

March 5, 2012

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: *Written Ex Parte Filing*
Programmatic Environmental Assessment of the Antenna Structure
Registration Program, WT Docket Nos. 03-187 and 08-61

Dear Mrs. Dortch:

The Infrastructure Coalition (consisting of CTIA–The Wireless Association[®], the National Association of Broadcasters, the National Association of Tower Erectors, and PCIA–The Wireless Infrastructure Association), by its counsel, submits herewith a statement by Environmental Resources Management (“ERM”), *High Level Review: Review of Longcore et al. 2012 Accepted Manuscript* (March 5, 2012).

Last April, the Infrastructure Coalition submitted a detailed report by ERM on the data, literature, and analytical methods employed in a paper submitted to these dockets in January 2011 in the form of a pre-publication manuscript, Longcore *et al.*, *An Estimate of Avian Mortality at Communication Towers in the United States and Canada* (2011). ERM found significant deficiencies, which rendered the paper scientifically invalid:

Due to the flaws and uncertainties described herein, the Longcore *et al.* findings should not be considered an accurate or substantiated estimate of avian mortality and risk to bird populations from communications towers and the ASR program and therefore should not be viewed as a scientifically valid determination or consensus in the context of the PEA analysis.¹

¹ ERM, *Final Report: Peer Review of Longcore et al. 2011 Draft Papers*, at 1 (May 13, 2011), Attachment 1 to Infrastructure Coalition Further Comments, WT Dockets 08–61 and 03–187 (May 17, 2011).

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Now, over a year after the initial submission of that manuscript, and months after the scheduled completion date for the Final Programmatic Environmental Analysis (“FPEA”),² the authors of that paper have submitted a new revised version that has been accepted for publication, Longcore *et al.*, *An Estimate of Avian Mortality at Communication Towers in the United States and Canada* (2012).

It is our understanding that the Commission is in the final stages of preparing for the release of its FPEA. It is also our understanding that the Commission will not be releasing for comment the revised Longcore *et al.* paper. It would, however, be inherently arbitrary and capricious for the Commission to place uncritical reliance on this filing, submitted long after the eleventh hour, in finalizing the FPEA.

Given the current stage of the proceeding, Infrastructure Coalition believes it is vitally important for the Commission to recognize that this version of the Longcore *et al.* paper continues to be flawed and therefore not worthy of reliance. Accordingly, the Coalition commissioned ERM to perform an expedited, high-level review of the paper, and its conclusions, as set forth in the attached review statement, make clear that many of its criticisms of the earlier draft of the paper remain matters of serious concern.

Respectfully submitted,

By: 
William J. Sill
Michael Deuel Sullivan
Counsel for the Infrastructure Coalition

Attachment

cc: Jane Jackson, Jeffrey Steinberg, Aaron Goldschmidt (via email)

² See <http://www.fcc.gov/encyclopedia/programmatic-environmental-assessment-pea> (“December 2011 – Tentative release of the final Programmatic Environmental Assessment (PEA)”)

**Review of Longcore *et al.*
2012 Accepted Manuscript**

March 5, 2012

Environmental Resource management
200 Harry S. Truman Parkway
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Annapolis, MD 21401



**High-Level Review of
An Estimate of Avian Mortality at Communication Towers
in the United States and Canada, by Longcore *et al.*; 2012**

ERM has been asked to provide a high-level review of Longcore *et al.*, *An Estimate of Avian Mortality at Communication Towers in the United States and Canada* (2012), which was recently filed with the Federal Communications Commission as a revised version of a manuscript originally submitted in January 2011. In 2011, ERM provided a detailed analysis of the 2011 Longcore manuscript, which identified significant concern about some of Longcore *et al.*'s methodology and assumptions. Considering the extremely abbreviated time period within which to file a response, ERM has had insufficient time to conduct as thorough and detailed a review of this version of the Longcore *et al.* paper as we did on the manuscript. Based on the limited review we have been able to provide, there remain several significant questions in the revised 2012 Longcore *et al.* paper.

ERM's review of the Longcore paper suggests that some of the concerns we identified during our prior review of the manuscript relating to the analytical methodologies (*e.g.*; bootstrapping, log-transformations) are still applicable to this updated paper. We also re-iterate our prior concerns that lumping variables such as tower height, geographical location, and lighting arrays potentially over-simplifies the effects of towers as a whole on bird mortality, and that these factors have direct and significant design and cost implications for the communications industry.

We do note that the authors' assumptions that searchers only find 20% of birds that are killed because of search efficiency, scavenging, and incomplete sampling has a significant effect on estimated annual fatalities (500% increase in mortality estimate). The authors do acknowledge that the results are sensitive to these assumptions (pg 17). As a result, the estimate of avian mortality can be significantly overstated if these assumptions are incorrect. We also note that the paper concludes that over two-thirds of the estimated mortality is attributable to towers over 300 m tall (pg 17).

In our report in April 2011, we indicated concerns about the limited geographic coverage of the study. We specifically recommended inclusion of a tabular breakdown of the datasets reviewed by Longcore *et al.* to demonstrate the distribution of towers in each height category, the geographic region where the study was conducted relative to migratory routes of primary species, and the time period when the study was conducted relative to the migration season. The 2012 version of the paper responds to this suggestion by including Tables 3 and 4, which provide tower heights for each study, and Figure 5, which shows the geographical distribution of towers by height class. There is no way, however, to relate mortality data from an individual study to a geographic region based on the data provided, which still limits independent assessment of the data.

We note that due to the nature of the data, any investigator would have to make certain assumptions to render the data useable for an analysis of this type. Although there are alternative methods and assumptions that could have been used and would likely yield different mortality estimates than those reported by Longcore *et al.*, we have not had sufficient time to explore those alternative analytical approaches or

determine the effects that different assumptions would have had on the predicted avian mortality.

Although some of our initial criticisms have been addressed, we still have questions about how some of the adjustments made to the data to account for sampling design and effort affect the outcome of Longcore *et al.*'s analysis. For example, although Longcore *et al.* (2012) recognizes the effect that inclement weather has on avian mortality at telecommunication towers, it is still not clear how this effect is managed in the analysis. Page 10 states "Days where maximum free airspace was recorded..." (*i.e.*; good weather days) "...were excluded from analysis..." The authors state that they calculated a mortality index for bad weather days, but it is not clear whether the good weather days were excluded only from calculation of the index or from the entire study. Furthermore, it is unclear how or even if that index was used in the final analysis.

Thus, it is clear from this high-level review that questions remain about some of the statistical methods and assumptions used by Longcore *et al.* (2012), which leave considerable uncertainty around the paper's estimate of avian mortality attributable to telecommunication towers.