

3 BILLION BIRDS

GONE



Ottawa National Wildlife Refuge
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14000 West State Route 2, Oak Harbor, OH 43449

1 in 4
Birds Gone
Since 1970

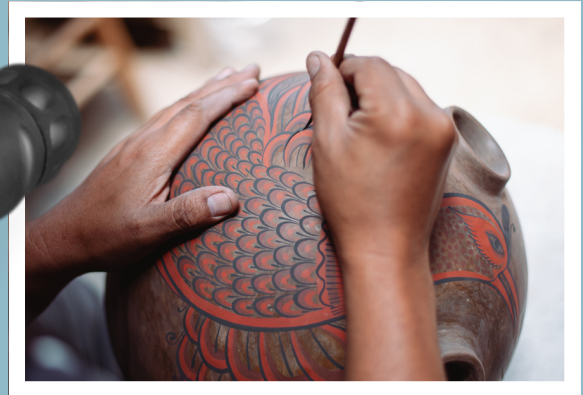
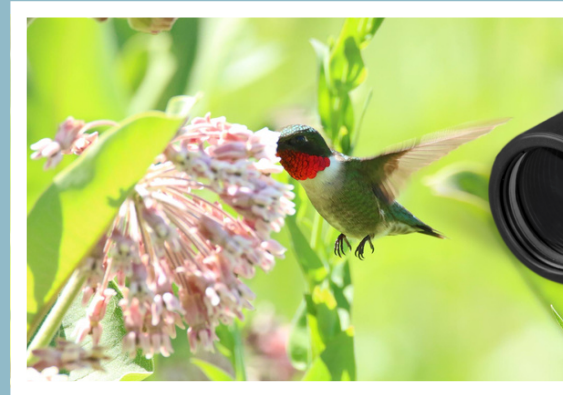


Call to action

A study published in Science by Rosenberg et al., (2019) brought to attention an alarming decline in North American bird abundance, estimating that nearly 3 billion adult breeding birds across almost all biomes in North America have been lost since 1970. These findings were an urgent call to action for the U.S. Fish and Wildlife Service and the Region 3 Migratory Bird Program to address the threats birds face, particularly in regards to bird window collisions.

Ottawa National Wildlife Refuge has taken on the challenge to reduce bird window collisions by applying window tape and dots, window film, zen curtains, and paint to the glass on our buildings. We also are working to reduce light pollution by turning off interior building lights at night and using motion sensors and timers.

Why should we care?



- **Birds benefit the ecosystem:** Birds aid in seed dispersal, pollination, and pest control.
- **Birds benefit the economy:** In 2016, 45 million bird watchers contributed \$40 billion to the United States economy.
- **Birds benefit art and culture:** Birds inspire art, music, and poetry, and play a significant role in culture, religion, and folklore across the world.

Threats birds face

Birds face a number of threats in both their breeding and non-breeding grounds, including:

- habitat loss and degradation
- collisions with glass and other large objects
- light pollution
- climate change
- invasive species
- plastic waste
- pesticide use
- outdoor cats

These threats need to be addressed to prevent further losses in bird populations and biodiversity.



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To learn more about how to save birds, visit:
<https://www.friendsofottawanwr.org/savebirds.html>

What can you do?

Make windows safer

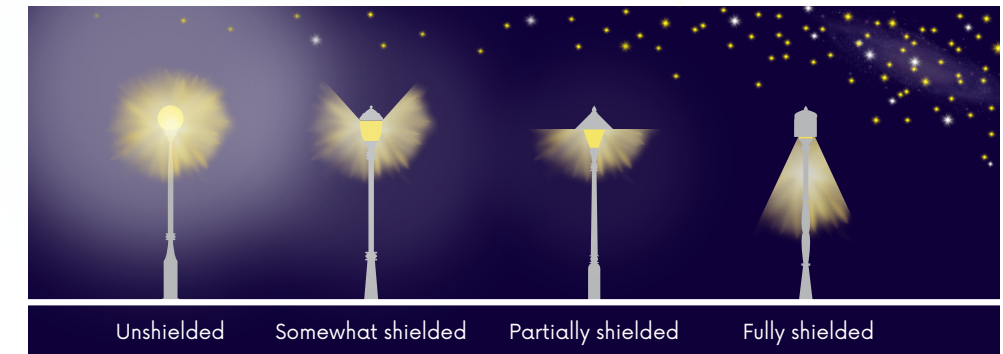
Creating visual barriers on the **outside** of windows that birds can see will help reduce bird window collisions. There are a number of products and solutions that you can use to create visual barriers for birds to see. Take a walk around our Visitor Center, Wildlife Window, and Bob Hines Ranger Station to see examples of what you can do to your home or business. The sky is the limit!

- **Zen curtains** are strings spaced every two inches that hang over windows. They can be left to sway in the wind, or secured at the bottom of the window.
- **Window tape or dots** are placed on the outside of windows, spaced every two inches horizontally and two inches vertically to be most effective.
- **Non-toxic tempera paint, or a simple bar of soap**, can be used on the outside of windows to create art that will reduce window reflections. To be most effective, use lighter colors and make sure not to leave any spaces that are greater than two inches by two inches.
- **Window film** is a film that covers the outside of windows, and can be printed with customized designs, or bought with a plain design. One-way perforated film allows views from the inside out, but prohibits views from the outside in.
- **Screens or small mesh netting** can be applied to the outside of windows, leaving three inches of space between the screen or netting and the window. Make sure netting stays taught so birds cannot get entangled in it.
- **Bird feeders and baths should be placed within 3 feet of a window** to lessen any potential impacts with windows after flying away from the bird feeders or baths.



Reduce light pollution

Light pollution is caused by excessive and inefficient artificial light used for the exterior and interior of buildings, factories, street lights, sporting venues, and advertisements. More often than not, lighting is brighter than it needs to be, and is not efficiently targeted or shielded, which wastes light and energy. Wildlife use the night sky to navigate, especially during migration. Birds become disoriented by sky glow from cities, throwing them off of their migration paths and attracting them to dangerous glass-covered cities. Birds are then faced with the threats of colliding with buildings or other structures, and becoming exhausted from flying around and calling out in confusion.



Help save birds by reducing light pollution. Turn off exterior lights when not needed, or use motion sensors, particularly during migration months between March - May and August - October. Replace unshielded exterior light fixtures with fully shielded fixtures to direct light downward and only where it is needed. Dim lights, and use warmer colored light bulbs to reduce blue light emissions. Keep light from spilling outside by closing shades at night.

Create safe habitat

Create a safe and welcoming space in your yard or community by:

- **Planting natives** - Native plants provide shelter, food, and nesting sites that attract insects, birds, and other wildlife.
- **Leaving up dead trees or plants** - If it is safe to do so, leave dead trees and plants standing to provide shelter, roosting and nesting sites, and food sources for birds and other wildlife.
- **Avoiding pesticides** - Pesticides can be toxic to birds and kill food and habitat sources birds need. Avoid using pesticides in your yards or gardens, and try to eat organic foods to support farming without pesticides.
- **Keeping cats indoors** - If possible, keep cats indoors, especially during peak bird activity and breeding season. Outdoor cats are a major threat to birds, killing 2.6 billion birds in the United States each year.

