

Monitoring Buildings for Bird Collisions

This protocol is intended for building owners and managers who are seeking to reduce the impact of their properties on birds and not for ongoing research. For best practices for on-going research, please see [Loss, et al 2014](#). Specifically, this protocol is designed to comply with the monitoring protocols of LEED™ Pilot Credit 55.

Local Partners

We strongly urge all monitoring programs to contact a local bird conservation organization for assistance in designing and operating a monitoring program. Most groups will be committed to working with you to document successes and troubleshoot problems and should be considered an asset for your project. The [Bird Conservation Alliance](#), maintains a directory of conservation groups across the country.

Schedule

The bulk of collisions happen in the morning hours between 7am and 11am, though they can happen at any time. Scavengers, including gulls, crows, cats and other animals, learn where collisions happen frequently, so it is important for monitors to inspect the site as close as possible to the local peak collision time.

Collisions may happen at any time of year, although particular buildings often have predictable peaks, depending on local conditions. In more urban settings, spring and fall migration are often peak periods, though in more rural settings peak collisions may happen in summer, when recent fledglings swell local populations.

Ideally, monitoring would happen several times a day, daily for at least 18 months, including at least two peak seasons. Although timing will vary with local bird activity, monitoring sweeps before 8am, near 10am and after 2pm should catch the majority of collision victims.

At a minimum, monitoring must happen once a day, three times per week, for 18 months.

Permits

Because state and federal migratory bird salvage permits are required for collecting bird carcasses, partnering with a local university, museum or conservation group that maintains such permits is essential. In the absence of local group, contact your state department of the environment and wildlife or state department of agriculture who will be able to issue guidance, possibly through the state animal pathology lab.

Monitoring Route

Monitors should follow a consistent route around the building, visiting every façade with windows, including along green roofs, and if possible, setbacks and other roof terraces. A map of the monitoring route should be created for reference, and the route should be subdivided into segments, with each change in façade structure and orientation assigned a segment number.

Personnel

Regular and systematic searches for carcasses are essential for an effective monitoring program. Whoever is conducting the monitoring should be trained and expected to complete the searches on a consistent schedule. Training need not be extensive, but should walk participants through the complete process. Maintenance staff routinely are asked to conduct this work, but other employees or local volunteers from bird conservation groups may also be engaged. All occupants of the building should be informed about the monitoring, so that their own efforts do not complicate the data. Maintenance staff should be instructed to not sweep up carcasses when they are not engaged in monitoring.

Monitoring Kit

Monitors should be equipped with a kit containing the necessary supplies. Materials should fit easily in a gallon-sized plastic bag. Small zipper-seal bags, a permanent marker, paper lunch bags, a few sheets of paper towels or fabric rags, data sheet, hand sanitizer, latex/vinyl gloves and a copy of the salvage permit.

Search Effort

At the designated times, Monitors should conduct a careful search, looking within 30 feet of the building, with a special emphasis on plants and other objects, as injured birds may seek shelter near those objects. The primary activity should be the search effort, though it is permissible for searchers to do other things while they are searching (eg. sweeping or picking up litter). After each segment, the monitor should record the date, time, number of birds found, their species and their status (dead, alive, or injured), if possible photographs and specimens should be collected. It is important to record the search, **even if no birds were found**, especially for post-mitigation and post-construction monitoring, where the goal is to document that no birds were killed.

Collecting Specimens

As with any dead organism, proper handling is essential for the health and safety of the monitors. Monitors should wear gloves when collecting specimens, and deposit them in a sealed plastic bag with the date, location, and if possible species marked on the outside with permanent marker. Specimens should be kept in a freezer until they can be transferred to the permit holder of record, or their designee. Seek guidance from the appropriate state agency for disposition of specimens in the absence of a local partner.

Handling Injured Birds

It is important to plan in advance for possible injured birds and to determine a local wildlife rehabilitation provider who can accept any birds you may find. Gloves should be worn when handling any wild animal, and hands should be washed with soap or sanitized immediately afterwards. A brown paper bag with a piece of scrap fabric about the size of its bottom (to allow the birds claws something to grip) is adequate for transporting birds to a rehabilitator, a long-handled net is often helpful in retrieving injured birds. Make sure that birds are kept away from cold and extreme heat during transportation, and allowed as quiet an environment as possible.

These resources may be helpful in finding a rehabilitator, or contact your local Audubon chapter or nature center:

<http://wildliferehabinfo.org/>

<http://www.nrawildlife.org/>

<http://wildliferehabber.org/>

Identifying Species

Often, it is difficult to identify the species of a carcass, particularly if it has been on site for any length of time. Where possible, we recommend photographing each finding. Photographs should include clear images of head, flank and tail of the bird, so that an expert may identify the bird at a later date. Where it is not possible to identify to species, general categories (e.g. sparrow, hummingbird, pigeon, songbird) may be sufficient. Knowing what kinds of birds are hitting a structure is helpful in determining strategies for mitigation. For example, if hummingbirds are frequent victims, a denser pattern may be needed because of the birds' small sizes.

Recording information

Particularly in Post-construction monitoring, it is critically important to log when no birds are found.

1. Post-construction monitoring for a building using smart phones can be easily set up at <http://www.inaturalist.org/> or, if the monitors don't mind their data being public, they can report to a database created in inaturalist by Duke University at <http://www.inaturalist.org/projects/bird-window-collisions>. Another tool is Flap Mapper at http://www.flap.org/mapper_guide.php. Both of these apps allow gps tagged photos to be uploaded and automatically marked on a map. A third tool, www.d-bird.org, from NYC Audubon, allows easy GPS-referenced data to be collected from any smartphone.
2. Other systems are possible – one large corporation has added sightings of dead and injured birds to their computerized work order system and has contracted with a local group to come and pick up any injured birds. Another used picture texts – maintenance workers put a pre-printed tag with the section number next to carcass and snapped and texted the picture to a central number.
3. A low tech option is to assign names or codes to logical sections of the building façade, documenting each section with a photograph to make sections easy to identify

However you collect your data, you should create a spreadsheet or paper data sheet with the following columns:

Date= the date a monitoring round is performed

Time= the time the monitoring round is begun on that date

Monitor= the person doing that monitoring round

Location= name or code assigned to that section of the building. The locations along the monitoring route should be entered, in order, on the blank data sheet or spreadsheet.

Birds (dead)= record the number of birds observed (including zero)

Birds (stunned or flew off)=use this column if injured birds are found (including zero)

Disposition= any action taken – carcass removed, injured bird reported, taken to rehabilitator etc.

For further advice and guidance, contact Chris Sheppard at csheppard@abcbirds.org or Glenn Phillips at gphillips@abcbirds.org.