If a bird has collided with your home, you are not alone as up to 1 billion birds die each year following window collisions in the United States. The good news is that you can install one of the effective solutions below to prevent future collisions.

These products are easy to install, but if you think you need help we recommended calling your local handyman, house painter, or window washer – every product below will be a quick job for them.

Three Simple Solutions to Prevent Bird Strikes

These inexpensive, easy-to-install products are proven to prevent bird strikes.

Acopian BirdSavers are long-lasting hanging cords that can be installed several ways

Feather Friendly

Feather Friendly are durable white or gray adhesive squares installed in strips. Feather Friendly offers both DIY and professional products.

Bird tape:

ABC BirdTape is a durable translucent tape applied on the outside of the glass, available in stripes and squares.

Location Matters

While placing bird-friendly window products on the inside of windows may be tempting due to ease of application, homeowners should avoid this option whenever possible. Internally installed products are invisible to birds when window reflections are strong, rendering them ineffective. To learn more about internally applied solutions, see below.

Additional Effective Products

Bird Sceen-

Installed with suction cups or screws that can be applied to doors and windows.

Vertical monofilament installed by screwing mounts into the outside of the building.

Installing standard-sized, commercially available screens can also help protect birds.

Small, tightly-spaced translucent UV adhesive decals that work best on the outside of the window. Birds that don't see UV, like Mourning Doves, won't be protected but most songbirds should see this product. They offer both do-it-yourself and professional products.

Solyx offers six bird-friendly full-window films that might require professional installation.

Paint Your Own Design

Use brushes/stencil rollers and non-toxic tempera paint, longer-lasting acrylic paint, or an oil-based pen. For this to be an

effective solution, be sure to follow the pattern instructions below under "Ensure That Your Window Solutions Are Effective"

Large translucent UV adhesive decals that work best on the outside of windows. Birds that don't see UV, like Mourning Doves, won't be protected but most songbirds should see this product. Decals should be closely spaced.

Translucent UV adhesive decals that work best on the outside of the window. Birds that don't see UV, like Mourning Doves, won't be protected but most songbirds should see this product. Decals should be closely spaced.

Decals on the outside of your windows that are at least one quarter-inch in diameter and spaced two to four inches apart should prevent most collisions. Many shapes and sizes available.

Which Windows Should You Fix?

For a bird-safe home, start by identifying problem windows.

Not all windows pose equal dangers to birds. In fact, the majority of collisions are often caused by a small number of problem windows. Identifying and fixing the most dangerous locations is a good way to prevent future collisions. To get started, treat the following windows:

- 1. Windows that have already caused collisions.
- 2. Large windows and glass doors, especially those that reflect habitat (including sky) or through which you can see sky or greenery.

3. Windows across from bird feeders, bird baths, and fruitbearing plants.

In many cases, fixing only these windows will stop almost all of your collisions. But remain vigilant: If collisions occur at other windows, you can apply similar solutions to continue making your home bird friendly.

Should I apply bird-friendly solutions to the inside or outside of glass surfaces?

If you have Venetian blinds, you might prevent collisions by leaving them partly open to create the appearance of lines on your windows. Credit: Shutterstock DifferR Always apply your solution to the outside of the window. Solutions on the inside will be hidden by reflections on the outside of the window for most or all of the day.

What about Hard-to-Reach Windows?

While ABC recommends applying all bird-friendly products on the outside of your windows, you might have windows that are hard to reach from outside. In these cases, a quick test can tell you if a solution on the inside of the window might work.

Begin by applying the proposed "inside" solution to your window. Then observe the window from an outside location every two to three hours, starting in the early morning, to determine its visibility. If you can clearly see your test, birds might too. Your test solution should be something large and

bright, like Post It Notes, so that it has a chance to be visible through the reflections on the outside of the glass.

Don't forget: You can call a handyman, window washer, or a house painter to help apply bird-friendly solution to inconvenient windows/

Ensure That Your Window Solutions Are Effective

To save the most birds, follow these simple rules

Research shows that most collisions can be prevented by applying patterns that are correctly sized and spaced on the outside of glass surfaces.

Choose the right size pattern

If your pattern consists of stripes, they should be at least one-eighth of an inch wide. If you use dots or similar shapes, they should be at least one-quarter of an inch in diameter. It is not necessary to use simple dots or stripes — any pattern that follows these rules will save birds.

Two good rules of thumb:

- 1. You should be able to see the pattern clearly from 10 feet away. This is important: Birds need to detect patterns from far enough away that they have time to change course and avoid a collision.
- 2. Bigger is better: The larger the lines and dots are the more effective they are as they become easier for birds to see.

In general, white patterns tend to perform best because they reflect most light and provide greater contrast against a range of background colors and reflections.

Spacing patterns correctly

Ideal spacing follows the two-inch-by-two-inch rule: Patterns that have vertical, horizontal, or diagonal spaces of two inches or less – and that follow the pattern size rules above – will prevent most collisions.

Larger spacing poses a risk to small songbirds, including hummingbirds, that can easily fly through four-inch wide gaps.

Looking for an alternative? You can also apply a uniform solid pattern, including screens or solid-color window films, that cover the entire window.

Make New and Replacement Windows Safer for Birds New windows save energy, but are they dangerous for birds?

People often report large increases in collisions after replacing home windows. These are typically attributed to several causes, including:

- Increased reflectivity: New windows often have energyefficient coatings and multiple panes of glass, both of which can make them more reflective than older windows.
- Reduced screen visibility: Window screens reduce reflections and prevent collisions; however, on newer windows they are often sandwiched between panes of glass or may cover only the lower half of the window.
- Larger glass surfaces: New windows often lack the muntins and mullions — the "dividers" — needed to hold smaller pieces of glass, which also provide birds with visual cues that help prevent collisions.

Unfortunately, there aren't widely-available bird-friendly options for new or replacement home windows on the market. However, there are several things you can do to make sure your new windows (and glass doors) are safe for birds: