

TEXAN by NATURE™

Dear Fellow Texans,

Each year during fall and spring migrations, nearly two billion birds travel through Texas in one of the planet's great wildlife spectacles. This fall, 1 out of every 4 birds migrating through the U.S. will pass through Texas between August 15 - November 30.

Light pollution is a growing and underrecognized threat to birds. The light emanating from our cities disorients the birds, leaving them confused and vulnerable to collisions with buildings. In fact, nearly one billion birds are estimated to die annually due to collisions with buildings.

Join us in participating in [Lights Out Texas](#) to protect migrating birds by **turning off non-essential lights at night from 11 pm - 6 am during the fall migration period of August 15 - November 30**. Where conflicts apply, prioritize lights out during the **critical peak fall migration period from September 5 to October 29**. Each night and each light turned out helps save migrating birds. As an added bonus, turning off non-essential lights also saves money and conserves energy for cities, local businesses, and homeowners!

This past spring, the cities of Arlington, Cedar Hill, Dallas, Dripping Springs, Fort Worth, Galveston, and Houston, as well as Travis County issued Lights Out Texas proclamations. Countless businesses made commitments to go Lights Out, and over 170 dedicated volunteers contributed more than 1,200 volunteer hours to document bird casualties in cities across Texas to better understand bird-build collisions and bird migration dynamics.

The Lights Out Texas effort is led by a coalition that includes conservation non-profits, universities, governmental organizations, and Texans dedicated to the conservation of birds. Learn more about participating partners and how you can help migrating birds this migration season and for migration seasons to come on the next pages of this letter.

I hope that every Texan and business operating in Texas will participate in Lights Out Texas year-round, starting this fall by **turning out lights from 11 pm to 6 am, August 15 – November 30**. My vision is of a dark and starry Texas sky, ensuring a safe flight for birds on their journey to their over-wintering grounds.

Sincerely,



Laura Bush
Founder, Texan by Nature



HERE'S HOW YOU CAN HELP MIGRATING BIRDS

Whether you are a business or homeowner, help protect migrating birds passing through Texas by **turning off all non-essential nighttime lighting on and within buildings from 11:00 p.m. to 6:00 a.m. each night during fall migration from August 15 - November 30.** Where conflicts apply, **prioritize lights out from September 5 - October 29 during the peak of migration when the most birds are passing through Texas.** Visit [Texan by Nature's Lights Out Texas Page](#) to learn more.

Guidelines for EVERYONE:

- Turn off all non-essential lights from 11:00 p.m. to 6:00 a.m. each night.
- Do not use landscape lighting to light up trees or gardens where birds may be resting.
- For essential lights (like security lighting) use the following dark skies friendly lighting practices:
 - Aim lights down
 - Use lighting shields to direct light downwards and to avoid light shining into the sky or trees
 - Use motion detectors and sensors so lights are only on when you need them
 - Close blinds at night to reduce the amount of light being emitted from windows
- Share your success on social media and with the press, your commitment to go lights out to save birds is newsworthy.

Additional Guidelines for Buildings Taller Than 3 Stories:

- Extinguish or dim: Exterior and decorative lighting (i.e. spotlights, logos, clock faces, greenhouses, and antenna lighting); lobby/atrium lighting; and lighting in perimeter rooms on all levels of the building.
- Avoid: Floodlights; illuminating interior plants or fountains, and unoccupied floors; scheduling cleaning crews after dark; and blue-rich white light emissions (lighting with a color temperature of over 3000 Kelvins).
- Use: Desk lamps or task lighting rather than overhead lights; blinking lighting in place of continuously burning lights; and warm light sources (less than 3000 Kelvin) for outdoor lighting.

Get Recognition for Going Lights Out

- Take [Texas Conservation Alliance's Light Out for Wildlife Certification](#) pledge to show your commitment to go Lights Out!
- Share your success and influence others to make a positive change for wildlife and energy efficiency on your social media channels and website.
- If a company is seeking a deeper level of recognition, Texan by Nature (TxN) can recognize companies through their [Texan by Nature Certification program](#). Certified projects are highlighted on the TxN website through a story-telling write-up and on TxN social media channels, newsletter, etc.

CONTACT INFORMATION:

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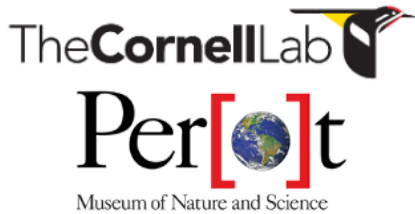
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Lights Out Texas Founding and Coordinating Organizations

- The Cornell Lab of Ornithology
- Texas Conservation Alliance
- Perot Museum of Nature and Science
- Biodiversity Research and Teaching Collections, Texas A&M University
- Houston Audubon
- Texas Parks and Wildlife Department Nature Trackers
- Texan by Nature
- Colorado State University
- University of Massachusetts Amherst



Lights Out Texas Supporting Organizations

- *Austin & Central Texas*
 - City of Austin, Office of Sustainability
 - City of Dripping Springs
 - Hill Country Alliance
 - Travis Audubon
 - Travis County
- *Dallas Fort Worth & North Texas*
 - Acton Nature Center
 - City of Arlington
 - City of Dallas, Mayor's Office
 - City of Cedar Hill
 - Dallas Zoo
 - Dogwood Canyon Audubon Center
 - Ellis County Master Naturalists
 - Fort Worth Museum of History and Science
 - Friends of Fort Worth Nature Center
 - Trinity River Audubon Center
 - University of Texas at Arlington
- *Houston & Gulf Coast*
 - City of Houston
 - City of Galveston
 - Gulf Coast Bird Observatory
 - The Houston Museum of Natural Science
- *San Antonio*
 - Bexar Audubon Society
 - Mitchell Lake Audubon Center
 - The Witte Museum
- *West Texas*
 - Big Bend Conservation Alliance
 - El Paso Trans Pecos Audubon Society
 - University of Texas at El Paso
- *Statewide*
 - Audubon Texas
 - Defenders of Wildlife
 - The Nature Conservancy
- *National*
 - American Bird Conservancy
 - Audubon
 - National Wildlife Federation

FACTS ABOUT HOW LIGHTS AT NIGHT IMPACT BIRDS

DID YOU KNOW? Texas contains 3 of the top 20 U.S. cities in exposing migrating birds to hazards created by light pollution, with Houston ranked #2 and the Dallas-Fort Worth area ranked #3. Because most migratory birds fly at night, bright lights of commercial and residential buildings attract and disorient birds, causing collisions and leaving birds vulnerable to threats on the ground.

1. Texas is globally important for birds.
 - 1 of every 3 birds migrating through the U.S. in spring and 1 in 4 in fall passes through Texas, meaning approximately one billion birds traveling through our state ^[2].
 - Protecting birds in Texas promotes conservation of bird populations across the Americas.
2. U.S. bird populations are declining rapidly, with 1 out of every 4 birds lost since 1970^[3].
 - An estimated one billion U.S. bird deaths occur annually from collisions with buildings and structures ^[4], with migratory species at most risk.
 - Attraction and disorientation resulting from light pollution concentrate migrant birds in cities ^[5].
3. Birds are essential to our planet's ecology – and our local economy.
 - Birds provide ecosystem services, act as benchmarks for environmental health, increase livability, and connect people of all ages and abilities to the natural world.
 - Birds also support the Texas economy. In the Rio Grande Valley alone, Texas A&M found that nature tourism – which is dominated by bird watching – contributes \$300 million and 4,407 full and part-time jobs annually.
4. Reducing light pollution directly reduces energy expenditures and carbon footprints.
 - Energy use is the single largest operating expense in commercial office buildings, representing approximately one-third of typical operating budgets and accounting for almost 20% of the nation's annual greenhouse gas emissions ^[6].
 - Office buildings waste up to one-third of the energy they consume ^[7].
5. Turning off or dimming internal and external lights is an effective intervention, whether at low or high-rises.
 - A 2021 peer-reviewed paper has modeled collisions at a building, showing that reducing lighting during the entire migration season would be an effective way to reduce collisions, resulting in a ~60% reduction in collision mortality from observed totals. ^[8]
 - Turning off individual lights, even in an otherwise brightly lit area, is likely to make a meaningful difference in decreasing bird mortality. ^[8]

[1] Van Doren, B.M., et al., High-intensity urban light installation dramatically alters nocturnal bird migration. *Proceedings of the National Academy of Sciences*, 2017. 114(42): p. 11175-11180.

[2] Dokter, A.M., et al., Seasonal abundance and survival of North America's migratory avifauna determined by weather radar. *Nature ecology & evolution*, 2018: p. 1, 4. / Horton, K.G., et al., Holding steady: Little change in intensity or timing of bird migration over the Gulf of Mexico. *Global change biology*, 2019. 25(3): p. 1106-1118.

[3] Rosenberg, K.V., et al., Decline of the North American avifauna. *Science*, 2019. 366(6461): p. 120-124.

[4] Loss, S.R., et al., Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. *The Condor*, 2014. 116(1): p. 8-23, 7. / Loss, S.R., T. Will, and P. Marra, Direct Mortality of Birds from Anthropogenic Causes, in *Annual Review of Ecology, Evolution, and Systematics*, Vol 46, D.J. Futuyma, Editor. 2015. p. 99-120.

[5] Horton, K.G., et al., Bright lights in the big cities: migratory birds' exposure to artificial light. *Frontiers in Ecology and the Environment*, 2019, 2. / Van Doren, B.M., et al., High-intensity urban light installation dramatically alters nocturnal bird migration. *Proceedings of the National Academy of Sciences*, 2017. 114(42): p. 11175-11180. B. / Cabrera-Cruz SA, C.E., Smolinsky JA, Buler JJ, Artificial Light at Night is Related to Broad-Scale Stopover Distributions of Nocturnally Migrating Landbirds along the Yucatan Peninsula, Mexico. *Remote Sensing*, 2020. 12(3): p. 395

[6] La Sorte, F.A., et al., Seasonal associations with urban light pollution for nocturnally migrating bird populations. *Global Change Biology*, 2017, 10. / McLaren, J.D., et al., Artificial light at night confounds broad-scale habitat use by migrating birds. *Ecology letters*, 2018. 21(3): p. 356-364.

[7] Star, Energy. "Commercial Real Estate: An Overview of Energy Use and Energy Efficiency Opportunities." (2013).

[8] Van Doren, B. M., et al., Drivers of fatal bird collisions in an urban center. *Proceedings of the National Academy of Sciences*, 2021. 118(24).