



INTERNATIONAL DARK-SKY ASSOCIATION

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Mr. Ramon Williams
Office of Requests for Environmental Review
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

RE: Request for Environmental Assessment for ASR File Number A1107618

Dear Mr. Williams:

On behalf of the International Dark-Sky Association, I write in order to petition for an environmental assessment (EA) relating to the proposed construction of a new communications tower near Terlingua, Texas. (File Number A1107618).

The "Big Bend" of the Rio Grande River defines a region of special ecological and environmental sensitivity along the border between the United States and Mexico. Among its other outstanding natural resources is a large "reservoir" of natural nighttime darkness, spanning hundreds of thousands of acres along that border. The area's rugged landscape and often harsh conditions have largely discouraged development, leaving much of the land in essentially pristine condition.

The dark conditions across the Big Bend at night are crucial for the wellbeing of many species (1), both endangered and not, and the visibility of brilliant, starry skies ties directly into the the historical character of the area, preserving a view characteristic of the area's cultural heritage. Both Big Bend National Park and Big Bend Ranch State Park have been certified by my organization as International Dark Sky Parks for both the quality of their night skies and their efforts to actively manage that natural resource. Each parks serves as a dark nighttime refuge, and they are acutely sensitive to the installation of new lighting in the area.

Biological needs for nighttime darkness are now firmly established, both in the scientific literature and resource management planning for public lands. There are both known and suspected hazards of exposure to artificial light at night (ALAN) among birds (2), mammals (3), reptiles and amphibians (4), insects (5), and many other animals. Urban pressures are increasingly forcing various animals to adopt increasingly nocturnal habits (6), rendering them acutely sensitive to ALAN. Therefore, places such as public lands, where nighttime darkness is conserved, are increasingly seen as a lifeline to all manner of species under threat.

The construction of new, lighted communications tower in this area is further expected to yield a detrimental effect on area viewsheds at night. For both locals and visitors alike, this kind of unwanted light detracts from the experience of seeing an unpolluted night sky. In recognition of this fact, the Brewster (Texas) County Commission recently updated the county outdoor lighting

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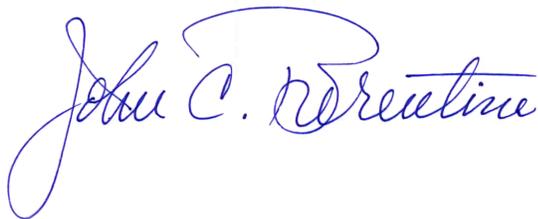
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ordinance (7) to address this specific issue. Citing concerns for the pollution of the night sky, §3.5(C) requires that "*new communication safety tower lighting must use lighting that has the least impact on dark skies and still be in compliance with federal regulations, and new communication tower safety lighting is not authorized unless required by federal regulations.*" The ordinance also notes the legal impetus for enacting these regulations, "for the purpose of preserving dark skies and protecting the continued viability of McDonald Observatory" pursuant to Texas law (8).

We understand the need for aircraft safety in the Big Bend area, and we further understand that lighting on communications towers over 200 feet in height is required by federal law (9). However, the FAA permits other means of collision avoidance for towers that does not involve lighting, such as the Obstacle Collision Avoidance System, or OCAS. We further have reason to believe that the lighting on the proposed tower in the Terlingua, Texas, area will adversely impact both the visibility of the night sky from both International Dark Sky Parks, and may have negative effects on area wildlife.

For these reasons, we urge the FCC to require an EA for this project pursuant to 51 FR 15000 §1.1307(c). We further assert that no categorical exclusion under NEPA would apply to this project.

Respectfully,



John C. Barentine, Ph.D.
Director of Public Policy

Notes

1. See reviews in, e.g., Rich, C. & Longcore, T., eds. (2006) *Ecological Consequences of Artificial Night Lighting* (Island Press); Longcore, T. & Rich, C. (2017) *Artificial Night Lighting and Protected Lands: Ecological Effects and Management Approaches* (U.S. Dept. of the Interior Natural Resource Report NPS/NRSS/NSNS/NRR—2017/1493).
2. Dominoni, D. (2015). The effects of light pollution on biological rhythms of birds: an integrated, mechanistic perspective. *Journal of Ornithology*, 156(1), 409–418.
3. Duffy, J. P., Bennie, J., Duran, A. P., & Gaston, K. J. (2015). Mammalian ranges are experiencing erosion of natural darkness. *Scientific Reports*, 5, 12042.

4. Perry, G., B. W. Buchanan, R. N. Fisher, M. Salmon, and S. E. Wise. (2008). Effects of artificial night lighting on amphibians and reptiles in urban environments. *Herpetological Conservation* 3:239– 256.
5. Grubisic, M., Van Grunsven, R. H. A., Kyba, C. C. M., Manfrin, A., & Hölker, F. (2018). Insect declines and agroecosystems: does light pollution matter? *Annals of Applied Biology*, in press; and Knop, E., Zoller, L., Ryser, R., Gerpe, C., Hörler, M., & Fontaine, C. (2017). Artificial light at night as a new threat to pollination. *Nature*, 548(7666), 206–209.
6. Gaynor, K. M., Hojnowski, C. E., Carter, N. H., & Brashares, J. S. (2018). The influence of human disturbance on wildlife nocturnality. *Science*, 360(6394), 1232–1235. Amended 22 August 2018; see <http://www.brewstercountytexas.com/wp-content/uploads/2018/08/Orders-Regulating-Outdoor-Lighting-Amended-August-22-2018-3.5-C.pdf>.
7. Texas Local Government Code, §229.051 et seq. (2012); see <https://statutes.capitol.texas.gov/Docs/LG/htm/LG.229.htm>.
8. 14 CFR Part 77, Subpart C (“Obstruction standards”, available on <https://www.law.cornell.edu/cfr/text/14/77.17>). The currently operable FAA rule on tower lighting appears in the Advisory Circular of 4 December 2015 (https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L_.pdf).