Help Stop Birds from Hitting Windows

Every year nearly one billion birds collide with glass in the U.S., and most of those fatalities happen at homes and buildings shorter than four stories tall. Even glass walkways and bus stop shelters cause bird collisions. Fortunately, your small efforts can make a BIG difference for birds!

Birds don’t see glass as a barrier and don’t avoid it. They collide with glass when they see natural reflections (clouds, sky, or trees) in the glass, when they see plants through windows, and when they are attracted to landscaping or interior lights. Many birds that seem fine following window collisions can later die from internal injuries.

You can make your building safer for birds. Some bird safety measures even reduce your energy costs and look nice. People are more likely to welcome building changes when they know the changes protect birds. You can figure out which glass is most likely to cause bird collisions by checking windows for vegetation reflection, searching for dead birds, or finding feather prints on windows.
Reduce Your Lights and Save Birds

At night, in inclement weather during spring and fall bird migration, birds can be attracted to lighted buildings, resulting in building collisions, entrapment, and exhaustion.

Blinds and shades reduce the amount of interior light that escapes outside during the night and during the day they help warn birds that glass is a barrier. Awnings and shutters also reduce escaping light and window reflection while conserving energy. Turning off unneeded lights by hand or with lighting timers and motion sensors reduces energy costs and bird attraction to buildings. Office buildings can be cleaned during the day to reduce nighttime lighting and nighttime overtime wages.

Visit our page on nighttime lighting to learn more about how you can implement bird-conscious lighting techniques at your location.

Dress Up Your Windows and Save Birds

Hawk silhouettes are a popular, but unfortunately don’t work unless applied in very high densities. The good news is that there are great solutions to help stop bird collisions.

Patterns can be applied to the outside of windows to help birds. These patterns should be ¼-inch in diameter (or larger) and be placed no more than 2 inches apart from each other. Creating a 2" x 2" grid is especially helpful to protect small birds, including hummingbirds. In addition, be careful of using dark colored patterns as they can be difficult for birds to see when the window reflects dark colors.

Parachute cord curtains cost approximately 11 cents per square foot. This elegant, inexpensive option uses 1/8-inch paracord pieces spaced less than 4 inches apart, hanging outside from the top of the window. The paracord creates a visual barrier for birds. These curtains can be purchased pre-made or constructed of readily available and inexpensive materials.

Tempera paint costs 13 cents per square foot. Using the 2" x 2" spacing mentioned above, non-toxic tempura paint patterns or artwork applied to exterior glass can reduce bird collisions for many years. Tempura paint is easily removed using vinegar and water.

Screens and netting cost about $1.83 per square foot. External insect screens reduce bird collisions by reducing window reflections and alerting birds that windows are barriers. Netting prevents injuries to birds if the bird can safely bounce off the screen instead of hit the hard glass. Net openings should be 1/2-inch or smaller, so birds don’t become caught. Companies sell
screens that can be attached with suction cups or eyehooks.

**Tape, decals, and external films** cost $2.50 (tape), $8-12 (dot patterns), and $4-6 (film), all per square foot. Products are available in many colors, tints, and patterns. www.birdsmartglass.org and https://www.collidescape.org.

**Protect Birds by Using New Glass**

**Acid-etched, Fritted or Frosted Glass**
Most effective when on the glass exterior, “fritted” glass includes adhered ceramic lines, dots or other patterns. Etching, fritting, and frosting not only reduce the risk of bird collisions but also reduce energy costs by reducing solar heat gain (27 SHGC) and reducing cooling loads. You can save energy and birds while still naturally lighting your buildings. Existing glass can be frosted using sandblasting. The American Bird Conservancy provides the latest recommendations in glass products and techniques.

**Ultraviolet Patterned Glass**
Ultraviolet (UV)-reflecting glass products are available with patterns generally invisible to humans but visible to many birds species. The American Bird Conservancy provides the latest recommendations in glass products.

**Channel Glass**
Patterns created by channel glass reduce bird collisions and is made of energy efficient, recycled materials. The American Bird Conservancy provides the latest recommendations in glass products.

**Join the Call to Protect Birds**
You can help recover bird populations by preventing window collisions at your home and other buildings. Your small actions are hugely important for our birds…start making your difference today!

- **Homeowners**
- **Building Managers and Tenants**
- **Low-cost Methods to Reduce Bird Collisions with Glass**
- **Methods to Reduce Bird Collisions with Glass When Remodeling and Designing New Facilities**

For more information on reducing glass and lighting impacts and practical tips please
visit Reducing Bird Collisions with Buildings and Building Glass. Canada’s Fatal Light Awareness Program (FLAP) is one of the leading international organizations for public awareness about the bird collisions with glass, informing policy, and developing guidance. Toronto’s Bird-Friendly Development Guidelines was developed by FLAP and in 2010 became mandatory for all new construction. Many U.S. cities and states followed suit with development of similar guidelines and programs, including: Chicago, New York, Minnesota, Portland, Oregon, and San Francisco. The American Bird Conservancy has also developed its own program and guidelines.

The Service is coordinating several initiatives to reduce bird impacts from buildings, including disseminating information internally and coordinating actions across our programs. The Service also coordinates with partners through the Council for the Conservation of Migratory Birds and the Urban Bird Treaty program.

**Additional Resources**

Recorded webinar (from 10/6/22) led by Dr. Scott Loss titled Bird-Window Collisions: State of the Science and Management Approaches.

- [Captioned video](#)
- [Audio-described video](#)

Material on this webpage was sourced from: Klem and Saenger 2009, Loss et al. 2014, Manville 2009

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