

Draft Programmatic Environmental Assessment of the Antenna Structure Registration Program



Responsible Agency:

**FEDERAL COMMUNICATIONS
COMMISSION**
445 12th Street, SW
Washington, DC 20554

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Draft PEA August 26, 2011

DRAFT
PROGRAMMATIC ENVIRONMENTAL ASSESSMENT
OF THE
ANTENNA STRUCTURE REGISTRATION PROGRAM

Responsible Agency:

Federal Communications Commission
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Washington, DC 20554

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**Draft Programmatic Environmental Assessment
of the
Antenna Structure Registration Program**

Responsible Agency: Federal Communications Commission
Affected Location: Nationwide
Proposed Action: Review the existing ASR Program and NEPA compliance procedures to evaluate their effects on migratory birds and other environmental resources
Report Designation: Draft Programmatic Environmental Assessment
Date: August 26, 2011
Comments Due: October 3, 2011

All comments must be submitted in WT Docket No. 08-61 and WT Docket No. 03-187 (for electronic comments) or must reference both WT Docket No. 08-61 and WT Docket No. 03-187 (for paper comments). All comments regarding this document should be submitted as follows.

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Acronyms and Abbreviations

AGL	Above Ground Level	T&E	Threatened & Endangered
ASR	Antenna Structure Registration	THPO	Tribal Historic Preservation Office
BCR	Bird Conservation Region	USACE	U.S. Army Corps of Engineers
BGEPA	Bald and Golden Eagle Protection Act	U.S.C.	U.S. Code
		USFWS	U.S. Fish and Wildlife Service
CEQ	Council on Environmental Quality	WOUS	Waters of the United States
CFR	Code of Federal Regulations		
CWA	Clean Water Act		
DAS	Distributed Antenna System		
EA	Environmental Assessment		
EIS	Environmental Impact Statement		
EO	Executive Order		
EPA	Environmental Protection Agency		
ESA	Endangered Species Act		
FAA	Federal Aviation Administration		
FCC	Federal Communications Commission		
FEMA	Federal Emergency Management Agency		
FIRM	Flood Insurance Rate Map		
FONSI	Finding of No Significant Impact		
MBTA	Migratory Bird Treaty Act		
MHz	megahertz		
MOA	Memorandum of Agreement		
MPE	Maximum Permissible Exposure		
NEPA	National Environmental Policy Act		
NHPA	National Historic Preservation Act		
NPA	Nationwide Programmatic Agreement		
NPDES	National Pollutant Discharge Elimination System		
NRHP	National Register of Historic Places		
PEA	Programmatic Environmental Assessment		
PEIS	Programmatic Environmental Impact Statement		
PIF	Partners In Flight		
PL	Public Law		
RF	Radio Frequency		
SHPO	State Historic Preservation Office		

INTRODUCTION

This Programmatic Environmental Assessment (PEA) has been prepared to evaluate the environmental impacts of the Antenna Structure Registration (ASR) Program administered by the Federal Communications Commission (FCC or the Commission). The ASR Program is the process under which each antenna structure that requires Federal Aviation Administration (FAA) notification must be registered with the FCC by its owner. The ASR requirements only apply to those antenna structures that may create a hazard to air navigation due to height (generally, structures more than 200 feet [61 meters] tall) or proximity to an airport runway. The current ASR Program does not routinely require an applicant to prepare an EA to evaluate potential impacts to migratory birds.

The U.S. Court of Appeals for the District of Columbia Circuit in *American Bird Conservancy, Inc. v. FCC* (2008) determined that the FCC has not adequately evaluated the potential effects that its current ASR program has on threatened and endangered species and migratory birds. The court further stated that the Commission could begin its evaluation of these effects with a PEA. In addition, the court required the Commission to provide notice of pending ASR applications that would ensure meaningful public involvement in the agency's National Environmental Policy Act (NEPA) procedures.

In partial response to the court's decision, the FCC has prepared and sought comment on draft procedures designed to help ensure that the environmental effects of proposed communications towers, including their effects on migratory birds, are fully considered prior to construction. The draft procedures, if adopted, would require:

- Applicants for new tower registration to provide a 30-day opportunity for public comment on the environmental effects of the proposed construction; and
- On an interim basis, pending completion of environmental review of the ASR program, preparation of an Environmental Assessment (EA) for a proposed tower more than 450 feet (137 meters) in height to address its potential impact on migratory birds.

PROPOSED ACTION

The Proposed Action consists of reviewing the existing ASR Program and NEPA compliance procedures to evaluate their effects on migratory birds and other environmental resources, in compliance with the 2008 court decision. Because of the nature of the projects under the ASR Program and in response to the 2008 court decision, this PEA primarily focuses on potential impacts to migratory birds.

PURPOSE AND NEED FOR THE ACTION

The ASR Program promotes air safety by requiring the registration of antenna structures that may create a hazard to air navigation due to their height or proximity to an airport runway. The purpose of the Proposed Action is to examine how potential environmental impacts are evaluated as part of the ASR Program and associated NEPA review and documentation. To ensure that the FCC complies with its obligations under NEPA, there is a need to consider whether the current program should be revised to require applicants to provide more comprehensive evaluations of potential impacts on resources, especially migratory birds.

ALTERNATIVES

The alternatives considered include a No Action Alternative, Alternative 1 that assumes a change in the FAA's permitted lighting configurations, and three options of Alternative 2 that require greater consideration of the effects of proposed towers on migratory birds and other environmental resources than the No Action Alternative.

The Commission's draft procedures (FCC 2011a), if adopted, would require applicants for new tower registration to provide a public notice and 30-day opportunity for comment on the environmental effects

of the proposed construction. The No Action Alternative, Alternative 1, and Alternative 2 each assume that the public notice and comment procedures will be adopted and remain in place.

The draft procedures also, as an interim measure, require applicants to prepare an EA for proposed towers that are more than 450 feet (137 meters) in height to address potential impacts on migratory birds.

Alternative 2 Option C considers the effects of adopting this requirement on a permanent basis.

It should be noted that lighting on new towers must conform to the requirements of the current FAA Advisory Circular 70/7460-1K Obstruction Marking and Lighting (USDOT/FAA 2007). The FCC cannot enforce lighting schemes that are not in compliance with this circular. Currently the FAA does not allow lighting configurations that use red flashing lights without also requiring the presence of red steady-burning lights. Pending completion of a conspicuity study, the FAA may consider revisions to the circular that would allow lighting schemes that use red flashing lights without red steady-burning lights.

No Action Alternative

The No Action Alternative is defined as continuation of the existing ASR Program and NEPA compliance procedures, including the public notice and 30-day public comment requirement of the FCC's draft procedures, and under the existing FAA-permitted lighting configurations.

Alternative 1 – Existing ASR Program with FAA Lighting Changes

Alternative 1 is the continuation of the existing ASR Program and NEPA compliance procedures, including the public notice and 30-day public comment requirement of the FCC's draft procedures, along with the potential changes to the FAA's permitted lighting configurations under which future towers that use red flashing lights would not also have red steady-burning lights.

Alternative 2 – Modifications to the ASR Program

Under Alternative 2, the FCC would revise its NEPA compliance procedures for the ASR Program to require more comprehensive assessments of potential environmental impacts from new towers and tower modifications involving a substantial increase in size, particularly for potential effects to migratory birds. Alternative 2 would not change the procedures for tower modifications or replacements that do not involve a substantial increase in size, for certain lighting changes, or for minor ASR actions, including administrative changes, changes in ownership, dismantling of towers, and minor changes/corrections to existing towers. It also would not affect activity at registered towers that does not require action in the ASR system, such as tower repair and replacement of tower parts.

There are three options under Alternative 2 for determining the level of NEPA review that would be required for a project.

Alternative 2 Option A

Alternative 2 Option A would require an EA for all new registered towers outside of an antenna farm, regardless of height, use of guy wires, or lighting scheme. Towers in an antenna farm, replacement towers, and modifications of existing towers would require an EA if they involve a substantial increase in size over the existing tower or towers. An EA would also be required for changes to existing towers involving: (1) a change to steady-burning lighting; (2) a change to high-intensity white lighting in a residentially zoned neighborhood; (3) addition of lighting; or (4) human exposure to levels of radio frequency (RF) radiation in excess of the limits in 47 CFR §§ 1.1310 and 2.1093. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds and Bald and Golden Eagles.

Under Option A, the only projects that would be categorically excluded from preparation of an EA would be those that propose: (1) a change from red steady-burning to flashing lights or removal of lighting on an existing tower (depending upon potential revisions to the FAA lighting circular); (2) replacement or

modification of an existing tower that involves no substantial increase in size; (3) construction in an antenna farm that does not involve a substantial increase in size over existing towers; or (4) a minor action.

Alternative 2 Option B

Under Alternative 2 Option B, a proposed new tower would require preparation of an EA only under certain combinations of location and structural and lighting features. Any proposed new registered tower that requires an EA under the existing rules or that is located within 660 feet (201 meters) of a Bald Eagle nest or 0.6 mile (1 kilometer) of a Golden Eagle nest would require an EA. Other locational features for which a project may require an EA would include ridgelines, coastal zones, and bird staging areas or colonial nesting sites. If any of those locational features are present, and a tower would be more than 450 feet (137 meters) tall, would use a red steady-burning lighting scheme, or would use guy wires, an EA would be required. Towers that are not proposed within any of these locations or that do not have any of these structural or lighting features would continue to be categorically excluded.

Towers in an antenna farm, replacement towers, and modifications to existing towers would require an EA under the same circumstances as new towers if they involve a substantial increase in size. An addition of red steady-burning lights to an existing tower would also require an EA if the tower is located in a ridgeline, coastal zone, bird staging area, or colonial nesting site.

Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds and Bald and Golden Eagles. If the tower is in a wetland or floodplain and is over 450 feet (137 meters) tall, uses red steady lights, or uses guy wires, the FCC would expect the applicant to either provide evidence that it is not in a riparian zone or a detailed analysis of its effects on migratory birds.

Alternative 2 Option C

Under Alternative 2 Option C, in addition to those towers for which an EA is required under the existing FCC rules, an EA would be required for any proposed new tower, or replacement or modification of an existing tower that involves a substantial increase in size, that is more than 450 feet (137 meters) above ground level (AGL), regardless of location, lighting scheme, or use of guy wires.

Towers less than or equal to 450 feet (137 meters) AGL would be categorically excluded from preparation of an EA unless a condition requiring an EA under the existing program is present.

Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds and Bald and Golden Eagles.

Alternatives Considered and Dismissed

Various alternatives for changes to the ASR Program were examined but dismissed as not feasible, including: prohibiting all new tower construction; prohibiting all towers that exceed a certain height; prohibiting all towers in certain locations; and prohibiting guy wires on all new towers.

ENVIRONMENTAL CONSEQUENCES

The ASR program is national in scope, and the environmental impacts of each individual tower may vary greatly depending on local conditions. Therefore, this PEA does not assess the environmental impacts of any particular tower. Rather, the PEA focuses on the broad, programmatic impacts of the ASR program in a national context. In addition, the PEA considers whether the FCC's processes, including its criteria for determining which towers are categorically excluded and which require an EA, ensure that potentially significant impacts of individual towers will be identified and considered. If an individual tower may have potentially significant environmental impacts, those impacts would be addressed in site-specific EA prepared for that tower.

Impacts (or effects) can be categorized by description (beneficial or adverse), context (site-specific, local, regional, or national), intensity (negligible, minor, moderate, or major), and duration (short- or long-term). NEPA requires consideration of all categories of impacts that apply to a proposed action, including direct, indirect, and cumulative impacts.

According to the Council on Environmental Quality (CEQ) regulations (40 CFR Section 1508.27), assessment of an impact's significance under NEPA requires consideration of both its context and its intensity.

For purposes of evaluating the impacts of the ASR program as a whole, as addressed in this PEA, the relevant context is generally national or international in scope. In project-specific EAs, the discussion of impacts would be more local in context.

Intensity refers to the severity of impact. This PEA uses impact threshold definitions that take into consideration the characteristics of communications towers:

- Negligible – The impact is barely perceptible or measurable and remains localized and confined.
- Minor – The impact is slight but perceptible and measurable and remains localized and confined.
- Moderate – The impact is readily apparent and sufficient to cause a change in the character-defining features of a resource. It generally does not affect the resource's viability.
- Major – The impact results in a substantial and highly noticeable change in character-defining features or involves an individually important feature of a resource. A major impact may, but does not necessarily, affect the resource's viability.

The intensity of the ASR Program's impacts to various resources is summarized in Table 1 at the end of this Executive Summary.

Once the relevant context has been identified and an impact has been determined to be negligible, minor, moderate, or major, a determination of the impact's significance must be made. Three levels of impact can be identified:

- No Impact – No impact is anticipated.
- No Significant Impact – An impact is anticipated, but the impact does not meet the intensity/context significance criteria for the specified resource.
- Significant Impact – An impact is anticipated that meets the intensity/context significance criteria for the specified resource.

Negligible, minor, and moderate impacts are generally not significant. However, a moderate impact may be significant if its importance is magnified by the context in which it occurs. Major impacts are often significant, but are not necessarily so when considered in context.

Several resources were determined to not be affected by or to be affected negligibly by the No Action Alternative, Alternative 1, and the three options under Alternative 2. These resources include: geology, soils, farmlands, groundwater, coastal zones/barriers, designated wilderness areas (which are already protected under FCC rules), air quality, noise, and land use. However, because coastal zones and barriers contain important habitats for migratory birds, these resources are addressed as part of the discussion of impacts to migratory birds.

FINDINGS

Environmental impacts from towers are dependent on a variety of factors including location, height, structural support system, and lighting scheme. The principal adverse impact of communications towers is on birds, especially migratory birds, and tower lighting is the primary contributor to bird mortality from

towers. Based on a review of the available peer-reviewed literature and the analysis contained in this PEA, the relative severity of impacts on birds is as follows:

- All other factors being equal, taller towers result in higher levels of avian mortality than shorter towers.
- All other factors being equal, towers with guy wires result in higher levels of avian mortality than towers without guy wires.
- All other factors being equal, steady-burning lights on towers result in higher levels of avian mortality than flashing lights.

Under all alternatives, the environmental impacts of the ASR Program at the national level on resources other than migratory birds are negligible, minor, or moderate. Taking into consideration the context and intensity of each of these impacts, the FCC finds that none of them rises to the level of significance. Furthermore, the existing ASR Program and all program alternatives require EAs for towers when existing ASR program criteria are triggered. This requirement ensures that potentially significant local effects on environmental resources other than migratory birds will be identified and considered.

No Action Alternative

The No Action Alternative would have no significant adverse environmental impacts at the national level to any resources, including migratory birds. Major adverse impacts on migratory birds due to construction in areas of heavy migration use (coastal zones, ridgelines, bird staging areas/colonial nesting sites, riparian zones) would continue. Avian mortality would be expected to increase in proportion to the number and types of new towers that are constructed. Current annual avian mortality from existing communications towers is estimated at approximately 5 million birds, the majority of which are migratory birds. Assuming that approximately 2,800 new towers would be constructed annually under the existing ASR Program, avian mortality would increase to an estimated 6.6 million birds by the year 2021 due to collisions with communications towers. While this number is large and constitutes a major impact, it is only 0.05 percent of the overall U.S. bird population, which is estimated at 10 billion birds. Furthermore, when evaluated in context with other sources of avian mortality, towers cause approximately 0.2 percent of annual avian mortality. Thus, in the national context of overall migratory bird abundance and other, greater forces to which migratory birds are subject, the relative impact of communications towers is small. In addition, the available scientific information does not support a finding that tower collisions may have a significant impact on any particular species. Therefore, the impact to migratory birds under the No Action Alternative is not significant.

In a local context, site-specific EAs are required when existing ASR program criteria are triggered. Migratory bird habitat features (ridgelines, coastal zones, and bird staging areas or colonial nesting sites) and tower features (height, lighting scheme, and guy wires) which are hazardous to migratory birds, as well as proximity to Bald and Golden Eagle nests, are not routinely considered under the current program in determining whether an EA is required. Therefore, there may be instances of significant impacts to a local population of migratory birds or individual Bald and Golden Eagle nests from a proposed tower that would not be addressed.

Alternative 1 – Existing ASR Program with FAA Lighting Changes

Under Alternative 1 there would be no significant adverse environmental impacts at the national level to any resources, including migratory birds. Major adverse impacts on migratory birds would continue and avian mortality due to bird collisions with communications towers would increase in proportion to the number and types of new towers that are constructed. However, the increase in avian mortality due to new tower construction would be greatly reduced by the FAA lighting circular revisions. Under these revisions, future towers that use red flashing lights would not also have steady-burning lights. A tower without red steady-burning lights is estimated to result in 50 to 70 percent less avian mortality than if it

uses red steady-burning lights (Gehring et al. 2009). Therefore, bird mortality would decrease under this alternative when compared to future conditions under the No Action Alternative. Additionally, tower owners may voluntarily change (or extinguish) red steady-burning lights on existing towers and use flashing lights exclusively, thereby further reducing migratory bird mortality. Therefore, the impact to migratory birds is not significant.

As is the case with the No Action Alternative, site-specific NEPA documents would be required under Alternative 1 when existing ASR program criteria are triggered. Migratory bird habitat features (ridgelines, coastal zones, and bird staging areas or colonial nesting sites) and tower features (height, lighting scheme, and guy wires) which are hazardous to migratory birds, as well as proximity to Bald and Golden Eagle nests, are not routinely considered under the current program in determining whether an EA is required. Therefore, there may be instances of significant impacts to a local population of migratory birds or individual Bald and Golden Eagle nests from a proposed tower that would not be addressed.

Alternative 2 – Modifications to the ASR Program

Alternative 2 Option A

Alternative 2 Option A would have no significant adverse environmental impacts at the national level to any resources, including migratory birds. Major adverse impacts to migratory birds would continue and avian mortality would be expected to increase in proportion to the number and types of towers that are constructed.

With no revisions to the FAA lighting circular, potential impacts to migratory birds would be reduced to a limited extent when compared with the No Action Alternative because of mitigation measures that would result from the EA process. Therefore, the impact to migratory birds is not significant at the national level for the same reasons as discussed under the No Action Alternative.

Under Option A with potential revisions to the FAA lighting circular, as under Alternative 1, the increase in avian mortality due to new tower construction would be greatly reduced because future towers that use red flashing lights would not also have red steady-burning lights. Also, tower owners may voluntarily change (or extinguish) red steady-burning lights on existing towers and use flashing lights exclusively, thereby further reducing migratory bird mortality. Potential impacts to migratory birds would be further reduced to a limited extent when compared with Alternative 1 because of mitigation measures that would result from the EA process.

Therefore, under Option A, with or without revisions to the FAA lighting circular, the impact to migratory birds at the national level is not significant.

With or without revisions to the FAA lighting circular, under Option A the preparation of site-specific EAs for all new tower construction would include an evaluation of the effects that the project would have on migratory birds and Bald and Golden Eagles. This evaluation would ensure that potentially significant environmental impacts from an individual tower on migratory birds would be addressed at the local level.

Alternative 2 Option B

Under Alternative 2 Option B, there would be no significant adverse environmental impacts at the national level to any resources, including migratory birds. Major adverse impacts to migratory birds would continue and avian mortality would be expected to increase in proportion to the number and types of towers that are constructed.

Without revisions to the FAA lighting circular, impacts to migratory birds would be reduced slightly compared to the No Action Alternative, to an extent at least comparable to Option A. Under Option B, applicants would have an incentive to avoid siting towers that are over 450 feet (137 meters) tall, use red steady-burning lights, or use guy wires on ridgelines, in coastal zones, in bird staging areas and colonial nesting sites, and in riparian zones within wetlands and floodplains. Therefore, towers with the features

that pose the greatest hazards to migratory birds would be less likely to be constructed in the locations where migratory birds are most prevalent. Applicants would also likely attempt to avoid constructing any towers near Bald and Golden Eagle nests. In addition, potential impacts to migratory birds and Bald and Golden Eagles may be reduced when compared with the No Action Alternative because of mitigation measures that would result from the EA process. Therefore, the impact to migratory birds under Option B without revisions to the FAA lighting circular is not significant at the national level.

With potential revisions to the FAA lighting circular, as under Alternative 1, impacts to migratory birds would be greatly reduced compared to the No Action Alternative because future towers that use red flashing lights would not also have steady-burning lights. A tower without red steady-burning lights is estimated to cause 50 to 70 percent less avian mortality than if it uses red steady-burning lights. Tower owners may also voluntarily change (or extinguish) steady-burning lights on existing towers and use flashing lights exclusively, thereby further reducing migratory bird mortality. Avian mortality would be further slightly reduced because the FCC anticipates that applicants would likely attempt to avoid constructing towers that are more than 450 feet (137 meters) tall or use guy wires in areas important to migratory birds, and would attempt to avoid constructing any towers near Bald and Golden Eagle nests. Overall, migratory bird mortality would be less than under Alternative 1 and comparable to Option A. Therefore, under Option B with revisions to the FAA lighting circular, the impact to migratory birds is not significant at the national level.

Under Option B, with or without revisions to the FAA lighting circular, EAs would be required for towers with the features that contribute the most to migratory bird deaths if they are located in the areas where migratory birds are most prevalent. These EAs would include an evaluation of potential impacts to individual species of migratory birds to the extent that species-specific information exists. In addition, EAs would be required for all towers in proximity to Bald and Golden Eagle nests. These requirements would ensure that potentially significant environmental effects on migratory birds at the local level would be addressed.

Alternative 2 Option C

Under Alternative 2 Option C, there would be no significant adverse environmental impacts at the national level to any resources, including migratory birds. Major adverse impacts to migratory birds would continue and avian mortality would be expected to increase in proportion to the number and types of towers that are constructed.

Without revisions to the FAA lighting circular, avian mortality would be reduced compared to the No Action Alternative because applicants would have an incentive to avoid constructing towers over 450 feet (137 meters) tall to the extent practicable. However, in many instances it is unlikely, particularly for broadcast towers, that such a tower could be reduced appreciably in height and still be able to meet service coverage requirements. Because Options A and B would require EAs for more towers that may affect migratory birds, Option C would not reduce potential impacts to migratory birds as much as those two options. However, potential impacts to migratory birds may be reduced when compared with the No Action Alternative because of mitigation measures that would come out of the EA process for towers more than 450 feet (137 meters) tall. Therefore, the impact to migratory birds is not significant at the national level for the same reasons as discussed under the No Action Alternative.

Under Option C, with the potential revisions to the FAA lighting circular, as under Alternative 1, impacts to migratory birds would be greatly reduced compared to the No Action Alternative because future towers that use red flashing lights would not also have steady-burning lights. A tower without red steady-burning lights is estimated to cause 50 to 70 percent less avian mortality than if it uses red steady-burning lights. In addition, tower owners may voluntarily change (or extinguish) steady-burning lights on existing towers and use flashing lights exclusively, thereby further reducing migratory bird mortality. Avian mortality would be further slightly reduced because applicants would have an incentive to avoid constructing towers over 450 feet (137 meters) tall where feasible, and because of mitigation measures

that may come out of the EA process for towers more than 450 feet (137 meters) tall. Overall, the reduction in migratory bird deaths would be more than under Alternative 1, but less than under Option A or Option B with revisions to the FAA circular. Therefore, under Option C with revisions to the FAA lighting circular, the impact to migratory birds is not significant at the national level.

With or without revisions to the FAA circular, site-specific NEPA documents would be required under Option C when existing ASR program criteria are triggered or when a proposed tower would be more than 450 feet (137 meters) tall. Except for tower height, migratory bird habitat features (ridgelines, coastal zones, and bird staging areas or colonial nesting sites) and tower features (lighting scheme and guy wires) which are hazardous to migratory birds, as well as proximity to Bald and Golden Eagle nests, would not be routinely considered under the Option C in determining whether an EA is required. Therefore, there may be instances of significant impacts to a local population of migratory birds or individual Bald and Golden Eagle nests from a proposed tower that would not be addressed.

Cumulative Impacts

From a cumulative impacts perspective, under the No Action Alternative, Alternative 1, or any option of Alternative 2, towers regulated under the ASR Program will continue to affect migratory birds. Migratory bird deaths due to collisions with communications towers are currently estimated at 5 million per year, and, depending on the alternative considered, this number is expected to be between 3.7 million and 6.6 million in 2021. If the FAA does not change its lighting circular, under all alternatives there will be an incremental increase in avian mortality over existing conditions. If the FAA revises its lighting circular, there may be either an increase or a decrease in avian mortality depending on the extent to which tower owners voluntarily change (or extinguish) steady-burning lights on existing towers and use flashing lights exclusively.

In assessing cumulative impacts upon a resource, the incremental impacts of the action in question are considered together with the impacts of other past, present, and reasonably foreseeable future actions. Anthropogenic sources and cat predation together annually kill a relatively large percentage of the U.S. migratory bird population (more than 2 billion out of 10 to 20 billion), and an increase in this mortality could therefore be significant. However, the estimated 5 million annual bird deaths caused by communications towers constitute only approximately 0.2 percent of these total bird deaths and approximately 0.05 percent of the migratory bird population. This small incremental contribution to the cumulative impacts of all actions on migratory birds is not significant.

Summary

The impacts of the ASR Program at the national level on all resources, including migratory birds, are not significant.

The best available and most currently cited estimate of avian mortality, primarily to migratory birds, from collisions with communications towers is 5 million birds annually. Tall towers, steady-burning lights, and guy wires are the primary tower characteristics contributing to avian mortality.

Migratory bird mortality from all sources would be expected to increase in the future, with an anticipated increase in the number of vertical structures in the environment as well as continuing impacts from other actions and factors. The construction of new communications towers would contribute incrementally to this future increase in mortality, regardless of whether FAA lighting changes are implemented.

The Commission recognizes that the potential changes to the FAA lighting circular would have the greatest beneficial effect and would be the critical element in reducing impacts to migratory birds under any of the alternatives. Under Alternative 1 (which assumes FAA lighting changes will occur) and any of the options under Alternative 2 (if FAA lighting changes occur), the incremental increase in migratory bird mortality from new towers approved under the ASR Program would be substantially reduced due to the use on future towers of red flashing lights exclusively without red steady-burning lights. Studies

indicate that the use of flashing lights on towers may reduce bird mortality at towers by 50 to 70 percent (Gehring et al. 2009). In addition, voluntary lighting changes on existing towers from steady-burning to flashing lights would further reduce migratory bird impacts and may possibly reduce the total number of bird deaths from registered towers to below current levels.

The Commission acknowledges that the estimated bird mortality as a result of collisions with towers approved under its ASR Program is a large number. However, the anticipated annual bird mortality from existing and future communications towers under any alternative is not significant at the national level, whether considered as a separate, direct impact or as part of a cumulative analysis.

The impacts of the ASR Program on resources other than migratory birds are not significant. The Commission acknowledges that the estimated bird mortality as a result of collisions with towers approved under its ASR Program is a large number. However, the anticipated annual bird mortality from existing and future communications towers under any alternative is not significant at the national level, whether considered as a separate, direct impact or as part of a cumulative analysis.

At the site-specific level, under Options A and B of Alternative 2, the requirements to prepare EAs for a proposed tower would ensure that potentially significant effects on local migratory bird populations and individual Bald and Golden Eagles would be considered. Under the No Action Alternative, Alternative 1, and Option C of Alternative 2, significant impacts on local migratory bird populations and Bald and Golden Eagles may not be addressed.

MITIGATION

Under the No Action Alternative, Alternative 1, and all options of Alternative 2, the FCC would ensure mitigation of environmental effects of individual towers through the preparation and review of EAs. The FCC is also engaged in programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) to consider potential further measures to protect threatened and endangered (T&E) species. The FCC encourages tower owners and applicants to consider additional measures that may further mitigate any environmental effects.

Table 1 summarizes impacts by resource for the No Action Alternative, Alternative 1, and Alternative 2 Options A, B, and C.

Table 1: Summary of Impacts by Resource for All Alternatives

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
Surface Water	Short- and long-term negligible to minor adverse impacts from increases in sedimentation and impervious surface area and minor modifications of stream channels due to construction activities. Fuel spill/leak from backup generator during site operation may result in short-term negligible to minor adverse impacts.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.
Wetlands/ Waters of the U.S.	Short- and long-term negligible to minor adverse impacts from increases in sedimentation and impervious surface area and potential wetland fill or disturbance due to construction activities.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
Floodplains	Short- and long-term negligible to minor adverse impacts due to the potential for construction activities to increase floodwater flows downstream of the project site.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.
Vegetation and Wildlife (other than T&E Species/Critical Habitat and Migratory Birds)	Short- and long-term negligible to minor adverse impacts due to vegetation disturbance/removal, some direct mortality to less mobile wildlife, habitat fragmentation, and introduction of non-native invasive species.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.
T&E Species/ Critical Habitat	Short- to long-term negligible to minor adverse impacts because FCC's procedures for implementing the Endangered Species Act (ESA) ensure that adverse effects to T&E species will be avoided or mitigated.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
Migratory Birds	<p>Direct: Short- to long-term major adverse impact. Annual bird mortality expected to increase from approximately 5 million currently to approximately 6.6 million in the year 2021, based on an estimated 2,800 new towers built annually.</p> <p>Indirect: Short- to long-term minor impacts (habitat and site abandonment). Evidence does not support determination of RF radiation impacts.</p>	<p>Direct: Short- to long-term major adverse impact. Mortality from new towers would decrease by 50 to 70 percent as a result of revisions to the FAA lighting circular when compared to No Action (from approximately 6.6 million in the year 2021 to approximately 5.5 million to 5.8 million) based on an estimated 2,800 new towers built annually.</p> <p>In addition, assuming owners of 50 percent of existing towers extinguish red steady-burning lights or change them to red flashing lights (and that these towers are evenly distributed across tower heights), annual bird mortality from existing towers would be reduced by an estimated 25 to 35 percent. This would</p>	<p>Direct (without revisions to FAA lighting circular): Short- to long-term major adverse impact. Mortality expected to decrease somewhat compared to No Action. Review of EAs expected to lead to adoption of mitigating measures in some cases and applicants would have incentive to make changes to existing towers rather than construct new towers. However, in many instances the factors contributing to migratory bird deaths would likely be difficult to avoid.</p> <p>Direct (with revisions to FAA lighting circular): Short- to long-term major adverse impact. Mortality expected to decrease slightly compared to Alternative 1.</p>	<p>Direct (without revisions to FAA lighting circular): Short- to long-term major adverse impact. Reduction in annual bird mortality compared to No Action because of incentives to place new towers that are over 450 feet tall, use red steady lights, or use guy wires outside of coastal zones, ridgelines, bird staging areas/colonial nesting sites, and riparian zones within wetlands and floodplains, as well as to reduce the heights of the tallest towers and avoid use of red steady-burning lights and guy wires within these areas where feasible. Reduction would be limited by applicants' ability to avoid these areas and features, as well as</p>	<p>Direct (without revisions to FAA lighting circular): Short- to long-term major adverse impact. Annual bird mortality expected to decrease compared to No Action, but not as much as with Option A (which requires more EAs) or Option B (which provides incentives to place new towers that are over 450 feet tall, use red steady lights, or use guy wires away from resources important to migratory birds, and to reduce tower heights and avoid red-steady lights and guy wires within these areas if feasible). Applicants would have an incentive to reduce heights of new towers, where feasible, and review of EAs for towers greater than 450 feet</p>

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
		<p>reduce total bird mortality from existing and new towers from 5 million currently to between 3.7 million and 4.6 million in the year 2021.</p> <p>Indirect: Similar to No Action.</p>	<p>Review of EAs expected to lead to adoption of mitigating measures in some cases and applicants would have incentive to make changes to existing towers rather than construct new towers. However, in many instances the factors contributing to migratory bird deaths would likely be difficult to avoid, particularly since steady lighting would no longer be a factor.</p> <p>Indirect (with or without revisions to FAA lighting circular): Somewhat reduced impacts (habitat and site abandonment) compared to No Action due to case-by-case review of EAs. Evidence does not support determination of RF radiation impacts.</p>	<p>protection already provided under FCC rules for areas that overlap (e.g., floodplains and wetlands). Moving a tower off of ridgeline may require a taller tower or multiple towers, which may cause other environmental impacts that offset the potential beneficial impact to birds. Some use of white flashing lights instead of red steady-burning lighting may occur, provided local land use regulations allow it. Overall, by establishing clear guidelines and aligning tower owners' economic incentives with the protection of migratory birds, reduction in bird mortality expected to be at least comparable to Option A.</p>	<p>(137 meters) is expected to lead to adoption of mitigating measures in some cases. However, opportunities for significant reductions in height are very limited.</p> <p>Direct (with revisions to FAA lighting circular): Short- to long-term major impact. Reduction in annual bird mortality expected to be more than under Alternative 1, but not as much as under Option A (because fewer EAs would be prepared) or Option B (which provides incentives to place new towers that are over 450 feet tall or use guy wires away from resources important to migratory birds, and to reduce tower heights and avoid</p>

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
				<p>Direct (with revisions to FAA lighting circular): Short- to long-term major adverse impact. Reduction in annual bird mortality compared to Alternative 1 because of incentives to place new towers that are over 450 feet tall or use guy wires outside of coastal zones, ridgelines, bird staging areas/colonial nesting sites, and riparian zones within wetlands and floodplains, as well as to reduce the heights of the tallest towers and avoid guy wires within these areas where feasible. Reduction would be limited by applicants' ability to avoid these areas and features, as well as protection already provided under FCC rules for areas that</p>	<p>guy wires within these areas if feasible). Applicants would have an incentive to reduce heights of new towers, where feasible, and review of EAs for towers greater than 450 feet (137 meters) is expected to lead to adoption of mitigating measures in some cases. However, opportunities for significant reductions in height are very limited.</p> <p>Indirect (with or without revisions to FAA lighting circular): Slightly less impact (habitat and site abandonment) than No Action, due to case-by-case review of EAs for towers more than 450 feet (137 meters) tall, but reduction would be less than under</p>

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
				<p>overlap (e.g. floodplains and wetlands). Moving a tower off of ridgeline may require a taller tower or multiple towers, which may cause other environmental impacts that offset potential beneficial impact to birds. Overall, by establishing clear guidelines and aligning tower owners' economic incentives with protection of migratory birds, reduction in bird mortality expected to be at least comparable to Option A.</p> <p>Indirect (with or without revisions to FAA lighting circular): Slightly less impact (habitat and site abandonment) than No Action, but less reduction in impact</p>	<p>Option A or B. Evidence does not support determination of RF radiation impacts.</p>

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
				than Option A. Evidence does not support determination of RF radiation impacts.	
Bald/Golden Eagles	Short-term minor to moderate adverse impacts due to tower construction and operation disturbances to eagle breeding, nesting, and feeding activities.	Similar to No Action.	Short-term minor adverse impacts due to tower construction and operation disturbances to eagle breeding, nesting, and feeding activities. Impacts expected to be minor because preparation and review of EAs would require coordination with USFWS, which would likely recommend actions to reduce impacts to Bald and Golden Eagles.	Short-term minor adverse impacts due to tower construction and operation disturbances to eagle breeding, nesting, and feeding activities. Impacts expected to be minor because of incentives to place new towers away from eagle nests, in addition to preparation and review of EAs for towers to be located near nests. EAs would require coordination with USFWS, which would likely recommend actions to reduce impacts to Bald and Golden Eagles. Reduction in impacts is likely to be at least comparable to Option A.	Short-minor to moderate adverse impacts due to tower construction and operation disturbances to eagle breeding, nesting, and feeding activities. There may be a slight reduction in impact compared to No Action and Alternative 1 due to preparation and review of EAs for towers more than 450 feet (137 meters) AGL and incentive to construct shorter towers, which may not be as attractive to nesting Bald Eagles, depending on other site characteristics.

Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
Cultural Resources	Short- and long-term, negligible to minor impacts anticipated based on Nationwide Programmatic Agreement (NPA).	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.
Other Visual and Aesthetic Resources	Short- and long-term, minor to moderate adverse impacts due to presence of new towers and lighting in landscape.	Similar to No Action.	Similar to No Action.	Similar to No Action.	Similar to No Action.
Economics	Short- to long-term minor adverse impact on applicants due to continuation of cost and schedule requirements for applicants to prepare and FCC to review an estimated 65 to 75 EAs annually.	Similar to No Action.	Short- to long-term moderate adverse impacts on applicants due to increased costs for applicants to prepare an estimated 2,800 EAs annually. Construction of towers may be delayed by the time necessary for the applicant to prepare and FCC to review 2,800 EAs a year, to the extent these tasks cannot be completed concurrently with other pre-construction	Short- to long-term minor adverse impacts on applicants due to increased costs for applicants to prepare an estimated 190 to 265 EAs annually. Construction of towers may be delayed by the time necessary for the applicant to prepare and FCC to review 190 to 265 EAs a year, to the extent these tasks cannot be completed concurrently with other pre-	Short- to long-term minor adverse impacts on applicants due to increased costs for applicants to prepare an estimated 130 to 140 EAs annually. Construction of towers may be delayed by the time necessary for the applicant to prepare and FCC to review 130 to 140 EAs a year, to the extent these tasks cannot be completed concurrently with other pre-

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Resource	No Action Alternative	Alternative 1	Alternative 2 Option A	Alternative 2 Option B	Alternative 2 Option C
			activities. To maintain current processing timelines, FCC would need to reallocate staff from existing duties to review/process EAs or obtain funds to hire more staff; otherwise, there would be extensive delays in EA processing times.	construction activities. To maintain current processing timelines, FCC would need to reallocate staff from existing duties to review/process EAs or obtain funds to hire more staff; otherwise, there could be delays in EA processing times.	construction activities. FCC would require additional staff time to review/process those EAs, which may result in a minor increase in processing time.
RF Radiation (human exposure)	No impact anticipated.	No impact anticipated.	No impact anticipated.	No impact anticipated.	No impact anticipated.

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CHAPTER ONE INTRODUCTION

1.1 INTRODUCTION

This Programmatic Environmental Assessment (PEA) has been prepared to evaluate the potential environmental impacts of the Antenna Structure Registration (ASR) Program administered by the Federal Communications Commission (FCC or the Commission).

The ASR Program is the process under which each antenna structure that requires Federal Aviation Administration (FAA) notification must be registered with the FCC by its owner. The ASR requirements only apply to those antenna structures that may create a hazard to air navigation due to height (generally, structures more than 200 feet [61 meters] tall) or proximity to an airport runway. The current ASR Program does not routinely require an applicant to prepare an EA to evaluate potential impacts to migratory birds.

The U.S. Court of Appeals for the District of Columbia Circuit in *American Bird Conservancy, Inc. v. FCC* (2008) determined that the FCC has not adequately evaluated the potential effects that its current ASR program has on threatened and endangered species and migratory birds. This court decision stated that in order for the FCC to comply with its obligations under the National Environmental Policy Act of 1969, as amended (NEPA), and the Endangered Species Act of 1973 (ESA), the Commission must consider whether the potential significant environmental impacts from the ASR program require preparation of a Programmatic Environmental Impact Statement (PEIS), as well as reconsider whether potential effects on threatened and endangered species require programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) under the ESA. The court further stated that the Commission could begin this evaluation with a PEA. In addition, the court required the Commission to provide notice of ASR applications that would ensure meaningful public involvement in NEPA review.

In partial response to the court's decision, the FCC has prepared and sought comment on draft procedures designed to help ensure that the environmental effects of proposed communications towers, including their effects on migratory birds, are fully considered prior to construction. The draft procedures, if adopted, would require:

- Applicants for new tower registration to provide a 30-day opportunity for public comment on the environmental effects of the proposed construction; and
- On an interim basis, pending completion of this PEA, preparation of an Environmental Assessment (EA) for a proposed tower more than 450 feet (137 meters) in height to address its potential impact on migratory birds.

This PEA has been prepared in accordance with NEPA, the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 CFR 1500–1508), and the FCC regulations for implementing NEPA (47 CFR 1.1301-1.1319). This PEA will also serve as a means to address the FCC's obligations under other Federal statutes, including the ESA.

The scope of this PEA includes an evaluation of the range of potential environmental impacts associated with towers requiring registration under the FCC's ASR Program. Because of the nature of the projects under the ASR Program and in response to the 2008 court decision, this PEA primarily focuses on potential impacts to migratory birds.

1.2 BACKGROUND

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's jurisdiction includes the 50 states, the District of Columbia, and all U.S. possessions.

The ASR program was instituted by the FCC in 1995 and is the process by which any antenna structure more than 200 feet (61 meters) above ground level (AGL) and certain antenna structures located within the landing slope of an airport runway, as defined under the FAA's rules, must be registered with the FCC. (The FCC's online calculator TOWAIR may be used to help determine whether an antenna structure requires registration.) The ASR system includes existing antenna structures that meet the criteria for registration as well as newly proposed towers. The tower owner is responsible for registering the antenna structure and for maintaining any required painting and/or lighting. As of June 28, 2011, there were 85,261 structures classified as towers, poles, or masts in the FCC ASR database (FCC 2011b). This number does not include antennas that are placed on buildings, bridges, water towers, and other structures.

Communications towers serve various industries and agencies, including radio, television, cellular phone, paging, microwave, public safety communications (such as police/fire dispatch), and national defense, as well as other advanced and emerging services. National defense and other systems operated by Federal agencies are not licensed by the FCC, and their towers are not required to be registered unless they are also used for FCC-licensed services.

Although new communications antennas can often be collocated on existing towers or other structures such as buildings, in many 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 a service provider, can influence the decision whether to collocate a new communications antenna on an existing structure or construct a new tower.

Designs of communications towers may differ. For instance, communications towers may be supported by guy wires or can be self-supporting, depending on various engineering, economic, environmental, or historic preservation factors. A guyed tower is a straight tower supported by guy wires to the ground, which anchor the tower. Self-supporting tower styles include monopoles (single tube towers with one foundation) and lattice towers (typically three-sided with a triangular base). Communications towers range widely in height, with many less than 200 feet (61 meters) above ground level (AGL), others over 1,000 feet (305 meters) AGL, and various heights in between. Typically the tallest communications towers are guyed, but there are guyed towers at almost any tower height.

The Commission and the FAA each have statutory responsibilities related to ensuring that antenna structures do not present a hazard to air safety. Specifically, Section 303(q) of the Communications Act of 1934, as amended, authorizes the Commission to prescribe painting and/or illumination of an antenna structure when there is a "reasonable possibility" that it may cause a hazard to air navigation, and requires permittees, licensees, and tower owners to maintain such lighting and/or illumination. Section 1501 of the Federal Aviation Act authorizes the FAA to require that persons proposing to erect a structure provide notice to the FAA when such notice will promote air safety. Under current rules, each tower owner proposing to construct or alter an antenna structure that is more than 200 feet (61 meters) AGL, or that may interfere with the approach or departure space of a nearby airport runway, must notify the FAA of the proposed construction and subsequently register the tower with the Commission's ASR Program.

As part of its review, the FAA considers whether the proposed structure constitutes a potential hazard, and may recommend appropriate painting and lighting for the structure. Current FAA guidelines ordinarily require lighting for communications towers over 200 feet (61 meters) tall, as well as for some towers in the approach or departure space of a nearby runway. Such lighting must conform to one of the six FAA Lighting Styles for communications towers. While some of these FAA Lighting Styles rely solely on white flashing lights, all styles that use red flashing lights also use red steady-burning lights. The FAA is in the final stages of conducting a conspicuity study that specifically addresses the use of red flashing lights instead of red steady-burning lights. Depending on the results of that study, the FAA may consider revising its lighting circular to allow lighting schemes that use red flashing lights without red steady-burning lights.

In a Report and Order released November 30, 1995, the Commission adopted rules implementing the ASR Program and began requiring antenna structure owners (instead of licensees) to register antenna structures with the Commission. The towers registered in ASR include towers constructed prior to the 1995 Report and Order that meet the criteria for registration as well as those constructed since. In a Memorandum Opinion and Order on Reconsideration released March 8, 2000, the Commission clarified several registration requirements. In a Notice of Proposed Rulemaking released April 20, 2010, the Commission sought comment on proposed procedural and other changes to the ASR process.

The number of towers constructed annually increased dramatically beginning in the early 1980s through about the year 2000 (FCC 2011b). Since 2000, the annual number of registered towers constructed has decreased, but still remains at levels above those in the early 1990s.

1.2.1 Court Cases and FCC Proceedings

In the Migratory Bird Notice of Inquiry (NOI) released in August of 2003 (WT Docket No. 03-187, Effects of Communications Towers on Migratory Birds), the Commission launched an inquiry regarding the impact that collisions with communications towers may have on migratory birds. The NOI requested information supported by scientific evidence on a number of topics in three general categories:

- the number of migratory bird collisions with communications towers;
- the role that certain factors such as lighting, height and type of antenna structure, weather, tower location, and bird migration paths might play in such collisions; and,
- the effectiveness of any measures to mitigate migratory bird collisions with communications towers.

Based on the record developed in response to the NOI, the Commission stated that it would consider whether further action was warranted, including possible amendments of the environmental rules.

To assist the Commission in evaluating the quality and sufficiency of the existing research, FCC hired an environmental consulting firm, Avatar Environmental LLC (Avatar). After Avatar furnished a report with its findings and recommendations (Avatar et al. 2004), the FCC's Wireless Telecommunications Bureau issued a Public Notice seeking comments and reply comments in response to the report's findings.

In its Notice of Proposed Rulemaking in November of 2006, the FCC sought comments on whether the Commission should take measures to reduce the number of instances in which migratory birds collide with communications towers.

In *American Bird Conservancy, Inc. v. FCC* (2008), the U.S. Court of Appeals for the District of Columbia Circuit determined that the FCC has not adequately evaluated the potential effects that its current ASR program has on threatened and endangered (T&E) species and migratory birds. The court decision held that in order for the FCC to comply with its obligations under NEPA and the ESA, the Commission must consider whether the potential significant environmental impacts from the ASR program require preparation of a PEIS. The court stated that the Commission could begin this evaluation with a PEA. The court also instructed the FCC to reconsider whether potential effects on threatened and endangered species require programmatic consultation with the USFWS under the ESA. In addition, the court required the Commission to provide notice of ASR applications that would ensure meaningful public involvement in NEPA review.

On May 2, 2008, a group of trade associations filed a Petition for Expedited Rulemaking regarding how the Commission should provide pre-approval public notice and opportunity for comment as required under *American Bird Conservancy, Inc. v. FCC*. The FCC then opened Docket No. WT 08-61 (National Environmental Policy Act Compliance for Proposed Tower Registrations) to address the court's decision. The FCC sought comment on the trade associations' petition.

On April 29, 2009, the FCC issued a Public Notice seeking comments on a petition for expedited rulemaking and other relief filed on April 14, 2009, by the American Bird Conservancy, Defenders of Wildlife, and National Audubon Society. The petitioners requested that the Commission adopt on an expedited basis new rules that they assert are necessary to comply with NEPA, ESA, the Migratory Bird Treaty Act (MBTA), and the FCC's implementing regulations, and to carry out the court's mandate in *American Bird Conservancy, Inc. v. FCC*.

1.2.2 Draft Procedures

The FCC, pursuant to CEQ rules, has prepared and sought comment on draft procedures designed to help ensure that the environmental effects of proposed communications towers, including their effects on migratory birds, are fully considered prior to construction. Under CEQ rules, before adopting procedures implementing NEPA, an agency must publish its draft procedures in the Federal Register for comment, and CEQ must determine that the procedures conform to NEPA and CEQ regulations. Comments on the draft procedures were due on or before May 5, 2011.

The draft procedures, if adopted, would require:

- Applicants for new tower registration to provide a 30-day opportunity for public comment on the environmental effects of the proposed construction; and
- On an interim basis, pending completion of this PEA, preparation of an EA for a proposed tower more than 450 feet (137 meters) in height to address its potential impact on migratory birds.

1.3 REGULATORY FRAMEWORK

This PEA has been prepared in accordance with NEPA, CEQ regulations for implementing NEPA (40 CFR 1500-1508), and FCC regulations for implementing NEPA (47 CFR 1.1301-1.1319). CEQ regulations mandate that all Federal agencies use a systematic interdisciplinary approach to environmental planning and the evaluation of actions that might significantly affect the human environment. According to Section 1508.14 of the CEQ regulations, "human environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. A determination of "significance" according to Section 1508.27 of the CEQ regulations requires consideration of both context and intensity.

The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action and both short- and long-term effects are relevant.

Intensity refers to the severity of impact and includes: consideration of both beneficial and adverse impacts; effects on public health or safety; unique characteristics of the geographic area; the degree to which impacts are likely to be highly controversial, highly uncertain, or involve unique or unknown risks; the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration; whether the action is related to other actions with individually insignificant but cumulatively significant impacts; the degree to which the action may adversely affect cultural resources protected by the National Historic Preservation Act (NHPA) or T&E species protected by the ESA; and whether the action would violate a Federal, state, or local law that protects the environment.

The intent of NEPA is to protect, restore, or enhance the human environment through well-informed Federal decisions. This PEA evaluates the environmental effects of the ongoing ASR Program (the No Action Alternative) and several alternatives. If the FCC decides to adopt an alternative for which the PEA determines that the environmental effects are not potentially significant, a Finding of No Significant

Impact (FONSI) will be issued. Otherwise, a Notice of Intent to prepare a PEIS will be published in the Federal Register.

NEPA requires consideration be given to all aspects of the human environment through a systematic, interdisciplinary approach to agency decision-making (PL 91-190 42 U.S.C. § 4332). This interdisciplinary approach ensures balanced consideration of various resources. The review of actions under an array of other Federal environmental statutes can also be incorporated into the NEPA process. Much of the research, planning, and consultation that occur under these other laws can take place at the same time that the evaluation and assessment is done for the NEPA document, thus avoiding duplicate data collection and analysis. It is highly recommended, and in some cases required, to document compliance with other Federal laws and Executive Orders (EOs) in the NEPA document.

This PEA will address the FCC's obligations under these other Federal environmental statutes. Although the FCC as an independent agency is not subject to most EOs, in some instances the FCC considers the effects on the subjects of EOs as part of its evaluation of effects on the human environment under NEPA (e.g., floodplains as set forth in EO 11988 and wetlands as set forth in EO 11990). Where useful to provide better understanding, key provisions of relevant statutes and EOs are discussed in more detail in the text of the PEA.

Under Section 7 of the ESA, as amended (U.S.C. 1531-1544), Federal agencies, in consultation with the USFWS or the National Marine Fisheries Service (NMFS), are required to evaluate the effects of their actions on special status species of fish, wildlife, and plants, and their habitats, and to take steps to conserve and protect these species. Special status species are defined as plants or animals that are candidates for, proposed as, or listed as sensitive, threatened, or endangered by USFWS or NMFS. Because towers registered under the ASR Program are not located in marine environments, this PEA discusses ESA matters only in terms of those species regulated by the USFWS.

The MBTA (16 U.S.C. 703-712) was enacted to ensure the protection of shared migratory bird resources. A migratory bird is any species that lives, reproduces, or migrates within or across international borders at some point during its annual life cycle. The MBTA prohibits the take and possession of any migratory bird, its eggs, or nests, except as authorized by a valid permit or license. Courts have rendered differing decisions regarding the scope of the MBTA's application to Federal agencies, as well as whether a party may be liable under the MBTA for the unintentional, incidental death of a migratory bird.

EO 13186, Protection of Migratory Birds, directs Federal agencies whose activities have or are likely to have a measurable, negative effect on migratory bird populations to develop and implement a Memorandum of Understanding with USFWS to promote the conservation of migratory birds.

The FCC has not yet resolved the nature and scope of its responsibilities, if any, under the MBTA, and as an independent agency, the FCC is not subject to the terms of EO 13186. However, because migratory birds are part of the human environment that is considered under NEPA, they are addressed in this PEA.

Under the current ASR program, tower registration applications are categorically excluded from the requirement to prepare an EA unless the proposed facility:

- Would be located in an officially designated wilderness area or wildlife preserve.
- May affect listed T&E species or designated critical habitat, or is likely to jeopardize the continued existence of proposed T&E species or result in destruction or adverse modification of proposed critical habitat.
- May affect resources listed or eligible for listing in the National Register of Historic Places (NRHP) or Native American religious and cultural sites.
- Would be located in a floodplain.

- Would involve significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).
- Would be equipped with high intensity white lights and located in a residentially zoned neighborhood.
- Would cause human exposure to levels of RF radiation in excess of limits established in 47 CFR §§1.1310 and 2.1093.

In these cases, the applicant must prepare an EA that includes sufficient analysis to support a determination that the proposed tower would or would not have a significant environmental impact.

The FCC will also require an EA if the processing Bureau, in response to a petition or on its own motion, determines that an otherwise categorically excluded action may have a significant environmental impact. In addition, the FCC's draft NEPA notice procedures provide for public notice and a 30-day opportunity for public comment on the environmental effects of the proposed construction. The applicant would not be permitted to certify that the project is categorically excluded until after the FCC has confirmed that it has identified no reason to require an EA in light of any comments it has received.

1.4 PROPOSED ACTION

The Proposed Action consists of reviewing the existing ASR Program and NEPA compliance procedures to evaluate their effects on migratory birds and other environmental resources, in compliance with the 2008 court decision.

1.5 SCOPE OF THE PEA

CEQ regulations (40 CFR §§ 1500.4(i), 1502.4, and 1502.20) encourage the development of program-level NEPA documents to focus on the issues specific to a proposed action. This PEA will also address other environmental regulations by providing a framework for assessing impacts of proposed future, individual projects.

A programmatic environmental document, such as this PEA, is prepared when an agency is proposing to carry out a broad action, program, or policy. The existing ASR Program, which the court ordered the FCC to review, is a broad action with nationwide implications. The programmatic approach creates a comprehensive, global analytical framework that assesses impacts expected from the program (or changes to the program) as a whole. It also supports subsequent environmental evaluations, such as stand-alone, site-specific EAs that may be required to determine the nature and extent of impacts resulting from individual towers at specific locations. It also allows the FCC to identify those project types that are unlikely to have significant adverse impacts on the environment, and therefore can be categorically excluded from preparation of an EA.

The scope of this PEA includes an evaluation of the range of potential environmental impacts associated with existing towers and new towers requiring registration under the FCC's ASR Program. The project types examined in this PEA have been categorized into various groups based on height, location, structure type (self-supported versus guy-wired), and lighting scheme. Because of the nature of the projects under the ASR Program and in response to the 2008 court decision, this PEA primarily focuses on potential impacts to migratory birds.

The PEA evaluates the environmental effects of the existing ASR program (No Action Alternative), the existing ASR program with FAA lighting changes (Alternative 1), and modifications to the ASR program (Alternative 2 with three options).

The FCC recognizes that new studies and research are being planned and conducted to examine the environmental impacts of towers, especially related to bird collisions and impacts to migratory birds. Due

to the changing technology and anticipated new studies examining bird and tower interactions, this PEA encompasses a 10-year planning timeframe, and will be reviewed for adequacy should future major changes to the ASR Program be considered or major changes to environmental conditions occur.

1.6 PUBLIC INVOLVEMENT

NEPA states that “There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action.” The FCC has engaged stakeholders and the general public in preparing this PEA. Stakeholders include Federal agencies, environmental organizations, industry interests, and the public.

1.6.1 Scoping Process

During the PEA planning process, the FCC provided several opportunities for public and stakeholder involvement. The FCC issued a Public Notice in the Federal Register on November 17, 2010 (Vol. 75, No. 221, pp. 70166-70168), announcing a January 14, 2011, deadline for public scoping comments and three public scoping meetings to be held in December 2010. These meetings were held as follows:

- December 6 in the District of Columbia (this meeting was also available as a webcast)
- December 13 in Tampa, FL
- December 15 in San Diego, CA

The FCC also held meetings with various agencies to discuss the development of the PEA.

- On February 11, 2011, and August 16, 2011, the FCC met with USFWS representatives to discuss migratory bird issues.
- On March 4, 2011, the FCC met with USFWS representatives to discuss threatened and endangered species issues.
- On March 24, 2011, the FCC met with CEQ representatives to discuss the approach being taken for the PEA.

On April 1, 2011, the FCC held a public workshop in the District of Columbia to discuss the project status, proposed action alternatives, available data, and impact evaluation methods.

1.6.2 Draft PEA

The FCC considered information obtained during the scoping process in preparing the Draft PEA. The public was notified of the opportunity to review and comment on the Draft PEA in various ways, including publication of a notice in the Federal Register and the posting of a notice of the availability of the Draft PEA on the FCC website. The FCC also sent e-mail notifications to those individuals who requested to be notified when the Draft PEA was published and provided direct mailings to individuals who requested a copy of the document.

The Draft PEA was available for public review between August 26, 2011, and October 3, 2011, via download from the FCC website in ASCII, Microsoft Word[®], and Portable Document Format. Paper copies of the Draft PEA were available for public review during regular business hours at the FCC Reference Center, Federal Communications Commission, 445 12th Street, S.W., CY-A257, Washington, D.C., 20554. Accessible formats (computer diskettes, large print, audio recording, and Braille) were available via e-mail requests to fcc504@fcc.gov or via telephone requests to the FCC’s Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice) or (202) 418-0432 (TTY).

1.6.3 Summary

The FCC solicited public and agency review and comment on the environmental impacts of the ASR Program PEA through:

- Public scoping meetings;
- A public workshop;
- Meetings and consultations with Federal agencies;
- Publication of a notice of availability of this Draft PEA in the Federal Register;
- Publication of the Draft PEA on the FCC website for review;
- Placement of the Draft PEA in a public repository for review; and,
- Direct mailing of the Draft PEA to individuals who requested a copy of the document.

Appendix A provides a list of agencies, organizations, and individuals consulted during the NEPA process.

Draft PEA August 26, 2011

CHAPTER TWO PURPOSE AND NEED

2.1 PURPOSE

The ASR Program promotes air safety by requiring the registration of antenna structures that may create a hazard to air navigation due to their height (greater than 200 feet [61 meters] AGL) or proximity to an airport runway. Through the registration process, environmental impacts from proposed towers are evaluated. The current ASR Program does not routinely require an applicant to prepare an EA to evaluate potential impacts to migratory birds.

The purpose of the Proposed Action is to examine how potential environmental impacts are evaluated as part of the ASR Program and associated NEPA review and documentation.

2.2 NEED

The U.S. Court of Appeals for the District of Columbia Circuit in *American Bird Conservancy, Inc. v. FCC* (2008) determined that the FCC has not adequately evaluated the potential environmental effects of its current ASR program on threatened and endangered species and migratory birds. To ensure that the FCC complies with its obligations under NEPA, there is a need to consider whether the current program should be revised to require applicants to provide more comprehensive evaluations of potential impacts on resources, especially migratory birds.

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Draft PEA August 26, 2011

CHAPTER THREE ALTERNATIVES

The ASR Program is the process under which each antenna structure that requires FAA notification must be registered with the FCC by its owner. The ASR requirements only apply to those antenna structures that may create a hazard to air navigation due to height (generally, structures more than 200 feet [61 meters] tall) or proximity to an airport runway. Under the current ASR program, tower registration applications are categorically excluded from preparation of an EA unless they fall within one of the categories listed in the FCC NEPA regulations found at 47 CFR § 1.1307(a) and (b), which are presented below.

The Proposed Action consists of reviewing the existing ASR Program and NEPA compliance procedures to evaluate their effects on migratory birds and other environmental resources, in compliance with the 2008 court decision.

The Commission's draft procedures (FCC 2011a), if adopted, would require applicants for new tower registration to provide a public notice and 30-day opportunity for comment on the environmental effects of the proposed construction. The applicant would not be permitted to certify that the project is categorically excluded until after the FCC has confirmed that it has identified no reason to require an EA in light of any comments received. For projects requiring an EA, the 30-day opportunity for comment could be provided after the applicant prepares the EA, as occurs under the Commission's existing procedures. After the close of the comment period, the FCC would either issue a FONSI or prepare an EIS. The No Action Alternative, Alternative 1 and Alternative 2 each assume that the public notice and comment procedures will be adopted and remain in place.

The draft procedures also, as an interim measure, require applicants to prepare an EA for proposed towers that are more than 450 feet (137 meters) tall to address potential impacts on migratory birds. Alternative 2 Option C considers the effects of adopting this requirement on a permanent basis.

It should be noted that lighting on new towers must conform to the requirements of the current FAA Advisory Circular 70/7460-1K Obstruction Marking and Lighting (USDOT/FAA 2007). The FCC cannot enforce lighting schemes that are not in compliance with this circular. Currently the FAA does not allow lighting configurations that use red flashing lights without also requiring the presence of red steady-burning lights. Pending the completion of a conspicuity study, the FAA may consider revisions to the circular that would allow lighting schemes that use red flashing lights without red steady-burning lights. Therefore, Alternative 1 considers what the effects of the No Action Alternative would be if the FAA revises its lighting styles. In addition, Chapter 5, Chapter 6, and Chapter 7 describe the effects that each of the options under Alternative 2 would have on migratory birds both with and without revisions to the FAA-permitted lighting schemes.

3.1 NO ACTION ALTERNATIVE

The No Action Alternative is defined as continuation of the existing ASR Program and NEPA compliance procedures, including the public notice and 30-day public comment requirement of the FCC's draft procedures, and under the existing FAA-permitted lighting configurations (Figure 1).

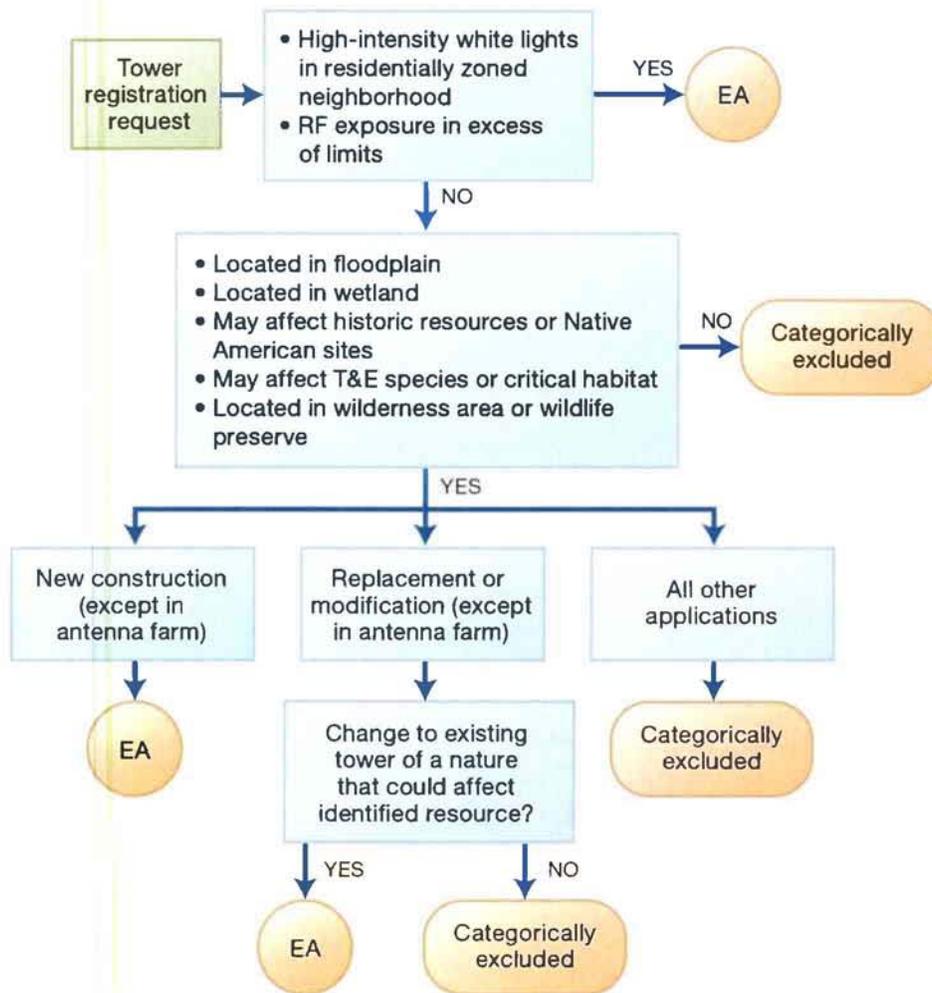


Figure 1: NEPA Flow Chart No Action Alternative

The current ASR Program does not routinely require an applicant to prepare an EA to evaluate potential impacts to migratory birds other than those that are federally listed or proposed as threatened or endangered. Under the current ASR program, new towers are categorically excluded from requirements to prepare an EA unless the proposed facility:

- Would be located in an officially designated wilderness area or wildlife preserve.
- May affect listed T&E species or designated critical habitat, or is likely to jeopardize the continued existence of proposed T&E species or result in destruction or adverse modification of proposed critical habitat.
- May affect resources listed or eligible for listing in the NRHP or Native American religious and cultural sites.
- Would be located in a floodplain.
- Would involve significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).
- Would be equipped with high intensity white lights and located in a residentially zoned neighborhood.

- Would cause human exposure to levels of RF radiation in excess of limits in 47 CFR §§1.1310 and 2.1093.

In these cases, the applicant must prepare an EA that provides sufficient analysis for FCC staff to reach a determination that the project would or would not have a significant environmental impact. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds, including individual species of migratory birds to the extent that species-specific information exists, and on Bald and Golden Eagles.

3.2 ALTERNATIVE 1 – EXISTING ASR PROGRAM WITH FAA LIGHTING CHANGES

Alternative 1 is the continuation of the existing ASR Program and NEPA compliance procedures, including the public notice and 30-day public comment requirement of the FCC’s draft procedures, along with the potential changes to the FAA’s permitted lighting configurations under which future towers that use red flashing lights would not also have red steady-burning lights (Figure 2).

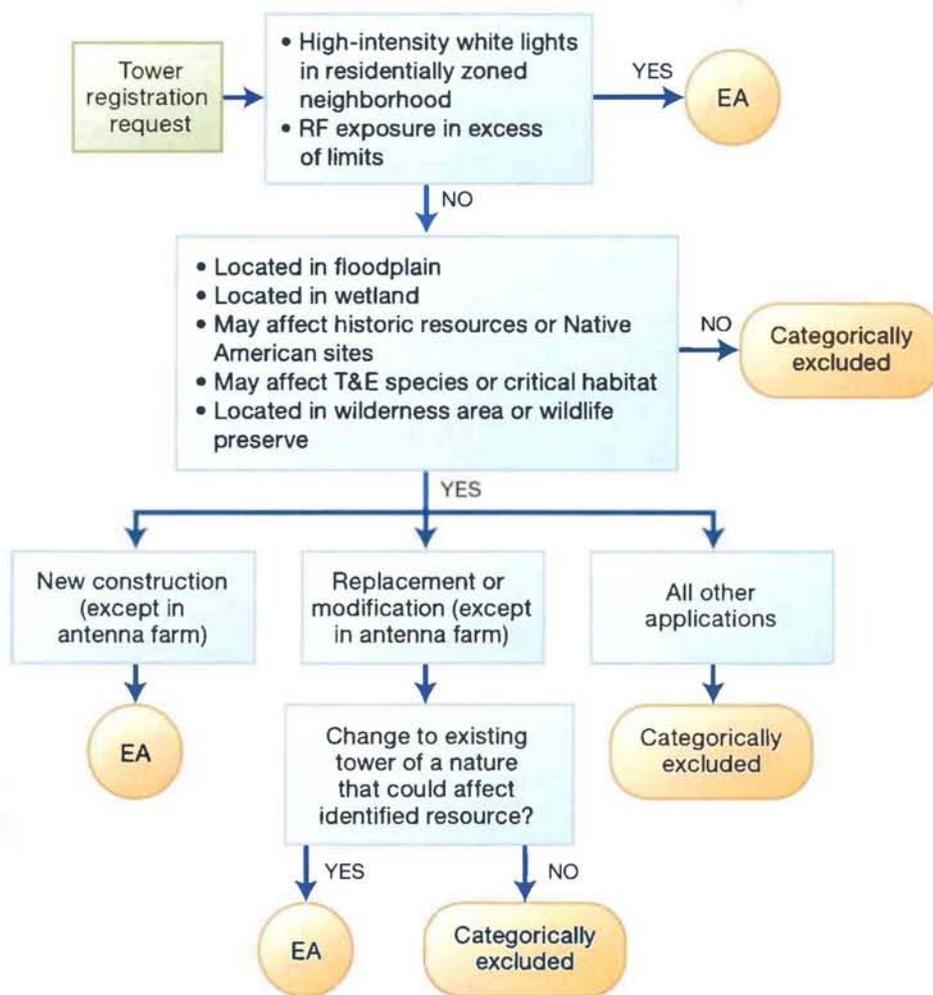


Figure 2: NEPA Flow Chart Alternative 1

The flowchart for Alternative 1 (Figure 2) is the same as for the No Action Alternative (Figure 1) – this is because FCC rules would not change under Alternative 1. The only change that would occur under

Alternative 1 is that tower owners would have different choices in selecting lighting schemes in accordance with the revised FAA circular.

The current ASR Program, and thus the program under Alternative 1, does not routinely require an applicant to prepare an EA to evaluate potential impacts to migratory birds other than those that are federally listed or proposed as threatened or endangered. Under the current ASR program, new towers are categorically excluded from requirements to prepare an EA unless the proposed facility:

- Would be located in an officially designated wilderness area or wildlife preserve.
- May affect listed T&E species or designated critical habitat, or is likely to jeopardize the continued existence of proposed T&E species or result in destruction or adverse modification of proposed critical habitat.
- May affect resources listed or eligible for listing in the NRHP or Native American religious and cultural sites.
- Would be located in a floodplain.
- Would involve significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).
- Would be equipped with high intensity white lights and located in a residentially zoned neighborhood.
- Would cause human exposure to levels of RF radiation in excess of limits in 47 CFR §§1.1310 and 2.1093.

In these cases, the applicant must prepare an EA that provides sufficient analysis for FCC staff to reach a determination that the project would or would not have a significant environmental impact. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds, including individual species of migratory birds to the extent that species-specific information exists, and on Bald and Golden Eagles.

3.3 ALTERNATIVE 2 – MODIFICATIONS TO THE ASR PROGRAM

Under Alternative 2, the FCC would revise its NEPA compliance procedures for the ASR Program to require more comprehensive assessments of potential environmental impacts from new towers and tower modifications involving a substantial increase in size, particularly for potential effects to migratory birds. Alternative 2 would not change the procedures for tower modifications or replacements that do not involve a substantial increase in size, for certain lighting changes, or for minor ASR actions, including administrative changes, changes in ownership, dismantling of towers, and minor changes/corrections to existing towers. It also would not affect activity at registered towers that does not require action in the ASR system, such as tower repair and replacement of tower parts. Under all options, Alternative 2 would include the public notice and 30-day public comment requirement in the FCC's draft procedures.

There are three options under Alternative 2 for determining the level of NEPA review that would be required for a project.

3.3.1 Alternative 2 Option A – Require an EA for All Projects Submitted for Registration Except for Certain Changes to Existing Towers

Under Alternative 2 Option A, an EA would be required for all new towers outside of an antenna farm submitted for registration – regardless of location, height, use of guy wires, or lighting scheme – and for certain replacement towers and changes to existing towers as described below (Figure 3).

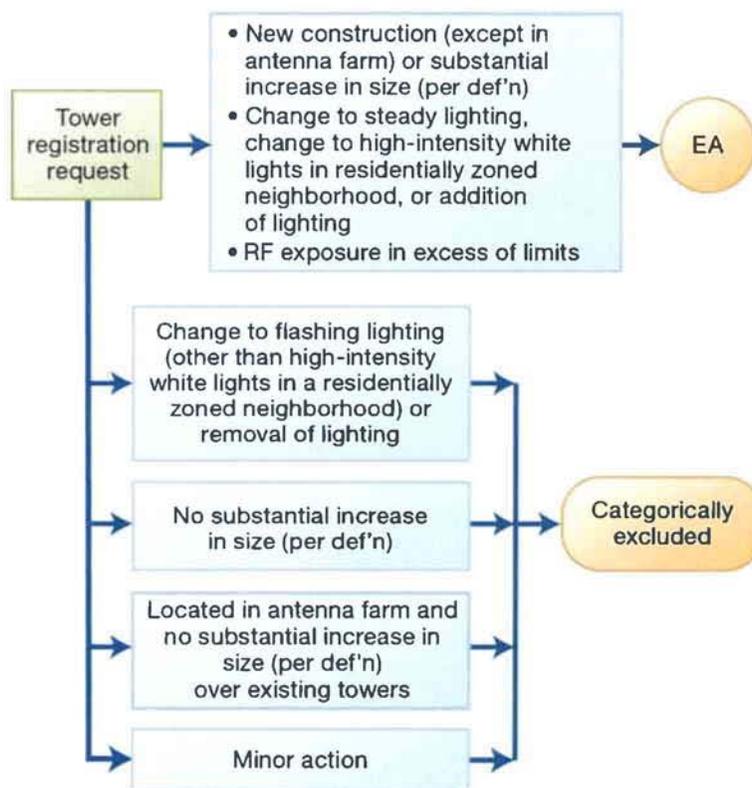


Figure 3: NEPA Flow Chart Alternative 2 Option A

Towers in an antenna farm, replacement towers, and modifications of existing towers would require an EA if they involve a substantial increase in size over the existing tower or towers. A substantial increase in size is defined as: (1) an increase in height of greater than 10 percent over the existing tower height (or the tallest tower in the array) or the height of one additional antenna array with separation from the nearest existing antenna not to exceed 20 feet (6 meters), whichever is greater; (2) a protrusion of more than 20 feet (6 meters) or more than the width of the tower at the height of the protrusion, whichever is greater; (3) the installation of more than four equipment cabinets or one equipment shelter; or (4) excavation more than 30 feet (9 meters) outside the existing tower site. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds, including individual species of migratory birds to the extent that species-specific information exists, and on Bald and Golden Eagles.

An EA would also be required for changes to existing towers involving: (1) a change to steady lighting; (2) a change to high-intensity white lighting in a residentially zoned neighborhood; (3) addition of lighting; or (4) human exposure to levels of RF radiation in excess of the limits in 47 CFR §§ 1.1310 and 2.1093.

Under Option A, the only projects that would be categorically excluded from preparation of an EA would be those that propose any of the following:

- A change from red steady-burning to flashing lights or removal of lighting on an existing tower (depending upon potential revisions to the FAA lighting circular).
- Replacement or modification of an existing tower that involves no substantial increase in size (per definition).
- Construction in an antenna farm that does not involve a substantial increase in size over existing towers.

- A minor action.

3.3.2 Alternative 2 Option B – Limit which Projects Are Categorically Excluded and Require an EA for the Rest

Under Alternative 2 Option B, a proposed new tower would require preparation of an EA only under certain combinations of location and structural and lighting features. Any proposed new registered tower that requires an EA under the existing rules or that is located within 660 feet (201 meters) of a Bald Eagle nest or 0.6 mile (1 kilometer) of a Golden Eagle nest would require an EA. Other locational features for which a project may require an EA would include ridgelines, coastal zones, and bird staging areas or colonial nesting sites. If any of those locational features are present, and a tower would be more than 450 feet (137 meters) tall, would use a red steady-burning lighting scheme, or would use guy wires, an EA would be required. Towers that are not proposed within any of these locations or that do not have any of these structural or lighting features would continue to be categorically excluded (Figure 4).

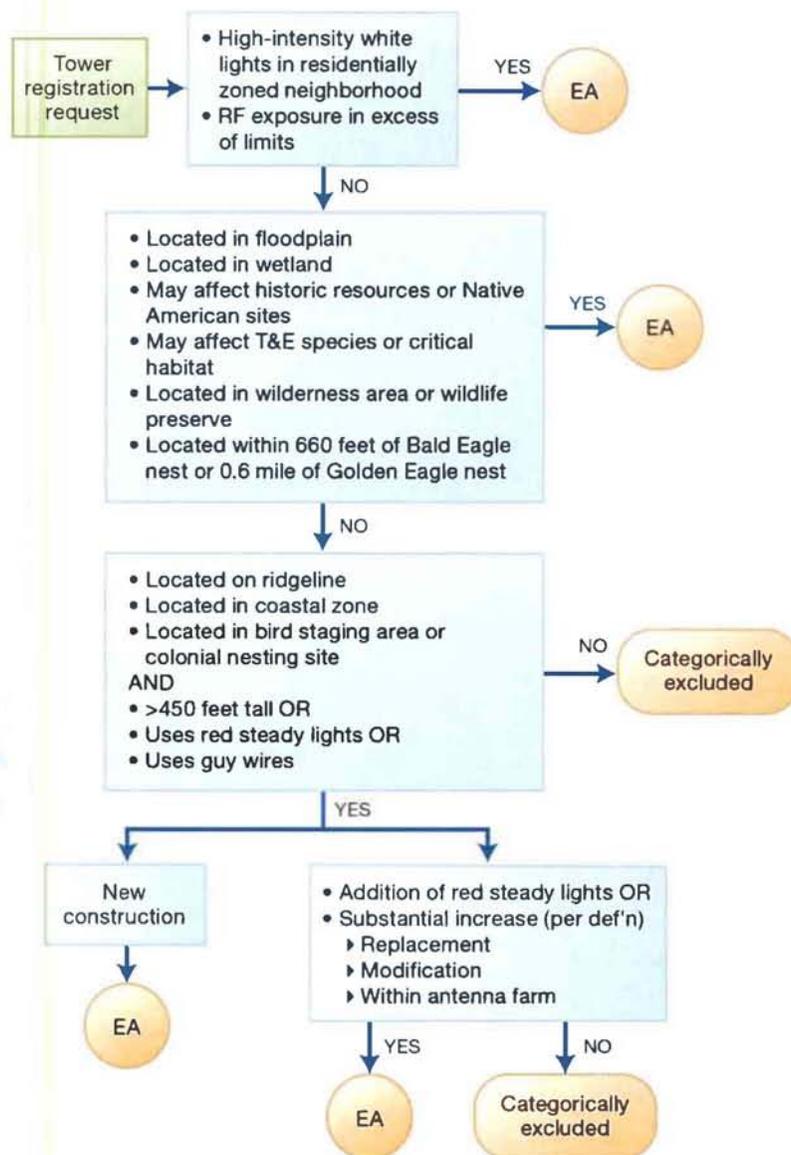


Figure 4: NEPA Flow Chart Alternative 2 Option B

Under Option B, any proposed new tower would be categorically excluded from preparation of an EA unless it:

- Would be located in an officially designated wilderness area or wildlife preserve.
- May affect listed T&E species or designated critical habitat, or is likely to jeopardize the continued existence of proposed T&E species or result in destruction or adverse modification of proposed critical habitat.
- May affect resources listed or eligible for listing in the NRHP or Native American religious and cultural sites.
- Would be located in a floodplain.
- Would involve significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).
- Would be equipped with high intensity white lights and located in a residentially zoned neighborhood.
- Would cause human exposure to levels of RF radiation in excess of limits in 47 CFR §§1.1310 and 2.1093.
- Would be located within 660 feet (201 meters) of a Bald Eagle nest or 0.6 mile (1 kilometer) of a Golden Eagle nest.

OR would be located in an area considered an important resource for migratory birds, including:

- ridgelines
- coastal zones
- bird staging areas or colonial nesting sites

AND would:

- be more than 450 feet (137 meters) tall **OR**
- use a red steady-burning light scheme **OR**
- use guy wires

Towers in an antenna farm, replacement towers, and modifications to existing towers would require an EA under the same circumstances as new towers if they involve a substantial increase in size, as defined under Option A. An addition of red steady-burning lights to an existing tower would also require an EA if the tower is located on a ridgeline or in a coastal zone, bird staging area, or colonial nesting site. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds, including individual species of migratory birds to the extent that species-specific information exists, and on Bald and Golden Eagles. If the tower is in a wetland or floodplain and is over 450 feet (137 meters) tall, uses red steady lights, or uses guy wires, the FCC would expect the applicant to provide either evidence that it is not in a riparian zone or a detailed analysis of its effects on migratory birds.

3.3.3 Alternative 2 Option C – Require an EA for All Projects More Than 450 feet in Height but Otherwise Do Not Change the Categorical Exclusion

Under Alternative 2 Option C, in addition to those towers for which an EA is required under the existing FCC rules, an EA would be required for any proposed new tower or replacement or modification of an

existing tower that involves a substantial increase in size, that is more than 450 feet (137 meters) AGL, regardless of location, lighting scheme, or use of guy wires (Figure 5).

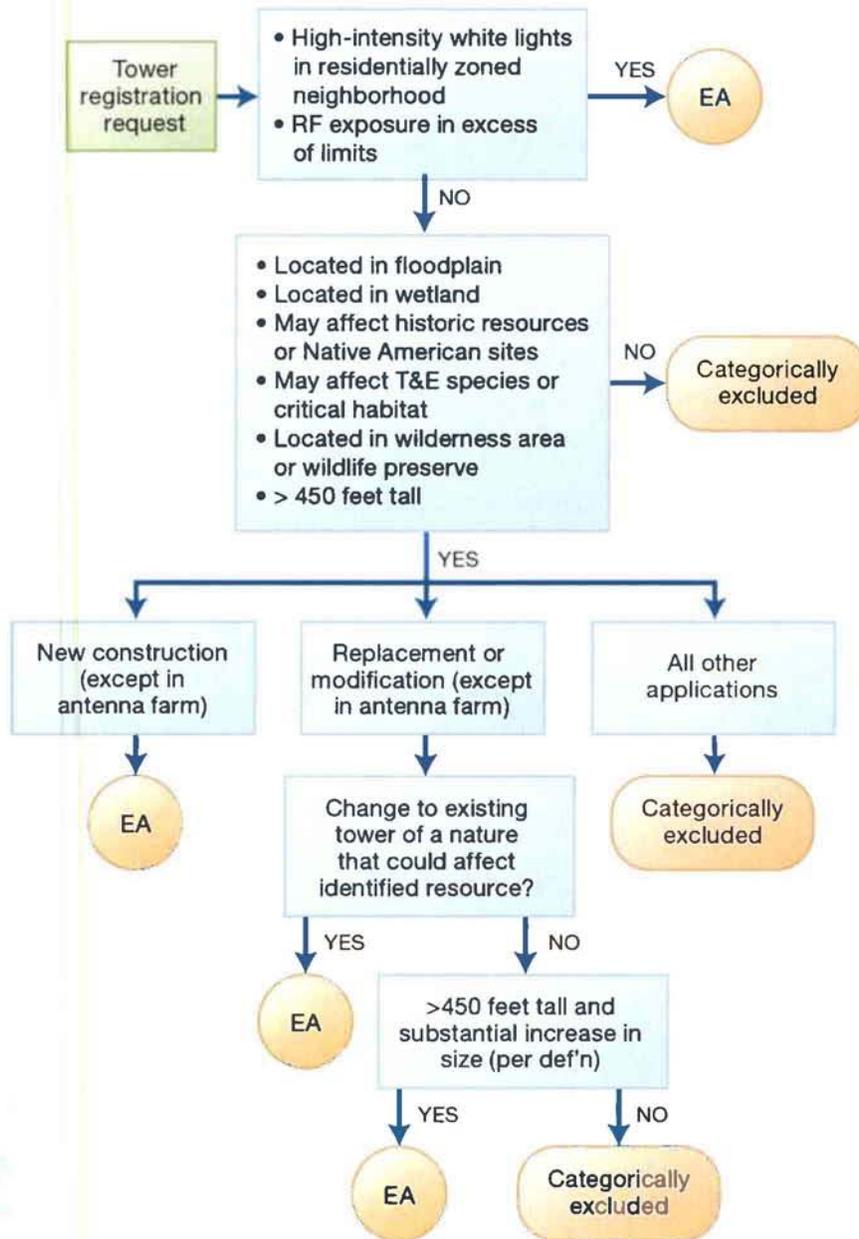


Figure 5: NEPA Flow Chart Alternative 2 Option C

Towers less than or equal to 450 feet (137 meters) AGL would be categorically excluded from preparation of an EA unless the proposed facility:

- Would be located in an officially designated wilderness area or wildlife preserve.
- May affect listed T&E species or designated critical habitat, or is likely to jeopardize the continued existence of proposed T&E species or result in destruction or adverse modification of proposed critical habitat.

- May affect resources listed or eligible for listing in the NRHP or Native American religious and cultural sites.
- Would be located in a floodplain.
- Would involve significant changes in surface features (e.g., wetland fill, deforestation, or water diversion).
- Would be equipped with high intensity white lights and located in a residentially zoned neighborhood.
- Would cause human exposure to levels of RF radiation in excess of limits in 47 CFR §§1.1310 and 2.1093.

In these cases, the applicant must prepare an EA that provides sufficient analysis for FCC staff to reach a determination that the project would or would not have a significant environmental impact. Every EA would need to consider, in addition to other potential environmental effects, the effects that the project would have on migratory birds, including individual species of migratory birds to the extent that species-specific information exists, and on Bald and Golden Eagles.

3.4 ALTERNATIVES CONSIDERED AND DISMISSED

The CEQ regulations for implementing NEPA require that Federal agencies explore and objectively evaluate all reasonable alternatives to a proposed action and briefly discuss the rationale for eliminating any alternatives that are not considered in detail in the NEPA document. Alternatives may be dismissed if they do not meet the project's purpose and need or if they are considered not feasible. The following alternatives were initially considered but then dismissed for the reasons described below.

3.4.1 Prohibit All New Tower Construction

Due to the demand for services that communications towers support, it is not feasible to consider prohibiting all new tower construction. Therefore, this alternative was dismissed from further consideration.

3.4.2 Prohibit Towers That Exceed a Certain Height

This alternative would prohibit construction of new towers that exceed a certain height (to be determined). However, the height of a communications tower is based on several considerations, including technological requirements for the service to be provided, size of area over which service is to be provided, topography, distance to other towers, and other factors. Due to these considerations, it is not feasible to require all towers to be shorter than a certain height. Therefore, this alternative was dismissed from further consideration.

3.4.3 Prohibit Towers in Certain Locations

This alternative would prohibit construction of new towers in certain locations (to be determined). However, the location of a communications tower is based on several considerations, such as technological requirements for the service to be provided, size of area over which service is to be provided, topography, and distance to other towers. Due to these considerations, it is not feasible to prohibit all towers in certain locations. Therefore, this alternative was dismissed from further consideration.

3.4.4 Prohibit Guy Wires on New Towers

This alternative would prohibit construction of new towers that require the use of guy wires. However, the need for guy wires on a communications tower is based on several considerations, such as the height of the tower and wind stress. Due to these considerations, it is not feasible to prohibit all towers from using guy wires. Therefore, this alternative was dismissed from further consideration.

Draft PEIA August 26, 2011