American Bird Conservancy Continuing Education

Bird-Friendly Building Design

American Institute of Architects: ABCbirds11, One hour, one LU/HSW credit
American Bird Conservancy CES provider number: 50111108
Green Building Council: 0920006847: Bird-friendly Building Design 1 credit

Abstract: Birds are potent cultural symbols. They play fundamental roles in ecosystems, agriculture, habitat regeneration, control of insect populations and more. Collisions with glass on buildings kill as many as a billion birds a year in the U.S. alone. Birds, like people, cannot see glass, striking it as they fly towards reflections of clouds, sky and vegetation or as they approach real habitat seen through glass. Birds collide with glass on structures of every size, from shacks to skyscrapers, in urban, suburban and rural areas. Advances in technology are increasing use of glass curtain walls, picture windows, wind walls, railings and other glass features, increasing the rate of mortality.

Until recently, this problem has been almost unrecognized as an issue of sustainability. However, the Green Building Council has responded by adding Pilot Credit 55, Reducing Bird Mortality, to the LEED rating system. Over twenty jurisdictions mandate or suggest bird-friendly construction in at least some cases and more legislation and voluntary guidelines are pending. Moving into the future it will be increasingly necessary to design structures with impact on birds in mind. Fortunately, bird-friendly design need not increase costs or constrain creative imaginations.

This class reviews the science that explains bird collisions, how to recognize hazards to birds in the built environment and shows a range of solutions and buildings that illustrate those solutions. Case studies will explore many of the currently available strategies for reducing bird mortality and how bird-friendly design can add value to strategies often deployed to control heat and light or promote security. We review use of the LEED credit and important features of legislation concerned with bird-friendly design. Techniques now in use for evaluating the relative threat level to birds of different materials are described, along with typical results.

Goals

Participants will learn to

1. Recognize hazards to birds in the built environment
2. Identify and apply current best practices in reducing bird collisions for new design
3. Integrate bird-friendly architecture with other aspects of green design
4. Understand existing and potential legislation mandating bird-friendly design
5. Use LEED Pilot Credit #55: Reducing Bird Collisions
6. Find and utilize resources on bird-friendly construction, including research reports, case studies, materials and guidelines.

Outline

1. Introduction
- **Why birds matter**
- **Why glass is invisible to people too and how they manage what birds can't**

2. Bird/Glass Collisions
- **The magnitude of the problem: how do we know?**
- **Causes of Bird Collisions**
  - **Glass reflectivity**
  - **Glass transparency (fly-through effect)**
  - **Passage effect**
  - **Light pollution**

3. Can 'bird-friendly' be defined objectively?
- **Research**
- **Tunnel testing and rating glass**
- **How much does this cost?**

4. Mandates and guidelines promoting bird-friendly design – what you need to know
- **Legislation: San Francisco, Oakland, Minnesota, Toronto, Ontario and more**
- **LEED Pilot credit #55: Reducing Bird Collisions**

5. Case studies
- **University of Minnesota**
- **Center for Global Conservation**

6. Beautiful bird-friendly buildings around the world

7. Conclusion
- **There is an increasing mandate for bird-friendly design**
- **Bird-friendly construction is compatible with other goals of green design**
- **New materials and information make bird-friendly design an achievable goal**
- **Resources are readily available**