclosed report[s], we are proposing a finding of:

- **No historic properties affected**: if there are no resources listed on, or eligible for listing on the National Register of Historic Places.
- **No adverse effect to historic properties**: if there are historic properties present within the APE, but the project will not affect them.

- **Historic properties affected**: there are historic properties present within the APE, and they will be affected by the undertaking.

In accordance with RUS's Blanket Delegation of Authority for Section 106, which has previously been provided to the [state] SHPO, [borrower] is submitting the [state what documentation is submitted for review = mapping, inventory survey etc.], recommendations of eligibility (only include if resources are identified in the survey), and recommendation of project effect for your review in accordance with 36 CFR § 800.2(c)(4). Please provide your concurrence within thirty (30) days of receipt of this proposed finding pursuant to 36 CFR § 800.3(c)(4). We will proceed to the next step in review after this time. Please direct any questions you may have to [contact information].

Sincerely,

Enclosures

cc: [RUS field or N/O representative] USDA Rural Utilities Service

8.1.2 Template Tribal Notification of Intent to Initiate Section 106 Review

[date][#2]

RE: Notification of Intent to Initiate Section 106 Review [#3]
[Project, Borrower, Project Location] [#4]

Dear [Name of THPO or Official Tribal Designee] [#5]:

The Rural Utilities Service (RUS), one of three agencies comprising USDA Rural Development, is authorized under the Rural Electrification Act of 1936, as amended, to provide federal financial assistance for the construction, improvement and expansions of telecommunications infrastructure, including broadband, in eligible rural communities in the United States. [Name of Borrower] [#6] financial assistance from RUS for [#7]. [#8].

If RUS elects to fund this application, it will become an undertaking subject to review under Section 106 of the National Historic Preservation Act, 16 U.S.C. §470m, and its implementing regulations, 36 CFR Part 800. In accordance with the attached blanket authorization issued by RUS in August 2012, [Name of Borrower] is initiating Section 106 review on behalf of RUS. In delegating this authority, RUS is advocating for the direct interaction between its Telecommunications Program borrowers and Indian tribes. RUS believes this interaction, prior to direct agency involvement, will support and encourage the consideration of impacts to historic properties of importance to Indian tribes earlier in project planning.

[Name of Borrower] proposes that the area of potential effects (APE) for the referenced project consists of [#9] as shown on the enclosed map. [#10] The geographic scope of the APE will not be final until a determination is made by RUS pursuant to 36 CFR § 800.4(a)(1). The APE does not include any tribal lands as defined pursuant to 36 CFR § 800.16(x). [#11]

[Name of Borrower] is notifying you about the referenced project because of the possible interest of the [Name of Indian Tribe] in [Insert County Name(s)]. Should the [Name of Indian Tribe] elect to participate in Section 106 review of the referenced project, please notify me in writing via letter or email as soon as possible at the following addresses – [Insert your mailing and email addresses]. Please include with your affirmative response, a description of any specific historic properties or important tribal resources in the APE and your recommendations about the level of effort needed to identify additional historic properties which might be affected by the referenced project. [Name of Borrower] will respect the confidentiality of the information which you provide to the fullest extent possible.

If at any time you wish to share your interests, recommendations and concerns directly with RUS, as the agency responsible for conducting Section 106 review, or to request that RUS participate directly in Section 106 review, please notify me at once, preferably via email. However, you may contact RUS directly. If you wish to do so, please submit your request to [Insert EES Manager Name and Contact Information].

Please submit your response to me by [Insert date 30 days from expected date of receipt]. During this time period, I will follow up to ensure your receipt of this notification and to identify any constraints which might delay your timely response. [Name of Borrower] has been advised

by RUS to proceed to the next step in Section 106 review if you choose not to respond in a timely fashion. Should you have any questions or require additional information please contact me at [Insert contact information].

Sincerely,

Enclosures

cc:

[#12]

Guidance for completing the template

#1 Applicability of Template

The template is not applicable to the construction of telecommunications towers and collocations which will carry spectrum regulated by the Federal Communications Commission (FCC). Section 106 review of towers and collocations carrying FCC regulated spectrum is concluded using FCC procedures.

#2 Insert date

Do not forget to date this correspondence because it is essential in determining when the 30-day review period has ended. If it is not too costly, please consider obtaining a delivery receipt for this notification.

#3 Notification of Intent to Initiate Section 106 Review

Do not designate this letter as a "Pre-Application Notification." It can be confusing and send the wrong message to parties outside of RUS. Therefore, its use is discouraged.

#4 Identify the Project, Borrower and Project Location by County and State

Clearly designate what is being submitted for review. Typically, it will be a loan design project. This is very important because an incorrect decision at this point could cause significant delays in completing the review. Get it right the first time - When in doubt, seek guidance from EES.

#5 Identify Tribal Historic Preservation Officer (THPO), or, in the absence of a THPO, the Official Tribal Designee, Title and Address

The addressee will be the THPO designated pursuant to Section 101(d)(2) of the National Historic Preservation Act. In the absence of a THPO, the tribe should have identified an official designee for Section 106 review. Please note that if this notification is directed to "Whom It May Concern," it is not legally sufficient.

#6 Select "is seeking" or "plans to seek"

Select "is seeking" whenever the borrower has filed an application with RUS for assistance. It matters only that the application is with RUS, NOT whether or not RUS has approved it for consideration.

Select "plans to seek" whenever the application for assistance has NOT yet been filed with RUS. If this is the case, then you may elect in the heading to designate this notice as a "Pre-Application Notification."

#7 Insert a Complete Project Description

All elements of the proposed construction must be included, especially those which will cause any digging, excavation or other ground disturbance. Include the design specifications, the scope of the ground disturbance, a description of the ROW/easement ownership, establish whether or not new or existing ROW or easements will be used, establish whether or not the construction will occur in or out of municipal boundaries, estimate the number of miles to be buried versus aerial, and if aerial, the prediction about the

need for new and/or replacement poles. Do not forget to include work and staging areas, laydown yards and access roads. If no ancillary facilities such as these are needed, then include that statement in the description. Also, please name the towns and counties where construction will occur. Also, describe any construction which will be more than 20 feet tall and therefore might intrude upon an important setting or obstruct an important vista.

#8 Describe the Project's Purpose and Need

This explanation, which must be consistent with the language in the ER or EA when that level of NEPA documentation is needed, helps establish for the tribe the public benefit of the project.

#9 Describe the area of potential effects (APE)

Describe the geographic area(s) which might be impacted by the project construction activities. The APE is not restricted to areas where construction will occur but also includes locations from which a constructive element greater than 20 feet tall might be seen. A borrower and tribe can only make recommendations about the scope of the APE. RUS makes the final determination. Therefore, get it right the first time - when in doubt, seek guidance from EES.

#10 Enclose maps

Enclose one or several maps showing the area in which the construction activities will occur and the proposed location of the various constructive components. Use USGS 7.5 series maps or something similar which shows the terrain in which the construction will occur. This can be augmented by other types of maps which show other project details. Staking sheets or maps with that level of detail are not necessary.

#11 Confirm that tribal lands are not involved

Under Section 106 tribal lands are defined "as all lands within the exterior boundaries of any Indian reservation and all dependent Indian communities." Confirm that the APE does not contain any tribal lands. In the event that tribal lands will be crossed or involved, work with your EES contact to engage the Tribe.

#12 Insert name and email address of appropriate EES contact

United States Department of Agriculture
Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service
Washington, DC 20250

August 14, 2012

To: Federally Recognized Indian Tribes
Tribal Historic Preservation Officers
State Historic Preservation Officers

Subject: Blanket Delegation of Authority for Section 106 Review

Applicability: Applies Nationwide to Undertakings Assisted by the Rural Utilities Service of the U.S. Department of Agriculture

The U.S. Department of Agriculture, Rural Development consists of the following three federal agencies - Rural Business-Cooperative Service (RBS), Rural Housing Service (RHS) and the Rural Utilities Services (RUS). Rural Development agencies administer numerous assistance programs from their offices located in Washington, D.C. and through their representatives in all states and territories. Further information about Rural Development can be found at http://www.rurdev.usda.gov/Home.html.

In order to streamline compliance with Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470f, and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800), RUS is authorizing its applicants to initiate consultation on its behalf, pursuant to 36 CFR § 800.2(c)(4). Effective immediately, RUS applicants and their authorized representatives may consult with the State Historic Preservation Officers (SHPO) to initiate the review process established under 36 CFR Part 800 and to carry out some of its steps. Specifically, RUS applicants are authorized to gather information to identify and evaluate historic properties, and to work with consulting parties to assess effects.

RUS, however, retains the responsibility to document its findings and determinations in order to appropriately conclude Section 106 review. RUS also remains responsible for initiating and conducting government-to-government consultation with federally recognized Indian tribes. The responsibility of RUS to consult on a government-to-government basis with Indian tribes as sovereign nations is established through specific legal authorities and is explicitly recognized in 36 CFR Part 800. Accordingly, RUS may not delegate this responsibility to a non-federal party without the agreement of the tribe to do so. In order to facilitate the early involvement of tribes in Section 106 review, RUS will support applicants working directly with Indian tribes, where tribes consent, to carry out the terms of this blanket authorization.

Be advised that applicants authorized in accordance with 36 CFR § 800.2(c)(4) must involve RUS in consultation whenever:

- Any consulting party, including the applicant, the SHPO or an Indian tribe, proposes that the action under consideration by RUS may have an adverse effect on historic properties, as defined pursuant to 36 CFR § 800.5(a);
- There is a disagreement between an applicant or its authorized representative and the SHPO or an Indian tribe about the scope of the area of potential effects, identification and evaluation of historic properties and/or the assessment of effects;
- There is an objection from a consulting party or the public regarding their involvement in the review process established by 36 CFR Part 800, recommended Section 106 findings and determinations, or implementation of agreed upon measures; or
- There is the potential for a foreclosure or anticipatory demolition as defined by 36 CFR § 800.9(b) and 36 CFR § 800.9(c), respectively.

RUS expects its applicants authorized in accordance with 36 CFR § 800.2(c)(4) to involve consulting parties in developing recommendations about Section 106 findings and determinations, and to carry out the exchange of documentation and information in a respectful, constructive and predictable manner. Therefore, Section 106 reviews are to be conducted within the time frames set forth within 36 CFR Part 800.

For RUS, this blanket delegation replaces an earlier memorandum issued on July 16, 2009.

Should you have any questions about this blanket authorization, please contact Laura Dean, Ph.D., the Federal Preservation Officer for RUS, at 202-720-9634 or via email at laura.dean@wdc.usda.gov.

Sincerely,

Mark S. Plank

Mark S. Plank
Director, Engineering and Environmental Staff
Rural Utilities Service

Appendix J. RUS Guidance and Exhibits for Project-Level Tiered Compliance

Exhibit 4-1

Telecommunications Program

Overview

The USDA Rural Utilities Service (RUS) is required to assess the impacts of proposed federal actions to the environment, such as the provision of financial assistance through the Telecommunications Program, in accordance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other federal, state, and local environmental laws. RUS Environmental Policies and Procedures (7 CFR Part 1794, relevant sections in Appendix B) defines the classifications and documentation requirements based on types of construction activities.

RUS has completed a Programmatic Environmental Assessment (PEA) for project activities typically financed through the agency's Telecommunications Program. This form must be completed by program applicants for activities where site-specific information is currently unavailable. RUS will use the information provided in this form to document if the activities in an application or non-site specific activities in an interim financing request are consistent with the PEA and its Finding prior to making an obligation decision.

No construction activities may begin until RUS fully concludes its environmental review process; RUS will notify applicants when they may begin construction. In accordance with 7 CFR §1794.15, borrowers and grantees are prohibited from taking actions that may have an adverse environmental impact until RUS has concluded the environmental review process. If the proposed project involves construction activities the applicant is generally prohibited from rehabilitating, converting, leasing, repairing or constructing property or facilities, or committing or expending Agency or non-Agency funds that are subject to reimbursement by RUS until after RUS has concluded its environmental review requirements.

I. Activities Covered in the Telecommunications Program PEA

A. Activities not requiring tiered, site-specific environmental review

In accordance with the PEA, the following activities do not require additional environmental review. Please mark if any of these activities are in your application or interim financing request:

- ☐ Last Mile Service Drops

- ☐ Internal building modifications
- ☐ Equipment replacement
- ☐ Cable placement in existing conduit

B. Activities not requiring tiered, site-specific environmental review, provided the following conditions are met.

In accordance with the PEA, the following activities do not require additional environmental review. Please mark if any activities with associated conditions are included in your application or interim financing request:

- ☐ Placing antenna on existing towers and buildings not listed or eligible for listing in the National Register of Historic Places
- ☐ External building modifications requiring less than or equal to 1 acre of new land disturbance with no extraordinary circumstances (see **Section II** of this form)
- ☐ Aerial cable installation on existing poles with no extraordinary circumstances (see **Section II** of this form)
- ☐ Ancillary equipment and huts installed in existing right-of-way with no extraordinary circumstances (see **Section II** of this form)
- ☐ New microwave or cell towers within the fenced area of an existing substation, switching station, or within the boundaries of an existing electric generating facility that is consistent with the U.S. Fish and Wildlife Service guidelines on towers (Appendix H of PEA) and with no extraordinary circumstances (see Section II of this form).

If conditions associated with these activities cannot be met, tiered site-specific environmental analyses, as demonstrated through the completion of Exhibits 4-2 and 4-3, must be completed as applicable prior to project construction or RUS approval of construction contracts or funds dispersal. Please list projects in your application or interim financing request that meet this criterion:

C. Activities requiring tiered-site specific environmental review

In accordance with the PEA, the following activities do require tiered site-specific environmental analyses, as demonstrated through the completion of Exhibits 4-2 and 4-3 as applicable. For these projects to remain eligible for RUS financing, you must receive RUS written notification that the environmental review is concluded before project construction or RUS approval of construction contracts or funds dispersal.

Please identify if any of the following activities are in your application or interim

financing request:

- Underground and buried placement of mainline cable
- New cell and microwave towers not consistent with **Section I.B** of this form
- New buildings, including headquarters offices

II. Identification of Extraordinary Circumstances

Extraordinary circumstances may be described as unique situations presented by specific proposals, such as characteristics of the geographic area affected by the proposal, scientific controversy about the environmental effects of the proposal, uncertain effects or effects involving unique or unknown risks, and unresolved conflicts concerning alternate uses of available resources within the meaning of Section 102(2)(E) of NEPA. In the event of extraordinary circumstances, a normally excluded action (i.e., one identified in **Section I** of this form) will be the subject of an additional environmental review by the Agency to determine the potential of the proposed action to cause any significant adverse environmental effect, and could, at the Agency's sole discretion, require an EA or an EIS.

Extraordinary circumstances can include, but are not limited to, the following:

1. Any violation of applicable Federal, state, or local statutory, regulatory, or permit requirements for environment, safety, and health.
2. Any proposal that is likely to cause uncontrolled or unpermitted releases of hazardous substances, pollutants, contaminants, or petroleum and natural gas products.
3. An adverse effect on the following environmental resources:
    a. Historic properties;
    b. Federally listed threatened or endangered species, critical habitat, Federally proposed or candidate species;
    c. Wetlands (actions that propose to convert or propose new construction in wetlands will require consideration of alternatives to avoid adverse effects and unwarranted conversions of wetlands. Actions involving linear utility infrastructure where utilities are proposed to be installed in existing, previously disturbed rights-of way or that are authorized under applicable Clean Water Act, Section 404 nationwide permits will not require the consideration of alternatives. Actions that require Section 404 individual permits would create an extraordinary circumstance);

d. Floodplains (actions that introduce fill or structures into a floodplain or propose substantial improvements to structures within a floodplain will require consideration of alternatives to avoid adverse effects and incompatible development in floodplains. Actions that do not adversely affect the hydrologic character of a floodplain, such as buried utility lines, would not create an extraordinary circumstance; or purchase of existing structures within the floodplain will not create an extraordinary circumstance but may require consideration of alternatives to avoid adverse effects and incompatible development in floodplains when determined appropriate by the Agency);

e. Areas having formal Federal or state designations such as wilderness areas, parks, or wildlife refuges; wild and scenic rivers; or marine sanctuaries;

f. Coastal barrier resources or, unless exempt, coastal zone management areas.

4. The existence of controversy based on effects to the human environment brought to the Agency's attention by a Federal, tribal, state, or local government agency.

Please describe if any of the activities included in your application or interim financing request (and as described in Section I of this form) may have extraordinary circumstances that require further RUS review.

III. Activities not covered in the PEA

Provide a description of each activity included in your application or interim financing request that does not fall within the description of activities listed in **Section I** of this form. RUS Bulletin 1794A-600, Exhibit C should be used as guidance in preparing the project descriptions so that RUS can classify the proposed project(s) in accordance with 7 CFR Part 1794.

Exhibit 4-2

Telecommunications Program

Environmental Report – Tiered Review for Cable Installation

Overview

The USDA Rural Utilities Service (RUS) is required to assess the impacts of proposed federal actions, such as the provision of financial assistance through the Telecommunications Program, to the environment in accordance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other federal, state, and local environmental laws. RUS Environmental Policies and Procedures (7 CFR Part 1794) defines the classifications and documentation requirements based on types of construction activities. If the project is listed under 7 CFR §1794.21, no additional documentation is required. If the project is listed under 7 CFR §1794.22, the applicant must complete this Environmental Report (ER). This report documents the additional site-specific analyses for those resources identified in the PEA as requiring such analyses. RUS will use the information provided in this ER to either conclude the environmental review process or determine the appropriate level of additional impact analyses.

No construction activities may begin until RUS concludes the environmental review process; RUS will notify applicants when they may begin construction. In accordance with 7 CFR §1794.15, awardees are prohibited from taking actions that may have an adverse environmental impact until RUS has concluded the environmental review process. If the proposed project involves construction activities the applicant is generally prohibited from rehabilitating, converting, leasing, repairing or constructing property or facilities, or committing or expending Agency or non-Agency funds that are subject to reimbursement by RUS until after RUS has concluded its environmental review requirements.

Federal agencies are encouraged to cooperate in their review of actions subject to NEPA, Section 106 of the NHPA, and Section 7 of the ESA. An applicant may submit to RUS a copy of any environmental review document that has been prepared in connection with obtaining permits, approvals, or other financing for the proposed project from state, local or other federal agencies. Such material, to the extent determined to be relevant, may be used to fulfill RUS environmental review requirements. RUS will notify applicants if additional information or analyses are necessary.

Requested Information

A. Project Description

Describe all project-related construction activities, including, but not limited to:

a. Construction and/or installation of buried or aerial cable: Provide the type of facility (buried vs. aerial), the method of construction (plow vs. trench), and the mileage for each type of facility; describe the potential rights-of-way (e.g., existing road shoulder, undisturbed land outside of existing ROW); can be general locations but should describe where in the ROW the cable is being planned for installation. See also item B.1.

b. Access: Provide a description of any access roads/facilities required for operation of the project, indicating the type (gravel, asphalt etc.) and size (length and width); and

c. Any pole replacement if required.

Complete descriptions include the length of proposed facilities, construction methodology, and locations. Maps must be provided for each site affected by project-related construction activities. RUS recommends U.S. Geological Survey 7.5-minute quadrangle maps at a map scale of 1:24,000; larger scale maps may be provided for site-specific proposals. USGS maps may be obtained and purchased at the following website (http://www.usgs.gov/pubprod/maps.html). All project elements, if known at the time of the application, must be clearly depicted on any map provided. If appropriate, photographs or aerial photographs of site-specific proposals may be provided.

B. Property Changes

Describe the amount of property to be cleared, excavated or otherwise disturbed by the proposed project.

a. Describe the current land use and zoning for all lands disturbed by project construction activities. If adjacent to road right-of-way (ROW), provide the distance from road asphalt (i.e. located within the road prism). If utility easement, also provide the distance from existing facilities; and

b. Determine and document whether the proposed project, or any project component, is within the boundaries of federally or state managed lands, including but not limited to parks, forest lands, wildlife refuges, or public lands. Where pertinent, integrate any standards, guidelines, or conditions from the federal or state agencies' land management plan(s) if such plan(s) exist. Also determine and document whether the proposed project, or any project component, is located on *tribal lands*, meaning lands within the exterior boundaries of any Indian reservation and all dependent Indian communities or on Indian allotment lands. If so, provide the name of the government body and indicate the status of coordination. Please note that all roads and associated ROWs traversing federal lands are controlled by the appropriate federal agency. Applicants may find information related to federal and tribal

lands on the ArcGIS website (http://www.arcgis.com/home/webmap/viewer.html?webmap=8047eda3656e4241b75463a5451ba9e2). State land boundaries information may be obtained through state government websites or sources.

C. Other Federal Involvement

Provide the name of any other federal agencies that may have a NEPA action associated with the project. This information will allow RUS to coordinate our review with other agencies and avoid duplicative effort.

D. Permitting

Provide a list of all federal, state, local, or tribal permits that will be required to construct the proposed project. Please provide the status of these permits and the anticipated date of receipt.

For the following resource areas, please indicate whether the resources are present within the project area and if the project will have any impacts on that resource.

E. Protected Species

Determine whether any project sites and activities will directly or indirectly affect any federally-listed threatened, endangered, proposed or candidate species, or are within or near designated critical habitat. Applicants must obtain and provide species lists and appropriate species accounts (i.e. requisite habitat) from the U.S. Fish and Wildlife Service's website (http://ecos.fws.gov/ipac/), which will provide applicants with information about threatened and endangered species, critical habitat, wildlife refuges, migratory birds, and wetlands (see below). Any conservation measures resulting from ESA Section 7 consultation, or seasonal or other restrictions to protect migratory birds, nests, or habitat should be incorporated into the assessment.

F. Wetlands

If wetlands are to be avoided, or potential impacts are addressed through a U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP), check this box □ , and no further action is required. If wetlands are identified in the project area and they cannot be avoided, applicants may need an individual permit from the USACE and/or the appropriate state agency. Applicants must notify RUS if the project will require an individual permit. Information about the USACE regulatory program can be found on their website (http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx). If the project will adversely affect wetlands, applicants should state if there is a practicable alternative location. In addition to any permit requirements, standard

avoidance and minimization measures should be implemented such as erosion/sedimentation protection, minimal vegetation removal, spill prevention and control, and appropriate vegetation/restoration. Maps of wetlands may be obtained from the U.S. Fish and Wildlife Service's National Wetlands Inventory website (http://www.fws.gov/wetlands/), or from soil maps obtained from the USDA, Natural Resource Conservation Service's website (http://search.mediacomcable.com/search/?q=http%3A//websoilsurvev.nrcs.usda.gov/app/HomePage.htm&r=&t=0). Wetland information may also be obtained from the applicable state agency.

G. Farmlands

If the project is located in other than a ROW or otherwise disturbed area, indicate whether the project will cross any farmland. The identification of alternatives per the Farmland Protection Policy Act (FPPA) is neither applicable nor required, but potential impacts to continued use of the affected land should be considered.

H. Coastal Areas

Determine whether any project sites are within the boundaries of a Coastal Barrier Resource Area (CBRA). For boundary related and contact information related to CBRA, see the U.S. Fish and Wildlife Service's CBRA website (http://www.fws.gov/ecological-services/habitat-conservation/Coastal.html).

I. Historic Properties

a. If you are applying for a project-specific loan or grant under the Broadband or Community Connect Programs, please continue on to the next steps. If you are applying for a multi-year loan under the Infrastructure Program, contact the appropriate RUS environmental protection specialist at the earliest time possible for more information.

b. For cable projects, RUS will conduct the Section 106 review. Applicants must contact the appropriate RUS environmental protection specialist for templates to consultation with SHPOs and to notify Indian tribes, Alaska Native Villages and Native Hawaiian organizations. Databases and maps to assist in identifying known archeological sites and NRHP listed or eligible resources can be obtained from the appropriate SHPO, which can be identified on the National Conference of State Historic Preservation Officers website (http://ncshpo.org/find/index.htm). The SHPO website will also include information about tribal interest. Applicants can also use tribal interest directories developed by other federal agencies, including the National Park Service website (http://grants.cr.nps.gov/nacd/index.cfm)or the Housing and Urban Development website (http://egis.hud.gov/tdat/tribal.aspx)

For buried fiber optic cable and aerial fiber optic cable requiring pole construction/replacement, applicants must identify and describe, including type and status for listing on the National Register of Historic Places (NRHP) known archeological sites located within 500 feet of either side of the cable route and prior archeological surveys that have been conducted in this study area. Include this information in the ER along with mapping that shows the relationship between these known sites and the study area as well areas of planned disturbance, whether for trenching or entry for buried line, or pole placement for aerial.

c. Certain standard practices or measures will also help avoid potential impacts to cultural resources. These include: keeping equipment and vehicles on roads or exiting ROWs; avoiding known cultural or historic sites; flagging or monitoring cemeteries within 200 feet of the Area of Potential Effect (APE); considering the effects of vibrating equipment on historic structures; implementing any protection measures resulting from consultation with SHPO; and stopping work and notifying the SHPO and RUS if artifacts or human remains are inadvertently discovered.

Extraordinary Circumstances Statement

Extraordinary circumstances may be described as unique situations presented by specific proposals, such as characteristics of the geographic area affected by the proposal, scientific controversy about the environmental effects of the proposal, uncertain effects or effects involving unique or unknown risks, and unresolved conflicts concerning alternate uses of available resources within the meaning of Section 102(2)(E) of NEPA. In the event of extraordinary circumstances, a normally excluded action will be the subject of an additional environmental review by the Agency to determine the potential of the proposed action to cause any significant adverse environmental effect, and could, at the Agency's sole discretion, require an EA or an EIS. Extraordinary circumstances can include, inter alia, the following: Any violation of applicable Federal, state, or local statutory, regulatory, or permit requirements for environment, safety, and health; an adverse effect on the following environmental resources: historic properties, federally-listed threatened or endangered species or critical habitat, wetlands, floodplains, formally-designated lands or waters, special sources of water, coastal barrier resources, or coral reefs.

In reviewing this report, the Agency certifies/does not certify that the proposal meets the criteria established in §§7 CFR 1794.21 and .22, Categorical Exclusions without or with an environmental report. The proposal's description and this Environmental Report also demonstrate/do not demonstrate that the proposal is consistent with 40 CFR §1508.4, Categorical Exclusion and that the proposal does not have any extraordinary circumstances.

Exhibit 4-3

Telecommunications Program

Environmental Report – Tiered Review for Towers and Buildings

Overview

The USDA Rural Utilities Service (RUS) is required to assess the impacts of proposed federal actions, such as the provision of financial assistance through the Telecommunications Program, to the environment in accordance with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), the Endangered Species Act (ESA), and other federal, state, and local environmental laws. RUS Environmental Policies and Procedures (7 CFR Part 1794) defines the classifications and documentation requirements based on types of construction activities. If the project is listed under 7 CFR §1794.21, no additional documentation is required. If the project is listed under 7 CFR §1794.22, the applicant must complete this Environmental Report (ER). This report documents the additional site-specific analyses for those resources identified in the PEA as requiring such analyses. RUS will use the information provided in this ER to either conclude the environmental review process or determine the appropriate level of additional impact analyses.

No construction activities may begin until RUS concludes the environmental review process; RUS will notify applicants when they may begin construction. In accordance with 7 CFR §1794.15, awardees are prohibited from taking actions that may have an adverse environmental impact until RUS has concluded the environmental review process. If the proposed project involves construction activities the applicant is generally prohibited from rehabilitating, converting, leasing, repairing or constructing property or facilities, or committing or expending Agency or non-Agency funds that are subject to reimbursement by RUS until after RUS has concluded its environmental review requirements.

Federal agencies are encouraged to cooperate in their review of actions subject to NEPA, Section 106 of the NHPA, and Section 7 of the ESA. An applicant may submit to RUS a copy of any environmental review document that has been prepared in connection with obtaining permits, approvals, or other financing for the proposed project from state, local or other federal agencies. Such material, to the extent determined to be relevant, may be used to fulfill RUS environmental review requirements. RUS will notify applicants if additional information or analyses are necessary.

Requested Information

A. Project Description

Describe all project-related construction activities, including, but not limited to:

a. Installation of telecommunications transmission facilities: Provide the type of facility (towers, satellite dishes, or equipment collocations) and the size/height. Indicate whether any of the facilities will use Federal Communications Commission (FCC) licensed spectrum;

b. Access: Provide a description of any access roads/facilities required for operation of the project, indicating the type (gravel, asphalt etc.) and size (length and width); and

c. Building construction: Provide the type of construction, including installation of prefabricated buildings, internal modifications, or equipment additions to buildings or other structures (e.g., relocating interior walls or adding computer facilities).

Complete descriptions include the height of proposed facilities, construction methodology (e.g., for towers, monopole, lattice, guyed vs. unguyed), and locations. Maps must be provided for each site affected by project-related construction activities. RUS recommends U.S. Geological Survey 7.5-minute quadrangle maps at a map scale of 1:24,000; larger scale maps may be provided for site-specific proposals. USGS maps may be obtained and purchased at the following website (http://www.usgs.gov/pubprod/maps.html). All project elements, if known at the time of the application, must be clearly depicted on any map provided. Cell or microwave towers should be sited at least 30 feet from public areas or residences, and not be accessible to unauthorized people. If appropriate, photographs or aerial photographs of site-specific proposals may be provided.

B. Property Changes

Describe the amount of property to be cleared, excavated, fenced, or otherwise disturbed by the proposed project.

a. Describe the current land use and zoning for all lands disturbed by project construction activities. If proposing a building on an urban or otherwise previously-developed site, determine if the site may be a brownfield (defined as: real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant), and if so, how applicable requirements for development have been met; and

b. Determine and document whether the proposed project, or any project component, is within the boundaries of federally or state managed lands, including but not limited to parks, forest lands, wildlife refuges, or public lands. Where pertinent, integrate any standards, guidelines, or conditions from the federal or state agencies' land management plan(s) if such plan(s) exist. Also determine and document whether the proposed project, or any project component, is located on *tribal lands*, meaning lands within the exterior boundaries of any Indian reservation and all dependent Indian communities or on Indian allotment lands. If so, provide the name of the government body and indicate the status of coordination. Please note that all roads and associated ROWs traversing federal lands are controlled by the appropriate federal agency. Applicants may find information related to federal and tribal lands on the ArcGIS website (http://www.arcgis.com/home/webmap/viewer.html?webmap=8047eda3656e4241b75463a5451ba9e2). State land boundaries information may be obtained through state government websites or sources.

C. Other Federal Involvement

Provide the name of any other federal agencies that may have a NEPA action associated with the project. This information will allow RUS to coordinate our review with other agencies and

avoid duplicative effort.

D. Permitting

Provide a list of all federal, state, local, or tribal permits that will be required to construct the proposed project. Please provide the status of these permits and the anticipated date of receipt.

For the following resource areas, please indicate whether the resources are present within the project area and if the project will have any impacts on that resource.

E. Protected Species

Determine whether any project sites and activities will directly or indirectly affect any federally-listed threatened, endangered, proposed or candidate species, or are within or near designated critical habitat. Applicants must obtain and provide species lists and appropriate species accounts (i.e. requisite habitat) from the U.S. Fish and Wildlife Service's website (http://ecos.fws.gov/ipac/), which will provide applicants with information about threatened and endangered species, critical habitat, wildlife refuges, migratory birds, and wetlands (see below). To avoid/minimize potential impacts to migratory birds, applicants should certify that they will implement the applicable measures as identified in Section 3.11.1.3 and Appendix I of the PEA. Any conservation measures resulting from ESA Section 7 consultation, or seasonal or other restrictions to protect migratory birds, nests, or habitat should be incorporated into the assessment. Special attention should be given to any measures in regard to lattice tower construction or use of guy wires. Also consult the USFWS Guidelines regarding towers and migratory birds (see Appendix H of the PEA).

F. Wetlands

If wetlands are to be avoided, or potential impacts are addressed through a U.S. Army Corps of Engineers (USACE) Nationwide Permit (NWP), check this box □, and no further action is required. If wetlands are identified in the project area and they cannot be avoided, applicants may need an individual permit from the USACE and/or the appropriate state agency. Applicants must notify RUS if the project will require an individual permit. Information about the USACE regulatory program can be found on their website (http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx). If the project will adversely affect wetlands, applicants should state if there is a practicable alternative location. In addition to any permit requirements, standards avoidance and minimization measures should be implemented such as erosion/sediment protection, minimal vegetation removal, spill prevention and control, and appropriate vegetation/restoration. Maps of wetlands may be obtained from the U.S. Fish and Wildlife Service's National Wetlands Inventory website (http://www.fws.gov/wetlands/), or from soil maps obtained from the USDA, Natural Resource Conservation Service's website (http://search.mediacomcable.com/search/?q=http%3A//websoilsurvev.nrcs.usda.gov/app/HomePage.htm&r=&t=0). Wetland information may also be obtained from the applicable state agency.

G. Floodplains

Determine whether any project sites are located within the risk-adjusted floodplain as

determined by EO 13690 and the Federal Flood Risk Management Standard (FFRMS). If any project-related construction activities are within floodplains, a copy of a Flood Insurance Rate Map (FIRM) that depicts construction activities must be included. Information related to floodplains, National Flood Insurance Maps, and the EO and FFRMS may be obtained from the Federal Emergency Management Agency's (FEMA) website (http://msc.fema.gov/portal). If the project will adversely impact the floodplain, applicants should state whether there is a practicable alternative location. Standard measures to protect floodplains include soil erosion/sediment protection and spill prevention and control.

Determine whether the project will irreversibly convert farmland (directly or indirectly) to nonagricultural use in accordance with the Farmland Protection Policy Act (FPPA). The USDA, Natural Resources Conservation Service (NRCS) established a farmland conversion impact rating score used to consider alternative sites if the score exceeds the recommended allowable level. This assessment is completed on Form AD-1006, which can be found on the NRCS website (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045394.pdf) The applicant is responsible for filling out Parts I, V, and VI of the form for submittal to the local NRCS office; the criteria for Part VI are found at 7 CFR §658.5.

H. Coastal Areas

Determine whether any project sites are within the boundaries of a Coastal Barrier Resource Area (CBRA). For boundary related and contact information related to CBRA, see the U.S. Fish and Wildlife Service's CBRA website (http://www.fws.gov/ecological-services/habitat-conservation/Coastal.html)**.**

I. Historic Properties

a. If you are applying for a project-specific loan or grant under the Broadband or Community Connect Programs, please continue on to the next steps. If you are applying for a multi-year loan under the Infrastructure Program, contact the appropriate RUS environmental protection specialist at the earliest time possible for more information.

b. Determine if your project will require review by the Federal Communications Commission. Applicants proposing telecommunications towers and collocations should note that the Federal Communications Commission (FCC) has regulatory requirements for licensing radio spectrum, and an established review process for ensuring compliance with Section 106 of NHPA. If the proposed tower or collocation will use FCC licensed spectrum, regardless of the height of the tower, applicants must complete FCC's Section 106 review process; see FCC's website (https://www.fcc.gov/general/tower-and-antenna-siting). If an application proposes a tower or collocation that will carry FCC spectrum, RUS has agreed that FCC will conduct Section 106 review for those facilities. The FCC Section 106 review requirements include: completing Form 620 for new towers or Form 621 for collocations, contacting the appropriate State Historic Preservation Officer (SHPO), and notify Indian tribes, Alaska Native Villages and Native Hawaiian organizations using the Tower Construction Notification System (TCNS), which can be found at FCC's website (http://wireless.fcc.gov/outreach/index.htm?job=tower_notification). In completing Form 620 applicants are advised to include for review any fiber optic cable that will be constructed to connect a proposed new tower to mainline cables. Please note: the FCC's

Section 106 review process does not apply to any portion of a proposal that is located within federal property, such as U.S. Forest Service, or National Forest System land, or an Indian reservation.

c. For all other projects, RUS will conduct the Section 106 review. Applicants must contact the appropriate RUS environmental protection specialist for templates to consultation with SHPOs and to notify Indian tribes, Alaska Native Villages and Native Hawaiian organizations. Databases and maps to assist in identifying known archeological sites and NRHP listed or eligible resources can be obtained from the appropriate SHPO, which can be identified on the National Conference of State Historic Preservation Officers website (www.ncshpo.org). The SHPO website will also include information about tribal interest. Applicants can also use tribal interest directories developed by other federal agencies, including the National Park Service website (http://grants.cr.nps.gov/nacd/index.cfm) or the Housing and Urban Development website (http://egis.hud.gov/tdat/Tribal.aspx).

d. Certain standard practices or measures will also help avoid potential impacts to cultural resources. These include: keeping equipment and vehicles on roads or exiting ROWs; avoiding known cultural or historic sites; flagging or monitoring cemeteries within 200 feet of the Area of Potential Effect (APE); considering the effects of vibrating equipment on historic structures; implementing any protection measures resulting from consultation with SHPO; and stopping work and notifying the SHPO and RUS if artifacts or human remains are inadvertently discovered.

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In reviewing this report, the Agency certifies/does not certify that the proposal meets the criteria established in §§7 CFR 1794.21 and 1794.22, Categorical Exclusions without or with an environmental report. The proposal's description and this Environmental Report also demonstrate/do not demonstrate that the proposal is consistent with 40 CFR §1508.4, Categorical Exclusion and that the proposal does not have any extraordinary circumstances.