



## Powell Butte Nature Park Grassland Bird Surveys

### Project Overview

[Conservation InSight](#) is collaborating with the [Johnson Creek Watershed Council](#) and [Portland Parks & Recreation](#) on a Community Science project to collect data on the bird community and composition at [Powell Butte Nature Park](#) (PBNP). By participating in this project, volunteers will help us understand the composition and abundance of landbirds (i.e., passerines and raptors) using restored habitat at PBNP. This Community Science project was implemented to engage the community with other scientific research being conducted by Conservation InSight at PBNP studying the effects of restoration actions on grassland bird populations at the Nature Park. While the focus of our research at PBNP is on grassland birds, other avian guilds are also expected to benefit from restoration actions conducted by Portland Parks & Recreation. Thus, data collected by volunteers will help inform management on impacts to the overall landbird population at the Nature Park.

Volunteers will be asked to walk on predetermined survey routes (i.e., line transects; see our **Survey Route Map** below) and record all birds encountered following established protocols (see our **Grassland Bird Survey Protocol** below). Data will be collected using the free [Cornell Lab of Ornithology](#) bird listing application [eBird](#) – all volunteers will be asked to create a free eBird account to participate in our surveys. See our **Entering eBird Data** guide (copy attached) to learn how to enter your data for our Community Science bird surveys. (Note: If you do not have a cell phone you can still participate in the surveys – we will pair you up with someone who can record the data in eBird for your survey group.)

Although we are asking volunteers to collect data for all birds encountered on a survey, we are most interested in getting data on grassland bird species (e.g., Western Meadowlarks and Savannah Sparrows). Since these species can be difficult to identify an identification guide is included in this document; we will also be providing useful tips during our training sessions. When conducting your surveys, try to focus a bit more effort on searching the grassland habitat along your route. It will be easy to get distracted by forest species on some routes (e.g., along Pipeline Lane) – so just remember to also watch (and listen to) the prairies while you walk!

**Our commitment:**

- Provide training and scheduling for surveyors
- Supporting your experience, including technical support
- Share the results

**Your commitment:**

- Attend two training sessions (dates and times to be announced): 1) Virtual Training – Survey Orientation; 2) Field Training at Powell Butte Nature Park. The Virtual Training is required for all volunteers; the Field Training is required for any volunteers who did not participate in surveys during the prior year.
- With a partner, complete 2-3 surveys each on 2-3 different days. Each survey takes about 30 minutes, so the total surveying time is 2-4 hours. Surveying includes walking survey routes and recording your bird sightings using the online data platform eBird.

**Preparation**

- Create an eBird account on the website [www.ebird.org](http://www.ebird.org) (*remember your username*).
- Email your eBird username to Dr. Tom Virzi at [tvirzi@conservationinsight.org](mailto:tvirzi@conservationinsight.org). Tom will use this to share the survey routes with you so they will be available to you through eBird. PLEASE DO THIS AT LEAST 48 HOURS BEFORE THE FIELD TRAINING SESSIONS.
- Download the eBird app on to your mobile phone. (Remember: Let us know if you do not have a cell phone and we will ensure that you are paired up with someone who can record the data in eBird for your survey group.)
- Read through the Powell Butte bird survey eBird help guide (emailed as a separate document).
- Read through this guide and familiarize yourself with the birds you're likely to see/hear (see list at the end of this document).
- If interested, the following 3 mobile apps are great aids for identifying birds during your survey: "Merlin Bird ID", "Sibley", or "iBird Pro Guide to Birds". However, we recommend against using Merlin's AI feature to identify birds for you during surveys.
- Please have your personal calendar ready at the orientation session. We will be doing signups for the surveys at that time.

**Safety**

You will be surveying on established trails within Powell Butte Nature Park, a public park managed by Portland Parks & Recreation. Most of these trails are graveled and have a gentle slope (0-5% grade).

- Please stay on the trails to avoid trampling vegetation and disturbing ground-based wildlife.
- Although dogs on leash are allowed in the park, we ask that you not bring them on the surveys. This will help maximize the number of birds you see and hear.
- If you encounter any park visitors with off-leash dogs or exhibiting other behavior you know/think is not permitted in the park, please do NOT challenge them. You can report it later. Occasionally we run into aggressive people and we'd prefer to avoid confrontations.
- We anticipate rain/inclement weather during the spring months. Unless you feel the weather poses a safety risk, please survey even in light rain.

## Travel & Location

The main entrance to Powell Butte Nature Park is located at SE Powell & 162<sup>nd</sup>. The address, for mapping purposes is 16160 SE Powell Blvd, Portland, OR 97236. Turn south at this intersection and drive to the top of the hill and park near the Visitor Center. We will meet at the Visitor Center for the Field Trainings at Powell Butte.

The main gate to the park opens at 7:00 a.m. If you arrive for your surveys earlier than 7:00, you will need to walk up the hill (~0.3 mi) or drive to the Anderegg Loop trailhead on the east side of the park and walk to your survey route from there (easier). For directions to this trailhead, refer to the map at the end of this document.

## Preparing for the Surveys

*Partners.* We prefer that you conduct surveys with a partner. Occasionally a single surveyor may miss a sighting or song/call, so a pair of surveyors can often get more complete data. We realize that coordinating schedules may be difficult, but for data consistency and field safety we prefer that surveys are always conducted with a partner. We will be filling in our names on a chart during the orientation as the method of scheduling the entire 10 weeks.


*Transects.* There are five transects in this project. Each transect is about 0.6 miles, a distance we'd like to have you complete in 30 minutes. This distance & time has been chosen to provide complete coverage to make optimal use of your time. We'd like to have you sign up to survey at least 2 transects each time you visit (1 hour total). If you'd like to do more, great!

You will notice that each of the five transects have two numbers in the name, such as the "8-37" in the "Powell Butte--Pipeline Lane (8-37)" transect. These numbers correspond with the beginning and ending trail map junction numbers, identified on the waist-high yellow metal trail junction markers. These serve as field markers to help confirm you're at the right location. When you choose your transect on eBird, confirm you're on the right transect by looking at the yellow trail marker.


Here's a list of birds you are most likely to see or hear on our transects between Apr-Jun. They are included here in case you want to review them ahead of time for visual/auditory ID.

American crow	Chestnut-backed chickadee	Orange-crowned warbler
American kestrel	Common yellowthroat	Red-breasted nuthatch
American robin	Dark-eyed junco	Red-tailed hawk
Anna's hummingbird	Downy woodpecker	Ruby-crowned kinglet
Bald eagle	Golden-crowned kinglet	Savannah sparrow
Band-tailed pigeon	Golden-crowned sparrow	Song sparrow
Barn swallow	House finch	Spotted towhee
Bewick's wren	House sparrow	Stellar jay
Black-capped chickadee	Lazuli bunting	Turkey vulture
Black-headed grosbeak	Lesser goldfinch	Violet-green swallow
Brown creeper	Mallard (usually flyovers)	White-crowned sparrow
Brown-headed cowbird	Northern flicker	Wilson's warbler
California scrub jay	Northern harrier	Yellow-rumped warbler

The focal species of this research is the Savannah sparrow. After you've encountered one a few times, it will be easy to identify. On our transects, Savannah sparrows are most often found in the open expanses of short grass on the Butte. Here are some important identifying characteristics.

	<ul style="list-style-type: none"> <li>• Yellowish stripe over eye (supraloral)</li> <li>• Medium-sized sparrow with small bill and short tail.</li> <li>• Brown, streaked back</li> <li>• Crisp, brown streaks on white breast</li> </ul> <p><b>Song:</b> During breeding season, the male sings a three-part song that lasts 2 to 3 seconds: opening with a few quick notes; then a high, thin, insect-like buzzy middle; and, ending with a quick lower trill.</p> <p><b>Call:</b> Like many grassland sparrows, this species uses short chip notes when alarmed, warding off intruders, or approaching its nest. A typical chip note is a soft, hissing <i>tss</i>.</p>
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The Western meadowlark is another important grassland species present at Powell Butte, though these birds may be gone by the time the surveys begin, so it's a good idea to learn their song just in case they are still around.

	<ul style="list-style-type: none"> <li>• Chunky, short-tailed with a flat head, long slender bill.</li> <li>• Round shouldered posture.</li> <li>• Breeding adults have bright yellow underparts with a prominent black V on the chest.</li> </ul> <p><b>Song:</b> complex, two-phrase "primary" song that begins with 1–6 pure whistles and descends to a series of 1–5 gurgling warbles. Males develop a repertoire of up to a dozen songs, and may switch the songs they sing in response to an intruder.</p> <p><b>Call:</b> low, bell-like <i>pluk</i> or <i>chupp</i>. Adults use the <i>weet</i> note when migrating.</p>
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Although there are many other, less common birds you may encounter, please review the ID for the Vesper sparrow if you are unfamiliar with this species. Although Vesper sparrows are rare at Powell Butte, one was seen for an extended period in 2018. Vesper sparrows bear a strong resemblance to Song sparrows and Savannah sparrows, both of which are commonly encountered on the Butte during surveys.



## Grassland Bird Survey Protocol

**Survey Routes:** We have created 5 predetermined line transect survey routes at Powell Butte Nature Park along existing trails (see **Figure 1: Survey Route Map** below – a larger map for printing is also attached). Routes were designed so that surveys would take approximately 30 minutes to complete, and placed so that volunteers could conduct multiple surveys while looping back to the Visitors Center parking lot in one morning. We anticipate that most volunteers will conduct at least 2 surveys per morning; however, some volunteers may choose to conduct more. Note that the main park entrance leading to the PBNP Visitor Center may be closed when you arrive for early morning surveys. Thus, we recommend entering the Park from the Conduit Lane entrance which is always open (see **Figure 2: Directions to PBNP Conduit Lane Entrance**).

Survey route names generally follow established trail names at Powell Butte Nature Park. However, please note that some of our predetermined routes follow more than one trail (e.g., our Meadowland Lane route begins on Pipeline Lane before turning onto Meadowland Lane). To avoid confusion, we have included a start and end point (number) as part of our survey route names. These numbers follow the numbers on designated trail markers at PBNP (yellow poles) so you can be certain you are following the proper route. You may start at either number – it doesn't matter which direction you walk on the survey route if you start and end at the proper numbers.

Transect/Survey Routes		
eBird Location Name	Length	Notes
Powell Butte--Reservoir Lane (8-37)	0.59 m	Seasonal closure lifted for 2025 surveys. Joins Meadowland Lane and Pipeline Lane transects at marker 37.
Powell Butte--Pipeline Lane (8-37)	0.62 m	Remember to focus on meadows (not forest) – but count all birds observed. Joins Meadowland Lane and Reservoir Lane transects at marker 37.
Powell Butte--Meadowland Lane (15-37)	0.60 m	Actually starts on Pipeline Lane at marker 37 – begin counting birds there. Continue to turnoff for Meadowland Lane at marker 38. Connects to Summit Lane transect at marker 15.
Powell Butte--Summit Lane (12-15)	0.64 m	Only survey the section between markers 12 and 15 – do not count birds on remainder of loop. Connects to Meadowland Lane transect at marker 15.
Powell Butte--Mountain View Trail (8-13)	0.51 m	Focus survey effort on meadows below this trail – but count all birds observed.

**Survey Dates:** We will attempt to conduct 12 repeated surveys (one survey per week) along each line transect (i.e., survey route) during spring/summer 2025 (April 1 – June 30). Volunteers will be asked to sign up for at least two days during this period. However, more data are always better! So volunteers can conduct as many additional surveys as they like during the season.

**Survey Duration:** Each survey route should take approximately 30 minutes to complete. You may take longer to complete a survey, especially if are finding a lot of birds. However, please try to limit the amount of time it takes to complete your survey to 45 minutes maximum so effort among volunteers will be somewhat consistent. Also, please spend a minimum of 20 minutes completing your survey even if you aren't finding many birds. You may need to increase or decrease your pace as you conduct your survey to stay within these time limits.

**Time of Day:** Transect surveys for landbirds (i.e., passerines and raptors) are dependent on time of day since birds are generally more active in the early morning. Thus, volunteers should attempt to conduct surveys in the early morning – completing surveys no later than 3 hours after sunrise. In general, you will need to start your last survey of the morning no later than 2 hours after sunrise to follow our protocol. If circumstances cause surveys to be completed later in the morning the data are still useful to us; however, please avoid conducting surveys midday or in the afternoon for data consistency.

**Weather Conditions:** Transect surveys should not be conducted in rain heavier than a light drizzle or intermittent light rain showers, high winds, heavy fog (< 100 yds visibility), or other conditions that substantially reduce bird activity or your ability to detect bird activity. We would like volunteers to record weather conditions at the start of the survey including temperature (estimated is OK), sky cover and wind level (using the codes below). These data will be submitted with your bird lists (*see slides for Entering eBird Data*) in the comments section.

<b>Sky Codes:</b>	<b>Wind Codes:</b>
0 = clear, or few clouds	0 = less than 1 mph; calm conditions
1 = partly cloudy (half-clouded)	1 = 1-3; wind direction shown by smoke
2 = mostly cloudy (overcast; few sky openings)	2 = 4-7; leaves rustle at times
3 = fog or smoke	3 = 8-12; leaves and twigs in constant motion
4 = light drizzle	4 = 13-18; raises dust and loose paper
5 = rain showers	5 = 19-24; small trees sway

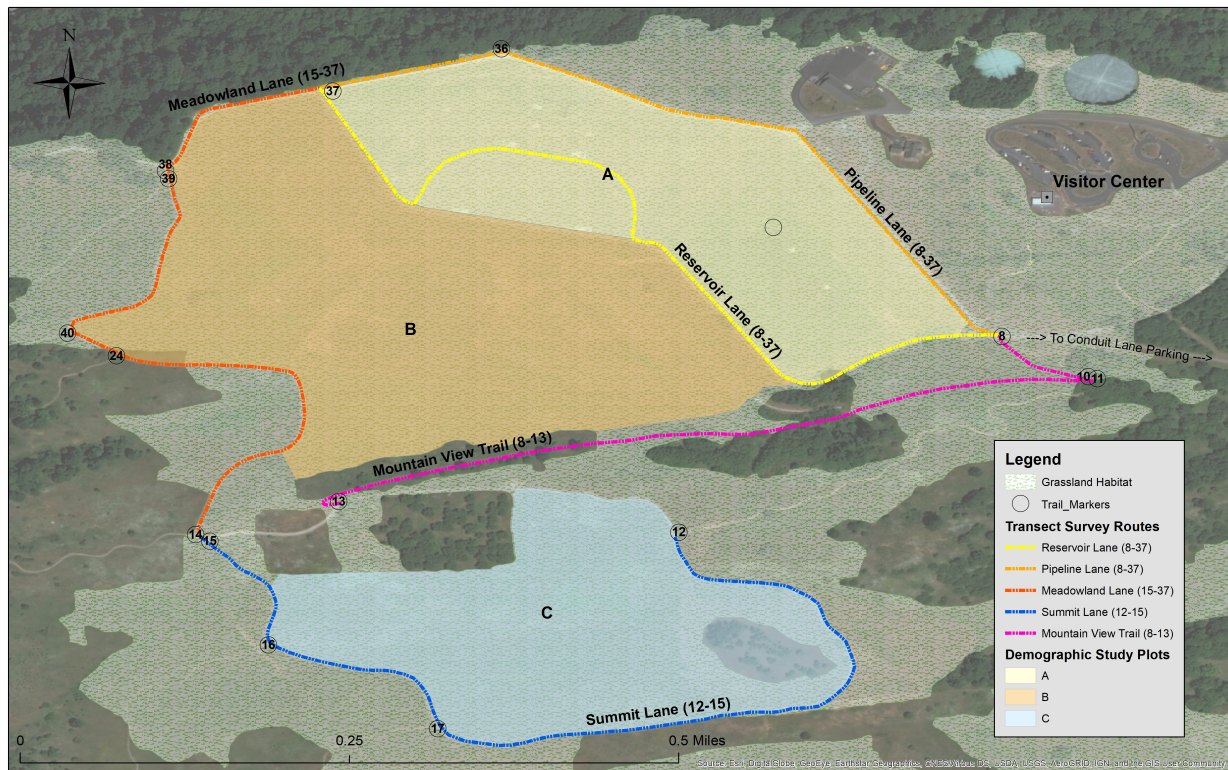
**Disturbance Data:** As part of your survey we would like you to record anything you see that might be disturbing birds along your route. This information will be recorded in the Checklist Comments on your eBird list (*see slides for Entering eBird Data*). Common activities you might see include dogs off leash, people walking off trails in prairies, people on trails in closed areas, people flying drones, etc. Record any activities you think could influence bird activity or behavior along your survey route. **IMPORTANT:** Please do not engage anyone about these activities while conducting your survey – you can always tell park personnel later if you want.

**Counting Methods:** Walk slowly and quietly along your route while conducting surveys to increase your chance of detecting birds. Please always stay on trails while conducting your surveys. Occasionally, stop, listen, and look around for birds – especially in the meadows. Count all birds that you see (or hear) along your survey route, regardless of distance from you when detected. Only record birds you can confidently identify (by sight or sound) – don't worry if you miss a few! Include birds seen flying overhead (e.g., flocks of geese). We want you to record everything you see (or hear) so we can create a comprehensive bird list for Powell Butte Nature Park!

Counting birds can be difficult if you've never tried to do this before. It is very easy to double-count individuals. Here are some tips to reduce the chance of this happening (we'll go over this in greater detail during our training sessions):

1. When you start your survey stand still for a few minutes and look and listen around you. Start identifying species and counting individuals here. We want you to record all the birds you detect here, even if they are located before the start point for your survey route.
2. As you walk along the survey route you want to be careful not to double-count those same individuals you already recorded at the start of your survey. Sometimes this is easy (e.g., you see a Kestrel flying overhead at the start and then see it again as you begin to walk – count this as 1 Kestrel). Sometimes it is very difficult (e.g., you hear some Juncos singing at the start and then hear some again as you begin to walk – are these the same Juncos singing?). Just be mindful of this issue and do the best that you can – we expect some counting difficulties. Use your judgement and always be conservative when counting.
3. As you walk on your survey route concentrate on counting the birds ahead of you, keeping in mind birds may be flushing ahead of you as you walk. Do the best that you can trying to determine if they are the same birds moving along with you. Count them as new individuals only if you are relatively sure they aren't birds you already counted. You may also count birds behind you if you are relatively certain that you did not already count them – a great example is if you see/hear a new species behind you that you did not record previously.
4. Raptors flying overhead can be challenging to count. You may see a Kestrel hunting at the start of your transect, then see another one near the end. Use your best judgement as to whether this is a second Kestrel or the same individual. Be conservative and only count it once if you're unsure.
5. Counting flocks of birds is also challenging. For large flocks we suggest counting in tens (or even hundreds for very large flocks). Don't get too hung up on getting a very precise count – we accept that counts of flocks will not be very precise. With practice you can get pretty good at estimating flock sizes!
6. At the end of your survey route do the same thing that you did at the beginning – take a few minutes to record all the birds in the area around you. However, some of our survey routes connect directly with each other (on purpose). If you are conducting more than one survey in a morning and your routes end/begin at the same point you need to be more careful about double-counting birds on both routes. In this instance, you should not record any birds detected past the end point of your first survey route. Rather, wait until you start your next survey route to record these birds.

Figure 1: Survey Route Map



**Figure 2: Directions to PBNP Conduit Lane Entrance**

**Google Maps** 3910 SE 166th Ave, Portland, OR 97236 to 4701-4837 SE Anderegg Loop Drive 0.5 mile, 2 min  
Powell Butte Nature Park - Conduit Lane Entrance



**3910 SE 166th Ave**

Portland, OR 97236

- ↑ 1. Head south on SE Naegeli Dr toward Anderegg Meadows  
453 ft
- 2. Turn right onto SE Lee Anna Way  
341 ft
- 3. Turn right onto SE Anderegg Loop  
Destination will be on the right  
0.3 mi

**4701-4837 SE Anderegg Loop**

Portland, OR 97236