

Seattle Bird Collision Monitoring Project



Volunteer Manual

Draft December 2023

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About Seattle Bird Collision Monitoring Project (SBCMP)

Birds Connect Seattle launched the Seattle Bird Collision Monitoring Project in 2021 as part of our Bird-Safe Cities program. The project seeks to document bird-window collisions in Seattle and to identify factors that contribute to collision risk so that we may prevent them.

Study questions include:

- What species are impacted by collisions in Seattle?
- How many birds strike study buildings?
- How quickly are carcasses scavenged?
- What is the probability that we detect carcasses when they are present?
- How do weather, season, and proximity to vegetation or water affect collision risk?
- What building design elements contribute to collisions?

During collision monitoring periods, we conduct daily surveys for dead or injured birds around study buildings. We follow a standardized protocol adapted from the work of Hagar and Cosentino (2014) and Loss et al. (2016). Trained volunteers search an area within six feet of study building walls. We assume any carcasses within this area are window-collision victims unless another source of mortality is apparent.

In addition to structured surveys through the Seattle Bird Collision Monitoring Project, Birds Connect Seattle also collects reports of dead birds opportunistically through dBird.org, an online platform for reporting and tracking human-related bird mortality and injury.

Collision Monitoring: Supplies, Dress, and Behavior

Collision Monitoring Supplies

All collision monitoring volunteers will be provided the following materials:

- collision monitoring protocol
- Federal Bird Salvage Permit number
- Washington State Scientific Collection Permit number
- datasheets and access to online data entry forms
- specimen information cards

Survey route collision monitoring volunteers will also be provided:

- weather-resistant field kit
- volunteer ID lanyard

- program information business cards
- high visibility safety vest
- map of study route buildings
- gloves*
- hand sanitizer*
- small plastic bags*
- large plastic bags*
- ruler*
- pencil*
- paper bags*
- injured bird transport box*
- paper clips/small binder clips*
- soft cloth*

*at-home collision monitoring volunteers may wish to gather these items, or similar items, and have them on hand in case you find a dead or injured bird

Dress for Success

Seattle's weather is variable. Please check the forecast before completing your survey to make sure you are prepared. Surveys will be completed rain or shine.

Generally, wear layers and dress to be comfortable. Survey routes are more than 1 mile in length over a lot of concrete. Comfortable shoes are important. Collision Monitors may often need to kneel to pick up specimens; shorts may be uncomfortable for that reason.

Keeping Safe

Your personal safety is our priority. We do not expect any issues, particularly for at-home monitors, but please be vigilant and remain aware of your surroundings at all times. All monitoring will occur in daylight hours, both to increase the likelihood we are able to see the collision evidence we are looking for and to support the safety of volunteers.

Specific considerations for study route volunteers include the public location of the study route buildings in areas with a lot of nearby pedestrian and vehicular traffic. Given volunteer availability, we will do our best to pair study route volunteers with a monitoring partner.

If you are in an emergency situation, please call 911 immediately.

If you feel uncomfortable or unsafe but it is not an emergency, stop your monitoring activities, move immediately to safety, and contact Birds Connect Seattle project staff.

Additionally, Birds Connect Seattle tries to gain permission from building managers to monitor at study route buildings. However, building occupants, security guards, and people on the street may inquire about your activities. When this occurs, please share the following and offer program information card:

I'm part of a research project studying bird window collisions. We're looking for dead or injured birds that may have struck windows. If you have any questions or would like to get involved, please contact Joshua Morris, Urban Conservation Manager at Birds Connect Seattle.

Building Trust and Being Present

We wish to build and maintain good relationship with our building partners for two reasons:

- 1) so that we may continue long-term monitoring; and
- 2) to increase the likelihood that building personnel will work with us to find solutions if we discover problematic collision areas.

We also want to ensure we are collecting good, usable data that will best help us understand and prevent collisions in Seattle.

To make sure we are building trust with our partners and building a robust dataset, please:

Respect building occupant privacy. Never peer through building windows. Only take photographs of collision evidence on windows if doing so won't violate the privacy of the building occupants. Please only photograph specimens facing down toward the street.

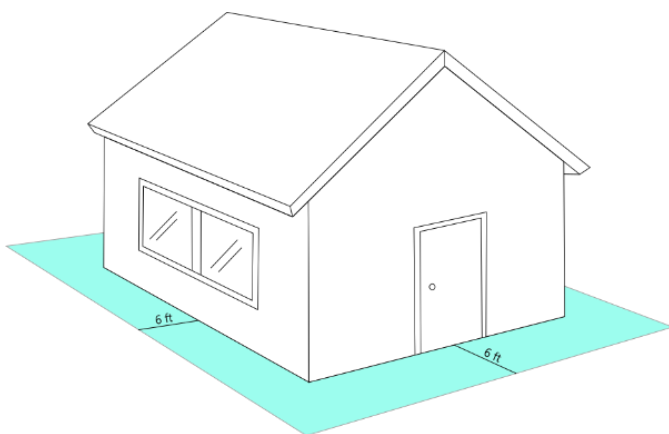
Conduct surveys quietly. There's no need to be silent, just to keep our conversations at a respectful decibel level.

Be fully present during surveys. We ask that you do not take calls, text, use the internet, or listen to music while completing building surveys. This will help ensure we are maximizing the probability we detect birds if they are present. If you must take a call or respond to a text, please pause your survey, be brief, and resume carcass searches when you are finished.

Do not post on social media. To help us build trust with businesses and residential building properties, please refrain from posting any collision monitoring-related findings to any social media platforms.

The Collision Monitoring Protocol

This protocol is adapted from Hager & Cosentino 2014 and Loss et al. 2014.



(Figure 1): Focus your search within six feet of the outside walls of your home or building, or just beyond the width of your outstretched arms. Photo: [Hagar et al. 2014](#).

Types of Collision Evidence

- A dead bird found within about six feet of the building;

- An injured bird found within about six feet of the building;
- Important bird parts such as head, wing or leg; or an obvious feather pile (ten+ feathers, four+ flight feathers) within six feet of the building;
- Bird feathers stuck to the window of the building due to apparent collision;
- A blood smear, or clear body smudge or dust imprint on the window of the building; and
- Seeing or hearing a bird striking a window

(Figure 2): Examples of collision evidence on windows



Collision Incidents: You will be asked to submit a report for each collision incident you find. Collision incidents can involve more than one type of collision evidence. A feather stuck to a window with a bird carcass on the ground immediately below it would count as one collision incident, while a body part and a feather pile found near two different sides of the building would count as two collision incidents (unless there was strong evidence that they were both from the same bird).

Protocol for Study Routes

Preparation

- **Attend a Prospective Volunteer Information Session if you are new to the Seattle Bird Collision Monitoring Project.** This session will provide you with background information about bird-window collisions, the history and goals of the project, details on what to expect as a volunteer for the upcoming season, next steps for participating and the opportunity to ask questions to determine if bird-window collision monitoring is the right fit for you.
- **Provide your route preferences and day of the week availability** to project staff. You will be assigned a route, a day of the week and a monitoring partner based on your responses, overall volunteer availability, and the needs of the program. For example, if you are willing to monitor either the Seattle University route or the downtown route on Monday, Wednesday or Friday, you might be assigned to monitor at the Seattle University route on Wednesdays with Jane Doe. You and Jane Doe will then be responsible for surveying the Seattle University study buildings every Wednesday for the duration of the study period.
- **Attend a Virtual Volunteer Orientation.** The orientation will provide an in-depth review of the monitoring protocol and the resources available to support your monitoring efforts.
- **Attend an In-Person Volunteer Field Training.** The field training will give you a chance to practice the survey protocol, develop an eye for detecting collision evidence, and provide you with on-the-ground experience of the route you will be surveying.

- **Pick up a monitoring kit** containing the supplies listed above in the Collision Monitoring Supplies section. These will be distributed at the field training.
- **Connect with your survey partner**, if you have been assigned one, to decide where and when you will meet on your first survey day.
- **If you (or both you and your partner) are unable to conduct the survey on the day of the week you have been assigned at any point during the study period, notify project staff.** Since we are trying to monitor each route approximately every 24 hours, BCS project staff will find someone who can fill in for you the day or days you will miss. It is not necessary to make up the day you miss by surveying on a different day, as other volunteers are assigned to the other days of the week.

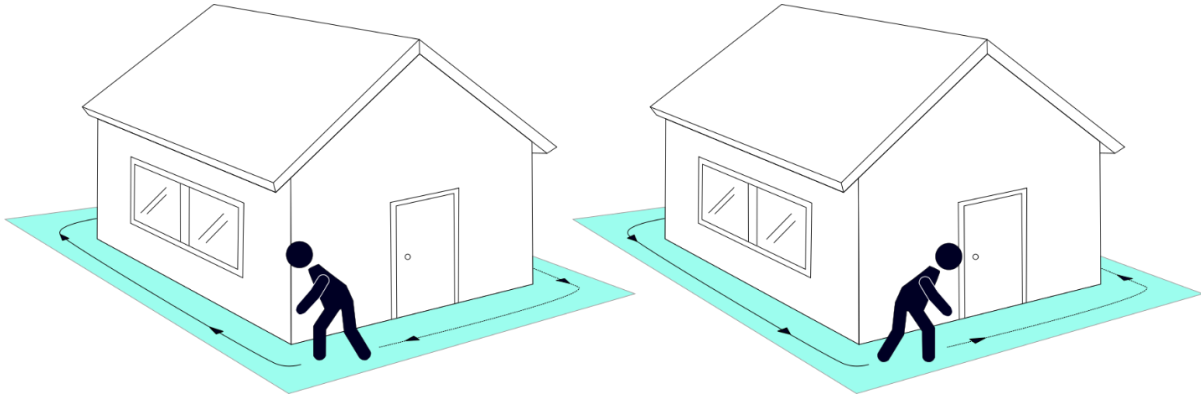
Survey Protocol

- 1) Arrive at a study building, move to a designated survey start location, and prepare for your survey.** If you are unsure where study buildings or start positions are located, consult the route map. Collect pre-survey data including surveyor names, the date, and weather conditions. Refer to the [“How to Complete the Data Sheet”](#) section of the handbook for additional details. Only one paper data sheet needs to be completed per pair, as partners are monitoring alongside one another.
- 2) Note the time you begin actively surveying on your datasheet and begin your search for collision evidence.**
- 3) Search for collision evidence.** Refer to the [“Types of Collision Evidence”](#) section if you need a reminder of the specific types of evidence you are looking for.
- 4) Move slowly and search thoroughly.** Walk slowly and focus your search within 6 feet of the building’s walls (Figure 1). When birds are dead or still, they are remarkably small and can be difficult to detect. Be sure to look under, within, and on top of any shrubs, sift through any ground cover like ivy. Birds often hide if they survive a collision. Check under ledges, gaps between buildings, and under steps or thresholds and other small spaces that might conceal a bird. The Cedar Waxwing in Figure 3 managed to wedge itself under a gap between a door and the ground. See the [Tips for Successful Monitoring](#) section below for more details.
- 5) Note any collision evidence at this time, but leave it in place until the survey is complete.**
- 6) If you find an injured bird, animal welfare is a priority.** Pause the survey (note time and length of pause) and refer to the [“What to Do if You Find an Injured Bird”](#) section below. Resume monitoring after completing injured bird protocol.
- 7) Make two passes around your building or study area** as shown in Figure 4 and Figure 5. To maximize the probability that you detect dead or injured birds if they are present, walk the perimeter of your building or study area two times. The second pass should be in the opposite direction from the first pass. If you find collision evidence, make sure to indicate on which pass

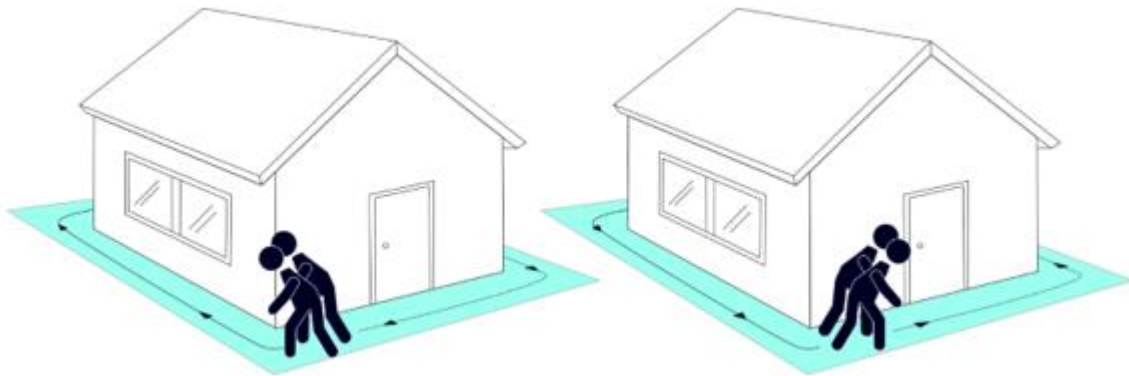


*(Figure 3): Cedar Waxwing.
Photo: Heidi Trudell*

(1 or 2) you detected each collision incident. Monitors assigned a partner should complete the survey as a pair, unless one surveyor is not available on one of the assigned survey days.



(Figure 4): Solo Collision monitors will complete one pass around study buildings in each direction.



(Figure 5): Working as a pair, collision monitors will complete one pass around study buildings in each direction.

- 8) **End the survey, note the end time of your active search and complete your datasheet.** Refer to the [“How to Complete the Data Sheet”](#) section of the handbook for additional details.
- 9) **Note your pause length, if any.** Please record the length of any pauses in your search efforts, whether to take a call, help an injured bird, or talk with someone who approached you during the survey. Tracking how long our volunteers are searching for birds helps us track “survey effort” at each building. Survey effort affects carcass detection rates and is important data.
- 10) **Indicate if you were able to complete a full survey.** If there was construction, impassable conditions or anything else that prevented you from completing the survey or a portion of the survey, please indicate how much of the survey area you weren’t able to survey in the notes section.
- 11) **Carefully check over the rest of your datasheet to ensure that all elements are filled out.** You will use the datasheet to report your findings on the online data form when you return home.
- 12) **Document and collect any evidence of collisions.** After you have searched the site and completed the datasheet, return to any collision evidence to document it. Fill out a Specimen

Information Card and place the specimen in a plastic bag. Fill out the online Collision Evidence Reporting form. Store the specimen in a refrigerator or freezer until you are able to deliver it to Birds Connect Seattle.

13) Repeat these steps for all buildings on the survey route.

14) Report the data you have collected as soon as possible when you return home. Use the datasheet and the specimen information card to report your findings on the online data form. See the "[How to Complete the Online Data Entry Form](#)" section below for more details.

Protocol for At Home Monitors

Preparation

1. **Attend a Prospective Volunteer Information Session if you are new to the Seattle Bird Collision Monitoring Project.** This session will provide you with background information about bird-window collisions, the history and goals of the project, details on what to expect as a volunteer for the upcoming season, next steps for participating and the opportunity to ask questions to determine if bird-window collision monitoring is the right fit for you.
2. **Attend a Virtual Volunteer Orientation.** The orientation will provide an in-depth review of the monitoring protocol and the resources available to support your monitoring efforts.
3. **Complete the Building and Yard Characteristics survey.** Your responses will help us investigate correlations between building/yard characteristics and collision risk. The survey will also help you identify which parts of your building you will be surveying, whether that is two facades of your duplex, your entire detached home, or the wall/windows above the deck of your apartment. **Designate one or more start/end point(s) for your surveys.**
4. **Choose a 7-day long "study period" during which you will conduct daily collision surveys.**
 - a. **Study periods should be at least one week long and fall entirely within the monitoring season.** For example, if the monitoring season is from September 15-October 29, you can start your study period any time between September 15 and October 22. Your final survey day should be no later than October 29. BCS project staff will let you know the start and end dates for each monitoring season.
 - b. **Make sure you can complete at least one survey per day during your study period.** The best time to survey may be between 8 am-12 pm or 3-7 pm (spring/fall)/2 pm-5 pm (winter) and ideally you will complete your surveys at approximately the same time every day. If you hear or see a bird strike a window at your building after you have already completed a survey for the day, please do an additional survey and record the data as you would for a normal survey.
 - c. **Your study period can be longer than one week if you wish.** You may also choose to monitor two or more non-consecutive study periods of at least a week throughout the season.
5. **Be prepared to access the Online Data Entry Form on your mobile device to record data during your surveys.** If you prefer to use paper datasheets, you can find printable datasheets on the [project webpage](#). Enter the data from your paper datasheet into the online data entry form as soon as possible after you have collected it.

If you are in the Seattle area and are able to collect specimens, ensure you fill out specimen information cards to accompany collision evidence. The cards are also available on the [project](#)

[webpage](#). You can also copy the information onto a blank sheet of paper to create your own specimen information card if you don't have access to a printer.

Survey Protocol

1. **Move to your designated survey start location and prepare for your survey.** Open the [Online Data Entry Form](#) on your mobile device or get out your paper datasheet. Complete the survey shift and weather, precipitation, and wind information before beginning.
2. **Note the time you begin actively surveying on your data entry form and begin your search for collision evidence.**
3. **Search for collision evidence.**
 - a. **Move slowly and search thoroughly.** Walk slowly and focus your search within 6 feet of the building's walls (Figure 1). When birds are dead or still, they are remarkably small and can be difficult to detect. Be sure to look under, within, and on top of any shrubs, sift through any ground cover like ivy. Birds often hide if they survive a collision. Check under ledges, gaps between buildings, and under steps or thresholds and other small spaces that might conceal a bird. The Cedar Waxwing in Figure 3 (above) managed to wedge itself under a gap between a door and the ground. See the [Tips for Successful Monitoring](#) section below for more details.
 - b. **Note any collision evidence at this time, but leave it in place until the survey is complete.**
 - c. **If you find an injured bird, animal welfare is a priority.** Pause the survey (note time and length of pause) and refer to the "[What to Do if You Find an Injured Bird](#)" section below. Resume monitoring after completing injured bird protocol.
 - d. **Make two passes around your building or study area.** To maximize the probability that you detect dead or injured birds if they are present, walk the perimeter of your building or study area two times. The second pass should be in the opposite direction from the first pass. If you find collision evidence, make sure to indicate on which pass (1 or 2) you detected each collision incident.
4. **End the survey, note the end time of your active search and complete your data entry form.** See the "[How to Complete the Online Data Entry Form](#)" section for more details.
 - a. Make sure you have noted the length of any pauses in your search efforts, whether to take a call, help an injured bird, or talk with someone who approached you during the survey. Tracking how long our volunteers are searching for birds helps us track "survey effort" at each building. Survey effort affects carcass detection rates and is important data.
 - b. The online data entry form will provide you with a link to report collision evidence. If you found collision evidence, don't forget to finish the basic data entry form after completing the Collision Evidence Reporting form.
5. **Document and collect any evidence of collisions.** After you have searched the site and completed most of the basic online data entry form, return to any collision evidence to document it. Fill out the online Collision Evidence Reporting form. Fill out a Specimen Information Card and place the specimen in a plastic bag. See the "[How to Document and](#)

[Collect Collision Evidence](#)” section below for more details. Deliver the specimen to the Birds Connect Seattle Nature Shop as soon as possible.

6. **Repeat the protocol every day at approximately the same time for at least 7 days.** Ideally, you will complete at least one survey every 24 hours for the duration of your study period. If you hear or see a bird strike a window at your building after you have already completed a survey for the day, please do an additional survey and record the data as you would for a normal survey.

Tips for Successful Monitoring

Visual scanning: Dead birds are difficult to see (Figure 6). While moving around a study building, don't let looking toward one direction let you miss something in the other. Take your time to ensure you are visually scanning the entire 6ft spread before continuing forward.

Pacing: While collision monitoring, set a pace for yourself that would mimic searching for your lost set of keys.

Dense vegetation: The search areas we are monitoring are a 6ft width from the side of the building. There may be variation in the substrate, from pure concrete to dense vegetation. Injured or dying birds may often move to a place to hide or may fall through a top canopy layer to the grass or vegetation beneath. To ensure that carcasses do not go undetected, it is important to search between and under plants. We do not expect you to search under every square inch of vegetation. However, lifting up or shifting leaves, checking beneath overhanging branches, and spreading vegetation can help detect hidden birds.



(Figure 6): *Passerine sp. on rock substrate.* Photo: Heidi Trudell.

How to Document and Collect Collision Evidence

1. **Remember to finish your survey before pausing to document and collect collision evidence, unless the collision evidence you have found is an injured bird.**
2. **Do not handle a dead or injured bird or any bird parts with bare hands.** Use gloves, an inverted plastic bag, shovel, or other barrier to move or pick up specimens. Wash your hands or use hand sanitizer immediately after handling bird carcasses. If you use hand sanitizer, wash your hands as soon as possible.
3. **Check to see if the bird was banded.** Sometimes a metal or plastic band has been placed on the bird's leg or (as in geese and swans) as a neck collar. Bands help researchers determine the age of birds, their migratory pathways, and their population trends. If you find a banded bird, please **record the band numbers, color combination if any, which leg the band was on, the date, time and location of your find along with its condition and report it to the Bird Banding Lab** <http://www.pwrc.usgs.gov/bbl/> or 1-800-327-BAND (2263) when you have a chance. They will contact you with details as to where the bird was original banded.
4. **Photograph the specimen or other collision evidence both up close to capture details about the evidence and from a distance to show the location of the evidence in relation to the building.** Use gloves, an inverted plastic bag, shovel, or other barrier to move or pick up specimens. It is helpful to place a ruler or other reference object next to the specimen for scale. Take several photographs of carcasses, feather piles and body parts to help with identification. If you find a whole carcass, take a photo of the back (dorsal surface), the belly (ventral surface), and the side of the bird (lateral aspect), and an "establishing shot" showing the location of the evidence in relation to the building, as shown in Figure 7. With blood smears, body smudges and dust imprints on the window of the building, only take a photo of the collision evidence if it is possible to do so while respecting the privacy of the people in the building. These types of collision evidence are extremely difficult to photograph in the first place and your written description, which you will submit in the Collision Evidence Reporting form, may be more useful than the photos you are able to take.

(Figure 7): Documenting photographs-Try to get an establishing shot showing the collision evidence in relation to the building (top left), as well as a shot of the ventral surface (bottom left), lateral surface (top right), and dorsal surface (bottom right) of the bird.

If your evidence is a bird part or feather pile, just establishing shot and a good, close up shot are sufficient.



5. **Determine if it makes sense to collect the collision evidence.** We prefer to have all the collision evidence found on route surveys collected. At-home monitors can use the following information to determine whether to collect the collision evidence.
 - a. Prioritize collecting specimens that would help with identification of a species you personally can't identify (whole birds, bird parts like wings or tails, or feathers with colors or patterns), or whole, fresh carcasses which would be good candidates for the Burke Museum and/or useful for the SBCMP (searcher efficiency trials or carcass persistence trials). The Seattle Bird Collision Monitoring Project will donate to the Burke Museum most intact, non-decomposed specimens discovered as part of our activities.
 - b. Consider whether you will be able to bring the specimen to Birds Connect Seattle in a timely manner. Ideally, collected specimens should be brought to the Birds Connect Seattle office (8050 35th Ave NE, Seattle, WA 98115) within 24 hours. However, Birds Connect Seattle Nature Shop is only open Tuesday-Saturday, 10 am-5 pm, so that won't always be possible. If you are outside the greater Seattle metro area, it probably doesn't make sense for you to collect specimens.
 - c. If you can't bring the specimen to our office but really think it is worth collecting, you can collect the specimen and contact BCS project staff to determine if specimen pickup is possible.
 - d. If the specimen is going to be in your possession for more than several hours, you should slow the decay of the specimen by placing it in a refrigerator or freezer until you are able to deliver it to Birds Connect Seattle. Don't collect specimens if you don't have a space in your refrigerator or freezer where you are comfortable keeping dead birds! We will store specimens brought to Birds Connect Seattle in our freezer and deliver it to the Burke when we are able.
6. **Complete and submit an online Collision Evidence Reporting form for each collision incidence. If you have decided to collect the specimen, fill out a Specimen Information Card.** See the ["How to Complete the Online Collision Evidence Reporting Form"](#) and ["How to Complete the Specimen Information Card"](#) sections for more details.
 - a. If you are going to collect the evidence, the information reported in the Collision Evidence Reporting form is largely the same as the information that goes on a Specimen Information Card, so it makes sense to record this data in both forms at the same time. You may also wish to report the bird on dBird.org at the same time.
 - b. At-Home monitors and survey route monitors who run out of the provided specimen information cards can download and print the Specimen Information cards [here](#) (this document is designed to produce 3 specimen information cards, printed double-sided, flipped on the long edge). You can also copy the information onto a blank sheet of paper to create your own specimen information card if you don't have access to a printer.
7. **If you have decided to collect the specimen, use gloves, an inverted plastic bag, shovel, or other barrier to place the specimen in a plastic bag.** Use gloves to carefully place the bird in a plastic storage bag, or place an inverted freezer bag over your hand and pull the bird into the bag as you turn it right-side-out. If possible, collect the specimen in a ziplock bag. Squeeze as much air as possible out of the bag without damaging the bird and seal. Then place the bagged evidence into a second plastic bag along with the Specimen Information Card. Squeeze as much air as possible out of the bag without damaging the bird and seal. Wash your hands or use hand sanitizer immediately after handling bird carcasses. If you use hand sanitizer, wash your hands

as soon as possible. If you are monitoring a survey route, complete the rest of the route, taking the specimen with you. At the end of your survey, please call the Birds Connect Seattle Nature Shop at 206-523-4483 to arrange specimen delivery. Deliver the specimen to the Birds Connect Seattle office (8050 35th Ave NE, Seattle, WA 98115) as soon as possible. The Birds Connect Seattle Nature Shop is open Tuesday-Saturday, 10 am-5 pm. If you can't bring the specimen to our office during those hours, contact BCS project staff to determine if specimen pickup is possible. Store collected specimens in a refrigerator or freezer to slow decay.

8. **If you decided not to collect the specimen, simply remove it from your search area so you won't run the risk of recounting evidence you have already reported.** If possible, place the specimen in a location where it can decompose or be scavenged, far enough from your search area that it is unlikely to return to your search area either through the work of scavengers or as feathers carried by the wind. If this doesn't seem possible, you will have to gather the specimen and any detached feathers and put them into a garbage or compost bin. Wash your hands or use hand sanitizer immediately after handling bird carcasses. If you use hand sanitizer, wash your hands as soon as possible.

What To Do If You Find an Injured Bird

If you find an injured bird, animal welfare is the priority. Do not assume a baby or juvenile bird is injured. Follow the protocol in the [“What to do if you find a baby bird”](#) section if you find a baby or juvenile bird. If you need guidance for handling or transporting an injured bird beyond the information provided below, call our friends at PAWS: 425-412-4040. You can also review this [Volunteer Orientation](#) recording for what to do with an injured bird.

1. **Pause your survey.** Note (mentally at the very least) the time you stop surveying. If you are close enough to the bird that it is displaying alarm, move a short distance away until you are ready to secure the bird following the appropriate protocols below.
2. **Take no more than one “establishing shot” photo** showing the location of the injured bird in relation to the building as collision evidence. It is okay to skip taking a photo.
3. **Prepare to secure the bird.** Assemble your materials and create a plan of approach before getting close to the bird. **Do not handle or attempt to move raptors.** Extreme caution and specialized equipment must be used in handling these birds. **If you discover an injured raptor, call PAWS to coordinate care: (425) 412-4040.**
4. **Get the injured bird secured.** In many cases, a stunned bird on the ground can be captured using your hands (following the protocols below for handling adult injured songbirds and adult injured woodpeckers). Once you have secured the bird, avoid peering into the container or checking on the bird. This panics the bird.
5. **Fill out a Specimen Information Card for the injured bird,** skipping any questions only relevant for dead birds. This will provide the rehabbers with crucial information about the bird for its care. If you were unable to identify the bird species while securing it in a safe transportation container (as described below), do not make additional attempts to identify the bird. The bird rehabilitators at PAWS will be able to provide that information later.
6. **Once the bird is secured, note the length of your pause and resume your survey.** If you are monitoring a route, carefully take the bird, in its secure container, with you. If you are working with a partner and the weather is inclement, consider if one person can transport the bird while

the other finishes the route alone. If you are at home, find a safe, warm place inside and out of reach of pets and children to leave the bird in its secure container. An injured bird is collision evidence, so you will need to follow the steps for documenting collision evidence at the end of the survey.

7. **Take the bird to the PAWS Wildlife Rehabilitation Center** (15305 44th Ave W, Lynnwood, WA 98087) as soon as possible. When possible, they appreciate being called in advance at 425-412-4040. If you are unable to take the bird there yourself, contact BCS project staff to arrange transportation.

Protocol for handling adult injured songbirds:

1. Gather materials including a paper bag, cloth to line the bag, gloves to handle the bird with, a light towel, binder clips, and a Specimen Information Card or a piece of paper.
2. Put on the gloves and open the paper bag. Put a piece of cloth at the bottom of the bag. This gives perching birds something to hold onto. Have a binder clip ready. Leave the prepared bag nearby and take the light towel with you as you approach the bird.
3. Try to approach the bird quietly from behind (as long as you are not scaring it into the glass). Most birds have a blind spot right at the back of their heads. If you can, crouch as you approach to lessen the chance of scaring the bird.
4. Move your hand toward the bird from behind, and slightly above the bird. Cover the bird's back and grasp it in the bander's grip (discussed below). Or, toss the light towel over the bird. Grab the bird quickly and gently and place your entire hand in the paper bag.
5. Close the bag around your hand and gently release the bird into the bag.
6. Remove your hand and the towel slowly and carefully and fold over the top of the bag. Use a binder clip to secure the top of the bag.
7. Avoid peering into or checking on the bird. This panics the bird.
8. Enter the bird's information on a Specimen Information Card or a piece of paper and make sure the information travels with the bird. It is important for rehabbers to have as much information about the bird as possible for its care.
9. Once the bird is secured, you can resume your survey.
10. Take the bird to the PAWS Wildlife Rehabilitation Center (15305 44th Ave W, Lynnwood, WA 98087) as soon as possible. When possible, they appreciate being called in advance at 425-412-4040. If you are unable to take the bird there yourself, contact BCS project staff to arrange transportation.

Protocol for handling injured adult woodpeckers:

1. Gather materials including a cardboard box just large enough to fit the woodpecker comfortably, cloth to line the box, gloves to handle the bird with, a light towel, string to tie the box closed, and a Specimen Information Card or a piece of paper.
2. Put on gloves and prepare the box. Leave the prepared bag nearby and take the light towel with you as you approach the bird.

3. Try to approach the bird quietly from behind (as long as you are not scaring it into the glass). Most birds have a blind spot right at the back of their heads. If you can, crouch as you approach to lessen the chance of scaring the bird.
4. Toss a light towel over the bird. Grab the bird quickly and gently and place your entire hand into the box.
5. Close the box around your hand and gently release the bird into the box.
6. Remove your hand and the towel you had thrown over the bird slowly and carefully and close the box. Secure it by carefully tying string around the box, without jostling the box and its inhabitant too much.
7. Avoid peering into or checking on the bird. This panics the bird.
8. Enter the bird's information on a Specimen Information Card or a piece of paper and make sure the information travels with the bird. It is important for rehabbers to have as much information about the bird as possible for its care.
9. Once the bird is secured, you can resume your survey.
10. Take the bird to the PAWS Wildlife Rehabilitation Center (15305 44th Ave W, Lynnwood, WA 98087) as soon as possible. When possible, they appreciate being called in advance at 425-412-4040. If you are unable to take the bird there yourself, contact BCS project staff to arrange transportation.

Protocol for injured raptors (owls, hawks, eagles, etc.):

1. **DO NOT HANDLE INJURED RAPTORS.**
2. Call PAWS to coordinate care for the bird. (425) 412-4040

What to do if you find a baby bird

1. If you see a fully feathered bird hopping around that does not seem to be able to fly, it is a fledgling. Leave it on the ground and keep dogs, cats, and people away from it. Its parents will come back to feed it.
2. If the baby is not fully feathered and cannot hop, then it is a nestling and should be returned to its nest if possible.
3. If the whole nest has fallen off, put the babies back in it and place the nest back where it was (or in the upper branches of a nearby shrub).
4. If you must take the baby (because of a hazardous environment or visible injury), place it in a paper bag with an unscented tissue or soft cloth at the bottom. Take the bird to the PAWS Wildlife Rehabilitation Center (15305 44th Ave W, Lynnwood, WA 98087) as soon as possible. When possible, they appreciate being called in advance at 425-412-4040. If you are unable to take the bird there yourself, contact BCS project staff to arrange transportation.

How to Complete the Datasheet

BIRD-WINDOW COLLISION SURVEY RECORDING FORM

Seattle Bird Collision Monitoring Project

YOUR NAME: _____

DATE: ____/____/____
MM DD YYYY

PARTNER NAME: _____

BUILDING: _____

| | | | | |
|----------------|-------|---------------|----------|--------|
| Weather: | Clear | Partly cloudy | Overcast | Fog |
| Precipitation: | Rain | Hail/Sleet | Snow | None |
| Wind: | Calm | Light | Moderate | Strong |

Start time: _____

End time: _____

Length of all pauses: _____

Were you able to complete a full survey? NO YES (if no, describe in notes)

Did you find evidence of bird-window collisions? NO YES

Survey notes:

BUILDING: _____

| | | | | |
|----------------|-------|---------------|----------|--------|
| Weather: | Clear | Partly cloudy | Overcast | Fog |
| Precipitation: | Rain | Hail/Sleet | Snow | None |
| Wind: | Calm | Light | Moderate | Strong |

Start time: _____

End time: _____

Length of all pauses: _____

Were you able to complete a full survey? NO YES (if no, describe in notes)

Did you find evidence of bird-window collisions? NO YES

Survey notes:



(Figure 8): An example datasheet.

Fully completing and then promptly submitting the datasheet is essential for this project. We prefer that surveyors on the survey routes use paper datasheets to ensure we have written records to refer back to if any questions come up during data analysis or if online data entry doesn't work properly.

Your name: Please write your name as you'd like to be identified as a volunteer. Please be consistent.

Survey Partner Name: If you are monitoring with a partner, please write their name in this field. Only one paper data sheet needs to be completed per pair, as partners are monitoring alongside one another. If you are monitoring solo, please write N/A.

Date: The month, day, and year on which the survey occurred.

Building Name: Record the name of the building you are surveying.

Weather: Circle the weather conditions that match your observations according to the following definitions.

Meteorological definitions of weather data:

Clear: Sky condition of less than 1/10 cloud coverage.

Partly Cloudy: Sky condition when between 3/10 and 7/10 of the sky is covered.

Overcast: Sky condition when greater than 9/10 of the sky is covered.

Fog: Water droplets which are suspended in the air near the Earth's surface and causing reduced visibility.

Meteorological definitions of precipitation data:

Rain: Precipitation of liquid water particles.

Hail/Sleet: Hail is precipitation of dense ice at least 5 millimeters in diameter. Sleet is precipitation of frozen rain drops.

Snow: Precipitation of frozen water particles.

None: No precipitation of water particles.

Meteorological definitions of wind data:

Calm: The absence of apparent motion in the air. Smoke rises vertically with little if any drift.

Light: Wind felt on face. Leaves rustle and small twigs move. Ordinary wind vanes move.

Moderate: Wind moves small branches. Wind raises dust and loose paper from the ground and drives them along.

Strong: Large branches in continuous motion. Whistling sounds heard in overhead or nearby power and telephone lines. Umbrellas used with difficulty.

Start Time and End Time: Please look at your watch or cellphone just prior to beginning a survey and just after finishing. Note each time on the datasheet. This allows us to keep track of "survey effort," or how much time we are out in the field searching for carcasses. Tracking how long our volunteers are searching for birds helps us track "survey effort" at each study building. Survey effort affects carcass detection rates and is important data.

Length of all Pauses: Make sure you note the length in minutes of any pauses in your search efforts, whether to take a call, help an injured bird, or talk with someone who approached you during the survey. The length of any pauses will be subtracted from the survey time when calculating "survey effort."

Were you able to complete a full survey? Check yes or no. If there was construction, impassable conditions or anything else that prevented you from completing the survey or a portion of the survey, please indicate how much of the survey area you weren't able to survey in the notes section.

Did you find evidence of any bird-window collisions? Check yes or no. If you check yes, make sure you collect the evidence, fill out a specimen information card and fill out the online collision evidence reporting form.

Survey Notes: Add any additional information that might be helpful to know about the survey or any specimens you found, including on which pass you found the specimen.

How to Complete the Specimen Information Tag

Complete the Specimen Information Tag with a pencil or non-running ink. Specimen Information Tags should travel with the specimen, whether it is an injured bird, a bird carcass, bird parts or feathers. An example of the Specimen Information Tag is below.

You may also copy the information onto a blank sheet of paper to create your own specimen information card if you don't have access to a printer.

| BIRD CARCASS | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Specimen Information Collected date: _____ Collected time: _____ Species: _____ Cause of death: _____ Sex: Female / Male / Unknown Decay level: Fresh / Active / Dry Remains Collected during SBCMP survey? <input type="checkbox"/> Yes <input type="checkbox"/> No Reported to dBird.org? <input type="checkbox"/> Yes <input type="checkbox"/> No | Location information Address: _____ _____ _____ Latitude: _____ Longitude: _____ Detailed description: _____ | Collector information Name: _____ Phone: _____ Email: _____ |
| Notes | | |

(Figure 9): An example specimen information card.

Collected Date: The month, day, and year on which the specimen was collected. Best practice is to write out the name of the month, as in "September 20, 2024."

Collected Time: Note the time you discovered the specimen.

Species: If you are able to identify the carcass, note the species. Even more general identifications can be helpful, like gull or sparrow. If you are uncertain, leave the field blank. Note any guesses in the Notes section.

Cause of Death: Record the cause of death if it is known or suspected. Unless you saw the bird die, you will not be able to answer this question with complete certainty, but there are certain types of evidence that suggest certain causes of death more than others. The evidence you see, whether or not it seems strong enough to identify a cause of death, can be written down in the Notes section. During SBCMP surveys, we consider finding a dead or injured bird or bird parts or a feather pile within 6 feet of a building to be evidence that the death was caused by a window/building collision. dBird.org lists the following as possible human-related causes of bird mortality:

- Cat attack
- Collision with building/structure
- Entanglement
- Fell out of nest
- Vehicle collision
- Other

Other causes of death may include predation, disease, electrocution, poisoning. For injured birds, this can be replaced with the cause of injury if known or suspected.

Sex: Some species exhibit strong sexual dimorphism, allowing easy sex ID, others require greater knowledge or practice to distinguish female from male, and some cannot be distinguished by external features. If you are unsure, leave blank.

Decay Level: There are three levels of decay, fresh, active and dry remains.

Fresh:

- No apparent physical signs of decomposition.
- Little release of fluids.
- Flies may be looking for place to lay eggs.



(Figure 10): Example of a fresh bird carcasses. Often will appear as if the bird is sleeping. Sometimes feathers will be out of place.

Active decay

- Maggot/insect activity at its peak. Tissues begin to liquefy--increased release of fluids, exposure of internal organs.
- Maggots have migrated, putrefaction will almost be complete. Carcass will be mostly feathers, skin, and bone.



(Figure 11): Example of an Orange-crowned Warbler in active decay. Notice insect activity (ants) around the eye.



(Figure 12): Example of an Orange-crowned Warbler in a more advanced state of active decay. Insect activity stopped, mostly bones and feathers, but still some soft tissue remaining.

Dry Remains

- No soft tissue left. Remains are dry and consist only of feathers and bone.



(Figure 13): Dry remains of a Cooper's Hawk. Feathers and bone only, no soft tissue remaining.

Collected During SBCMP Survey? Check yes if the specimen was found in the study area of the buildings on your route or at your home. Check no if the specimen was found outside the study area or by a building that is not a study building on your route, even if you found the specimen while conducting a SBCMP survey.

Reported to dBird.org? Check yes or no. We encourage you to submit a report to dBird.org.

Location Address: Include the name of the building if the bird's death seems connected to the building features.

Latitude and Longitude: You can generate latitude and longitude coordinates by pressing and holding on the location you want coordinates for in Google Maps on your smart phone.

Detailed Description: Describe the specific location you found the specimen, the more precise, the better. Include information like the distance the specimen was from the window, the façade it was found by and any other information that would help identify exactly where the specimen was found.

Collector Name, Phone Number, Email Address: Please write your name as you'd like to be identified as a volunteer. Please be consistent across forms. Include the phone number and email address that are

the best for contacting you at in case someone handling the specimen in the future needs to follow up about the specimen.

Notes: Any other notes that may be useful, including surrounding habitat, behavior before death if observed, etc.

How to Complete the At-Home Online Data Entry Form

Fully completing and then promptly submitting the online data entry form is essential for this project. If just using the online data entry form, we encourage you to open the Online Data Entry Form on your mobile device and complete the survey shift and weather, precipitation, and wind information immediately prior to beginning your survey and finish it immediately following the end of your search time. If you are using a paper datasheet first, we encourage you to complete the datasheet and then enter the data you have gathered into the online data entry form as soon as possible!

The At-Home Online Data entry form should look similar to the accompanying images when opened on a phone. The online form should provide you with clear directions on how to fill out each line, but some additional information is included below relating to each data item.

Survey Shift Information

Survey Date: The month, day, and year on which the survey occurred.

Surveyor Name: Please write your first and last name as you'd like to be identified as a volunteer. Please be consistent.

Survey Partner Name: If you are monitoring with a partner, please write their name in this field. Only one data entry form needs to be submitted per pair, as partners are monitoring alongside one another. If you are monitoring solo, please write "solo" on this line.

Building Address: Type in the address of the building you are surveying. This line will eventually auto fill and you will need to click on the location address that matches your building that the form provides.

SBCPM At Home Online Data Entry Fo...

Thank you for volunteering with the Seattle Bird Collision Monitoring Project.

We encourage you to enter your field data as soon as possible after completing a monitoring survey.

Remember to complete a data entry form for each day that you survey, even if you do not detect any evidence of collision.

THANK YOU!

Next

Page 1 of 3

SBCPM At Home Online Data Entry Fo...

Survey shift information

Survey Date*

Surveyor Name*

Enter your first and last name.

Survey Partner Name*

Enter the first and last name of your survey partner. If no partner, enter "solo".

Building address*

Enter the address of the building you monitored.

Back Next

Survey Specifics

Weather: Select the weather conditions from the drop-down menus for Weather, Precipitation and Wind that match your observations according to the following definitions.

Meteorological definitions of weather data:

Clear: Sky condition of less than 1/10 cloud coverage.

Partly Cloudy: Sky condition when between 3/10 and 7/10 of the sky is covered.

Overcast: Sky condition when greater than 9/10 of the sky is covered.

Fog: Water droplets which are suspended in the air near the Earth's surface and causing reduced visibility.

Meteorological definitions of precipitation data:

Rain: Precipitation of liquid water particles.

Hail/Sleet: Hail is precipitation of dense ice at least 5 millimeters in diameter. Sleet is precipitation of frozen rain drops.

Snow: Precipitation of aggregated ice crystals forming flakes.

None: No precipitation of water particles.

Meteorological definitions of wind data:

Calm: The absence of apparent motion in the air. Smoke rises vertically with little if any drift.

Light: Wind felt on face. Leaves rustle and small twigs move. Ordinary wind vanes move.

Moderate: Wind moves small branches. Wind raises dust and loose paper from the ground and drives them along.

Strong: Large branches in continuous motion. Whistling sounds heard in overhead or nearby power and telephone lines. Umbrellas used with difficulty.

Start Time: This is the last line you should complete before beginning your search. The start time will auto fill when you first open the form. Please adjust the start time to when you actually begin your search. Clicking the line to edit the auto filled time produces a clock face that you move the hour and minute hands on to adjust the time. This is not necessarily the most user-friendly part of the form. Clicking the little keyboard icon in the bottom left corner of the clock screen will take you to a more standard screen where you can type in the time.

End Time: This is the first line you should complete after completing your search. Clicking the line to add a time

Survey specifics

Weather*

...

Precipitation*

...

Wind*

...

Start Time*

🕒 12:46 PM

End Time*

🕒

Duration of all pauses (minutes)*

If you did not pause, enter 0.

123

will generate the same clock, but it will be set to the current time, so if you are completing the form around your survey, you can simply select the “Set” button in the bottom right corner of the clock screen. Ensuring your start and end times are accurate allows us to keep track of “survey effort,” or how much time we are out in the field searching for carcasses. Tracking how long our volunteers are searching for birds helps us track “survey effort” at each study building. Survey effort affects carcass detection rates and is important data.

Duration of all Pauses (minutes): Make sure you note the length in minutes of any pauses in your search efforts, whether to take a call, help an injured bird, or talk with someone who approached you during the survey. The length of any pauses will be subtracted from the survey time when calculating “survey effort.”

Were you able to complete a full survey? Select Yes or No. As the description explains, sometimes it is not possible to complete a full search due to weather, ground conditions, construction etc. If you answer No, please describe the reasons in the “Final Comments” Section.

Did you find any evidence of collisions during your survey? Select Yes or No. If you select No, when you move to the next page, it will have a box for Final Comments. If you select Yes, an additional page of the form will appear.

Evidence of collisions

How many collision incidents does the evidence suggest? Enter the number of collision incidents you believe you have found evidence for. Refer to the [Types of Collision Evidence](#) section for more details about what counts as one collision incident.

Collision Evidence Reporting Form: Click on the link to go to the Collision Evidence Reporting Form. Go to the How to Complete the Online Collision Evidence Form section for more details on that form. Fill out the Collision Evidence Reporting Form for each collision incident you found. Don’t forget to return to the data entry form after completing the Collision Evidence Reporting form(s) to finish the last question on the Online Data Entry Form.

Did you complete the Collision Evidence Reporting Form for each collision incident you detected? Select Yes or No. If you select No, the next screen will again prompt you to complete the Collision Evidence Reporting Form. If you select Yes, you will be directed to the final page of the form.

Were you able to complete a full survey?*
Reasons why we cannot always complete a full search include blocked access due to weather, ground conditions, materials or people blocking the search area, safety concerns, etc.

If you answer no, please describe in the “Final Comments” section.

Yes

No

Did you find any evidence of collisions during your survey?*

Yes

No

SBCPM At Home Online Data Entry Fo...

Evidence of collisions

How many collision incidents does the evidence suggest?

12³

Please complete the Collision Evidence Reporting Form before moving on.
[CLICK HERE TO JUMP TO COLLISION EVIDENCE REPORTING FORM](#)

Did you complete the Collision Evidence Reporting Form for each collision incident you detected?

Yes

No

Final Comments: Any other notes that may be useful, including surrounding habitat, behavior before death if observed, etc. Remember to include the reasons you were unable to complete the full survey and notes about any pauses you took.

Final Comments

Any other notes or comments relevant to the survey?

1000

Back Submit

Page 4 of 4

How to Complete the Online Collision Evidence Reporting Form

If you find evidence of a collision, use the Specimen Information Card and the Online Collision Evidence Reporting form to record data about the collision evidence you found.

The Online Collision Evidence Reporting form should look similar to the following images when opened on a phone. The online form should provide you with clear directions on how to fill out each line, but some additional information is included below relating to each data item.

Survey details

Survey Date: The month, day, and year on which the survey occurred. This should be the same as the date you entered on the associated datasheet and online data entry form.

Surveyor Name: Please write your first and last name as you'd like to be identified as a volunteer. Please be consistent. This should be the same as the name you entered on the associated datasheet and/or online data entry form.

Survey Partner Name: If you are monitoring with a partner, please write their name in this field. Only one data entry form needs to be submitted per pair, as partners are monitoring alongside one another. If you are monitoring solo, please write "solo" on this line. This should be the same as the answer you entered on the associated datasheet and/or online data entry form.

Seattle Bird Collision Monitoring Project

Please complete a separate survey for each collision incident you have detected.

For example, if you found two bird carcasses, you would complete two of these surveys, one for each carcass.

But if you found one carcass and a blood smear on a window above the dead bird, you would complete a single survey, as we would assume the two pieces of evidence (the carcass and the blood) are related to the same collision incident.

Next

Collision Evidence

Evidence Type: Select one or more of the listed options that best describe the types of collision evidence you found. It is possible multiple types of evidence are present for a single collision incident, but usually there will just be one.

Species: If you are able to identify the carcass, note the species. Even more general identifications can be helpful, like gull or sparrow. If you are uncertain what it might be, but have a guess, you can add that guess as a note in the Notes section.

Species
If you can identify the bird species, please share the common name here. Otherwise, leave blank.

Description of the collision evidence*
Please describe the evidence in as much detail as possible.

Bird Status*

Dead

Injured

Bird Status: Bird status refers to whether the bird is dead or injured following the collision. Choose “injured” if you can’t find the bird after seeing or hearing a collision or if you have found feathers stuck to the window, blood smears, body smudges or dust imprints without additional physical evidence of the bird.

Decay Level: There are three levels of decay, fresh, active and dry remains. See fuller discussion of decay levels in “Specimen Information Tag” section.

On which pass around the building did you first detect the evidence? Select On the first pass or on the second pass.

Seattle Bird Collision Monitoring Proje...

Collision Evidence

Evidence Type*

Select the choices that best describes the type of collision evidence you found. It is possible multiple types of evidence are present for a single collision event, but usually it will just be one.

bird

bird part (e.g., leg, wing)

feather pile

feather on window

blood smear

body imprint

saw the collision occur

heard the collision occur

Description of the collision evidence: Describe the collision evidence with much detail as possible. If you are unable to collect the specimen, this information will be very important for understanding what evidence you found.

Level of decay*

Select NA if the bird status was injured.

Fresh

Active

Dry remains

NA

On which pass around the building did you first detect the evidence?*

On the first pass

On the second pass

Building aspect: This is the compass direction of the side of the building where you found the collision evidence (e.g. north, southeast etc.)

Where exactly did you find the evidence? Drop a pin on the map to show the location where you found the collision evidence. Try to be as precise as possible.

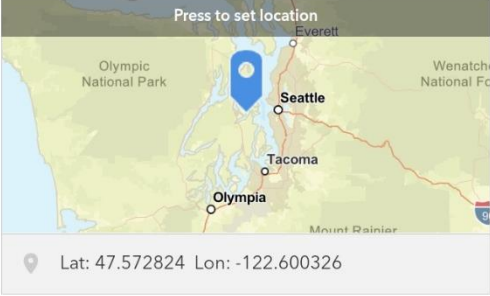
Photographs: There is space to attach up to four photographs of the collision evidence. When possible, include a ruler in the photographs to indicate the scale of the image. For all types of evidence, take an establishing shot of where the evidence was found in relationship to the building. For a bird carcass, take three close-up shots of the carcass, one each of the back (dorsal surface), the belly (ventral surface), and the side of the bird (lateral aspect). For bird feathers or parts, take close up photos of the feathers or parts as they were found in a pile or spread out. If necessary to get a clear sense of what part is being photographed, or to better display feathers with colors and patterns that might help with identification, gather the parts or feathers and take additional photographs of them arranged on a surface that makes them more visible. With blood smears, body smudges and dust imprints on the window of the building, only take a photo of the collision evidence if it is possible to do so while respecting the privacy of the people in the building.

Building aspect*

This is the compass direction of the side of the building where you found the collision evidence (e.g., north, south, east, southeast)

Where exactly did you find the evidence*

Drop a pin on the map to show the location where you found the collision evidence. Try to be as precise as possible.



Press to set location

Lat: 47.572824 Lon: -122.600326

Seattle Bird Collision Monitoring Proje...

Photographs

Please provide up to four photographs of the collision evidence.

For carcasses, please try to provide

- an establishing shot showing the carcass position relative to building;
- a photo showing the ventral (stomach) surface of the body;
- a photo showing a lateral (side) surface of the body; and
- a photo showing the dorsal (back) surface of the body.

Photo (1)


Drop image here or select image 

Photo (2)



Drop image here or select image 

Photo (3)

Drop image here or select image 

What to do if you find a dead or injured bird before or after outside of an official survey

You may discover a dead or injured bird as you walk between study buildings or as you go about your daily life. If so, we ask that you please report it at dBird.org. You do not need to complete a datasheet.

If the bird is dead, intact, and not decomposed, you may wish to collect it for use in Birds Connect Seattle training purposes or for the Burke's collection. If so, use the Tag and Bag protocol above and please contact the Birds Connect Seattle Nature Shop (206-523-4483). However, this is not an expectation.

If the bird is injured, you may wish to transport it to PAWS for care. Note that outside of collision monitoring surveys, Birds Connect Seattle cannot assist with injured bird transportation.

Frequently Asked Questions

What should I do if I can't survey on one of my assigned days?

If you (or both you and your partner) are unable to conduct the survey on the day of the week you have been assigned at any point during the study period, notify Birds Connect Seattle project staff. Since we are trying to monitor each route approximately every 24 hours, the BCS project staff will find someone who can fill in for you the day or days you will miss. It is not necessary to make up the day you miss by surveying on a different day, as other volunteers are assigned to the other days of the week.

What should I do if I need to edit a data sheet I already submitted?

At this time, volunteers cannot edit online data forms after they have been submitted. Please email project staff to explain what changes should be made.

What do I do if I find a dead bird, bird parts or a feather pile?

If you find a dead bird or other collision evidence while completing your search at a survey building, note the collision evidence at the time you discover it, but leave it in place until the survey is complete. Once you have completed the survey, return to the collision evidence to document and collect it.

What do I do if I find an injured bird?

The bird's welfare is the priority. Pause your survey to help the bird. Make sure you note how long you pause your survey for.

Should I count this smudge on the window?

Only count a smudge on the window if it was clearly made by a bird that hit the window. Blood, dust prints that show the shape of wings or tail or feather texture, and smudges that have feathers stuck to the glass in or near them are the best evidence that a smudge on the window was produced by a bird hitting the window.

I'm an at-home monitor and I already completed my survey, but I heard a collision, what should I do?

If you hear or see a bird strike a window at your building after you have already completed a survey for the day, please do an additional survey and record the data as you would for a normal survey.

At a Glance

The Collision Monitoring Protocol

1. **Arrive at a study building, move to a designated survey start location, and prepare for your survey.**
2. **Note the time you begin actively surveying on your datasheet and begin your search for collision evidence**, including dead or injured birds found within six feet of a building's walls (these birds are assumed to have collided with the building unless there is evidence of a different cause of mortality or injury), bird parts or an obvious feather pile (more than 10 feathers) within six feet of the building, a bird feather stuck to a window of a study building, a blood smear, body smudge or dust imprint on the window of a study building, and seeing or hearing a bird strike a window of a study building.
3. **Move slowly and search thoroughly, noting** any collision evidence you find, but leaving it in place until the survey is complete.
4. If you find an injured bird, pause the survey (note time and length of pause) and take care of the bird. Resume monitoring after completing injured bird protocol.
5. **Make two passes around each study building walking in opposite directions.**
6. **End the survey, note the end time of your active search and complete your datasheet.**
7. **Return to document and collect any evidence of collisions.**
8. **Repeat these steps for all buildings on the survey route.**

Collect and Document Collision evidence

1. **Remember to finish your survey before pausing to document and collect collision evidence, unless the collision evidence you have found is an injured bird.**
2. **Do not handle a dead or injured bird or any bird parts with bare hands.** Use gloves, an inverted plastic bag, shovel, or other barrier to move or pick up specimens. Wash your hands or use hand sanitizer immediately after handling bird carcasses. If you use hand sanitizer, wash your hands as soon as possible.
3. **Check to see if the bird was [banded](#).** If it was, **record the band numbers, color combination if any, which leg the band was on, the date, time and location of your find along with its condition and report it to the Bird Banding Lab**
4. **Photograph the specimen or other collision evidence both up close on the ventral, dorsal and lateral sides to capture details about the evidence and from a short distance away to show the location of the evidence in relation to the building.**

5. **Determine if it makes sense to collect the collision evidence.** We prefer to have all the collision evidence found on route surveys collected. At-home monitors can use the following information to determine whether to collect the collision evidence.
6. **Complete and submit an online Collision Evidence Reporting form for each collision incidence. If you have decided to collect the specimen, fill out a Specimen Information Card.**
7. **If you have decided to collect the specimen, use gloves, an inverted plastic bag, shovel, or other barrier to place the specimen in a plastic bag. Attach the specimen information card to the bag. Deliver the specimen to the Birds Connect Seattle Nature Shop as soon as possible.**
8. **If you decided not to collect the specimen, simply remove it from your search area so you won't run the risk of recounting evidence you have already reported.**

References

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