

Survey of Birds at Three Sites near Woodinville, WA:

Tolt Pipeline-Sammamish River Trail,
Gold Creek County Park, and 21 Acres
2016-2017 Report



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Summary of Woodinville 3-Site Bird Survey for period December 2016-November 2017

Including the Tolt Pipeline-Sammamish River Trail, Gold Creek County Park, and 21 Acres

Volunteer observers from Eastside Audubon Society conducted a survey of three sites in the Woodinville, WA area: The Tolt Pipeline-Sammamish River Trail from 148th Ave NE to the Sammamish River Trail, Gold Creek County Park, and 21 Acres. The surveys were conducted once a month for 12 months and observations were catalogued into checklists using eBird, a program of the Cornell Lab of Ornithology. This report is a summary of the findings of the survey.

Summary of Results from EAS Woodinville Area Survey

The surveyors found a total of 98 species of birds at the three sites. There was some overlap in the species seen with varying numbers of species being unique to each site (See Table 1).

- The Tolt Pipeline-Sammamish River Trail: 82 species of birds were detected through either direct observation and/or vocalization. This was the area with the largest number of bird species detected and the greatest variety of bird habitats.
- Gold Creek County Park: 41 species of birds were detected in forest habitat.
- 21 Acres: 54 species were detected in urban farm type habitat.

Breeding Birds

Breeding birds included both resident birds and birds that migrate to this area to breed. Breeding codes for all breeding birds were noted during the survey. Birds with positive evidence of breeding include 45 species of birds.

Migratory Birds

Migratory birds seek food and water during migration and use a variety of habitats. A total of 52 species of migratory birds were found in the survey areas. Positive evidence of breeding was found for 19 migratory bird species.

Habitat-Specific Birds

Many of the birds observed during the survey are representative of birds found in the Sammamish River Valley area. However, each of the three sites had unique habitat features, and because of this, they attracted certain bird species unique to each site. The three survey sites were chosen with this variety in mind.

The Tolt Pipeline-Sammamish River Trail area is unique among the three survey sites in having open farmland and grassy fields, some of which were flooded in winter, and riparian habitat along the Sammamish River. A total of 82 species of birds, representing 84% of all species seen during the survey were detected at this survey site. The array of habitats described above created good conditions for 27 species of birds not seen in the other two areas.

Gold Creek County Park is characterized by woodland forest habitat consisting of Douglas fir, western red cedar, and bigleaf maple trees and provides good habitat for forest birds such as Band-tailed Pigeons, Barred Owl, and Varied Thrush.

The 21 Acres site is the most urban of the three and had few unique sightings. However, the hawthorn and other flowering trees in the orchard area of the farm attracted a variety of songbirds, including warblers during spring migration. Two of these species of warbler, Orange-crowned Warbler and Yellow Warbler, were seen only at 21 Acres. Additionally, the grassy areas on the periphery of the farm were very productive for seven different species of sparrows over the course of the year.

Notable Observations

Three species of birds seen only one time were notable in that they were seen so few times.

A Ring-necked Pheasant was heard calling in March. A bird of open farmland and grassy edges, this species has been declining west of the Cascades due to land use changes and the scarcity of this species is concerning for its overall distribution in the Woodinville area.

A Barn Owl was seen in June, which would have been within its breeding period. However, the surveyors did not detect evidence of breeding for this species. The current land use may negatively affect the Barn Owl's ability to locate prey such as insects, snakes, and meadow voles upon which they are dependent for breeding success.

A Belted Kingfisher was seen in August. This is a fairly common bird species around water and its primary diet consists of fish. They require soft banks for burrowing and clear water for fishing. Information about the quality of water and fish abundance in the Sammamish River may help determine the reason this bird was seen only once during the year-long survey effort.

Table 1: EAS Woodinville Survey Summary Statistics

Survey Area	Total Bird Species	Unique Bird Species ¹	Breeding Species
Tolt Pipeline-Sammamish River Trail	82	27	39
Gold Creek County Park	41	6	28
21 Acres	54	2	31

¹ Species detected only at that specific site.



PO Box 3115, Kirkland, WA 98003

August 8, 2018

Woodinville 3-Site Bird Survey Report for period December 2016-November 2017

Including the Tolt Pipeline-Sammamish River Trail, Gold Creek County Park, and 21 Acres

This report includes data collected at three sites in the Woodinville, WA area. It includes a brief description of the three sites, the role of Eastside Audubon Society, and findings of the survey including monthly listings of birds observed.

Site Descriptions

Tolt Pipeline-Sammamish River Trail

The Tolt Pipeline Trail was developed as part of the installation of a water pipeline and its full distance runs from Duvall, WA to the Sammamish River. This survey covered only the final portion of the trail from 148th Ave, NE to the river, and then a short portion of the Sammamish River Trail south to NE 145th St.

Gold Creek County Park

Gold Creek County Park is a small park which preserves a section of the ridge to the east of and overlooking the Sammamish River. The park has about 2.5 miles of trails, which are used by hikers and equestrians. It is bordered by the Hollywood Hills residential area. A previous proposal to install a zip line concession was defeated by local residents who wanted to preserve the park as a natural area. The trails and bridges over Gold Creek are in good condition, but local blogs recommend better park maintenance.

21 Acres

21 Acres is a center for sustainable agriculture, education, and collective action. It offers a range of food and farm-based programs, workshops, events and tours within the farm, a market, and an LEED platinum certified building. It was founded in 2006 with the purpose to promote the benefits of local food systems within the context of climate challenges. The farm has a market as well as a research arm that explores the combination of old farming methods with new approaches. The farm is bordered by other farmland, some of which is cultivated, while other portions are fallow and are in various stages of grassland succession.

Eastside Audubon Society

Eastside Audubon Society (EAS) is a chapter of the National Audubon Society and has a service area that includes the City of Woodinville and all three sites included in this survey. The chapter has 1,100 members in 11 cities and towns in Northeastern King County from Lake Washington to the Cascade Crest. The chapter has supported efforts to preserve the existing Woodinville urban growth boundary, which has been effective in protecting the farmland in the Sammamish River Valley. The proximity of the farmland is an important feature of, and reason behind the selection of the three sites included in the survey. Conducting bird surveys is a long tradition with EAS, and in 2016 the chapter decided to conduct a one-year, once-a-month walking survey of areas near Woodinville which may be affected by future development if the urban growth boundary is relaxed or changed.

Prior to conducting the survey EAS members learned that some wine tasting businesses may be conducting business in areas zoned as rural and agriculture. Residents in the Hollywood Hills have challenged this encroachment with representatives of King County. After the survey began, the King County Council recommended an expansion of beverage businesses beyond the urban growth boundary. If enacted, this recommendation would allow additional wine tasting venues along 148th Ave, NE. The survey was completed before the recommendation was implemented. EAS hoped to obtain baseline data regarding bird use in this area of Woodinville.

Survey Methods

The survey was conducted one day per month in three locations outside the city limits of Woodinville. The survey began in December 2016 and concluded in November 2017 covering the 12-month period. Surveyors covered each site on foot with survey team members noting all birds seen or heard as they walked in the areas. Each month, surveyors walked the sites in the following order.

At the first site the team walked about one-half mile along the Tolt Pipeline Trail west of 148th Ave, NE, to the Sammamish River Trail and then southerly along the river trail to NE 145 St, NE, (SR 202). A total of 12 surveys were conducted in this area. Each month an average of 90 minutes was spent surveying this area (Range in minutes 35-124). Usually the survey party consisted of three members (Range 2-5).

The second site was Gold Creek County Park. A total of 12 surveys were conducted at this site. Surveyors began at the parking area located off 148th Ave, NE walking southeasterly on the main trail to the exit at 152nd Ave, NE; then re-entered the park walking on the trail north across a footbridge to the NE corner of the park; then west along the northern border of the park following a winding trail south and then east to the ravine; then west along the ravine rejoining the main trail and returned to the lodge and parking area. The estimated distance for this walk was 2.5 miles. There are no trail signs or mileage markers in the park. On each visit surveyors spent an average of 111 minutes in the park (Range in minutes 79-153). The survey team averaged three members (Range 2-5).

The third site was 21 Acres, a farm and business located at 13701 NE 171st Street, Woodinville, WA 98072. The surveyors walked the perimeter of the farm for a total of one-half mile spending an average of 58 minutes on the walk (Range in minutes 34-82). Usually there were three members in the survey party (Range 1-5).

A record of bird observations during the survey walks was made using the eBird database (Sullivan, et al, 2009). The names of bird species and the numbers of each species were logged into an eBird checklist. A separate eBird checklist was used for each of the three survey sites. A total of 36 eBird checklists were compiled during the year.

Cornell Lab of Ornithology, the developer of eBird, has assigned codes to describe possible breeding behaviors for use in eBird checklists. A number of these codes were appropriate for this survey and the surveyors used them to document their observations of breeding-related behavior. The breeding codes are ranked in the following order to reflect stronger evidence of breeding in the area surveyed. The abbreviation for each code is in parentheses. Beginning with the strongest breeding evidence, the codes used in this survey are: Feeding young (FY), carrying food (CF), recently fledged young (FL), nest building (NB), visiting a probable nest site (N), courtship display(C), territorial defense (T), a pair in suitable habitat (P), multiple (7+) singing males (M), singing male (S), and a bird in appropriate habitat (H). These data and information about the annual occurrence of birds in Washington in *The Birder's Guide to Washington* (Hadley, 2015) were used to determine the likelihood that a specific bird species breeds in the area.

Findings

The surveyors detected a total of 98 species of birds at the three sites. Of these, 35 were resident birds of the area, 52 were birds that migrated to the area, five were exclusively wintering birds, and six were either accidental sightings or their status was unknown. There was some overlap in the species seen in the three areas. At the Tolt Pipeline-Sammamish River Trail 82 species of birds were seen; at Gold Creek County Park 41 species were seen, and at 21 Acres 54 species were seen. Attached to this report is a

master spreadsheet that combines the totals from all three sites, and separate spreadsheets for each for the three sites.

Breeding Birds

A total of 121 breeding code notations were made on the eBird checklists. Breeding birds included both residents which were seen monthly or in nearly every month, and migrating birds, which were seen during the summer months. Birds with positive evidence of breeding included 45 species of birds which are resident or migratory in the survey areas (See Table 1.). Breeding codes, status as resident or migrant, and the location where breeding birds were observed are noted in the table. An additional 10 species of birds observed during the survey period are known to be resident in Western Washington, but evidence of breeding was not observed during the survey. However, they are probable breeders close to or within the survey area.

Wintering Birds

The three survey sites were within the Sammamish River Valley and it is important to note that they provided much needed wintering habitat for waterfowl and some grassland and forest birds, during the non-breeding part of the year. At the Tolt Pipeline-Sammamish River Trail site the surveyors observed the presence of flocks of geese and seven species of wintering ducks. The grasslands areas at Tolt Pipeline-Sammamish River Trail and 21 Acres provided food and cover for flocks of sparrows, House Finch, and large flocks of gulls, European Starling, Brewer's Blackbird, and American Crow. The woodland area at Gold Creek County Park supported wintering Golden-crowned Kinglet, Varied Thrush, and Red-breasted Nuthatch.

Migratory Birds

Migratory birds seek food and water during migration and will find lakes, ponds, flooded fields, and follow rivers to stay close to water sources. They will also forage in trees, shrubs, grasses, and farm fields. A total of 52 species of migratory birds were found in the survey areas. Positive evidence of breeding was found for 19 of these migrants (See Table 1). These are coded with an "M" in the Status column. An additional seven species of migrating birds are known to breed in Western Washington and were observed during the survey period. Although no breeding codes were assigned to these birds during the survey, they are probably breeders in the Woodinville area. The remaining 26 species do not breed in the lowlands of Western Washington, however, at some point during the survey period they used the habitats during their migrations.

Habitat-Specific Birds

Many of the birds observed during the survey are representative of birds found in the Sammamish River Valley. However, each of the three sites has unique habitat features, and because of this, they attracted certain bird species unique to each site. The three survey sites were chosen with this variety in mind.

The Tolt Pipeline-Sammamish River Trail area is unique among the three survey sites in having open farmland and grassy fields, some of which were flooded in winter, and riparian habitat along the Sammamish River. The array of habitats described above created good conditions for 27 species of birds not seen in the other two areas. Wintering waterfowl included Cackling Goose, Canada Goose, and a single Snow Goose in September. Wintering ducks including a Northern Shoveler, Gadwall, American Wigeon, Green-winged Teal, Ring-necked Duck, Bufflehead, and Common Goldeneye used the flooded fields. A Pied-billed Grebe was seen in the Sammamish River. In the shrubby areas Lincoln's Sparrow, Bullock's Oriole, and Brewer's Blackbird were found. The open fields provided good sightlines for raptors including Northern Harrier and Osprey, which were unique to the Tolt Pipeline-Sammamish River Trail. Bald Eagle, Red-tailed Hawk, and Cooper's Hawk were seen at all the sites. The wet areas also supported Killdeer and Marsh Wrens in summer, and several other wetland birds were detected in fall migration in October: Wilson's Snipe, Greater Yellowlegs, Virginia Rail, and Green Heron. Three species of gull were seen in the fields: Mew Gull, California Gull, and Glaucous-winged Gull. Cliff Swallow and Black Swift were seen in July and August respectively.

The woodland forest habitat of Douglas fir, western red cedar, and bigleaf maple trees in Gold Creek County Park provided good habitat for forest birds. Band-tailed Pigeons seen in March and May roam through forested areas and require a large territory. The survey documented that they use this park. A Barred Owl was seen in the park in November just at the beginning of their breeding season. After several months of hearing from nearby residents of frequent sightings of Barred Owl, the surveyors were able to confirm this with a direct sighting of a Barred Owl perched over the trail. Barred Owls have been expanding their range in Western Washington. The number of sightings reported by residents indicates these owls may be resident in the area, which may indicate that they are also breeding. Hermit Thrush was seen in October during fall migration, and Varied Thrush, which winters in lowland forests, was seen in December, January, and March.

The 21 Acres site is the most urban of the three and had few unique sightings. However, the hawthorn and other flowering trees in the orchard area of the farm attracted a variety of songbirds, including warblers during spring migration. Two of these species of warbler, Orange-crowned Warbler and Yellow Warbler, were seen only at 21 Acres. Although sparrows were seen at all three sites, the grassy areas on the periphery of the farm were very productive for seven different species of sparrows over the course of the year. White-crowned Sparrows and Golden-crowned Sparrows overlapped in spring and fall; Savannah Sparrows and a Fox Sparrow were seen in winter; and Song Sparrows, Dark-eyed Juncos, and Spotted Towhees were resident through the year.

Notable Observations

During the 12-month survey period 24 species of birds were seen only once. These were all birds seen with some regularity in Western Washington, but may be uncommon, or in migration. They can be attracted to an area as a rest stop during migration, or they may be a wandering type of bird that happens upon an area. Their appearance may not be habitat specific, as some bird species may be found in a variety of habitats.

Three such one-time sightings were notable in that the birds were seen so few times. All three of these species were detected in the Tolt Pipeline-Sammamish River Trail area, which contains some older pastures, agricultural areas, and some farm buildings. However, bird habitat in the area is challenged by expanded suburban development and agricultural use dominated by sod and tree farms.

A Ring-necked Pheasant was heard calling in March. A bird of open farmland and grassy edges, this game bird has been declining west of the Cascades due to land use changes (Aversa, et al, 2016). It is a good sign that one was heard during the survey, but the fact that only one was heard is concerning for the overall distribution of this species in the Woodinville area.

A Barn Owl was seen in June within its breeding period. However, the surveyors did not detect evidence of breeding for this species. One explanation for the lack of breeding detections could be that Barn Owls are nocturnal. Surveyors were on site before dawn on only two occasions, and subsequently may have missed the peak activity period for Barn Owls. The current land use may negatively affect the Barn Owl's ability to locate prey such as insects, snakes, and meadow voles upon which they are dependent for breeding success (Baughman, 2003).

A Belted Kingfisher was seen in August. This is a fairly common bird species around lakes, ponds, and streams in Western Washington. Its diet consists primarily of fish and these kingfishers will make spectacular dives from a height to capture fish. They require soft banks in which to burrow for nest building. They also require clear, still water for foraging (Aversa, et al, 2016). Information about the quality of water and fish abundance in the Sammamish River may help determine the reason this bird was seen only once during the year-long survey effort.

King County Regulated Wildlife Species

Four of King County's regulated wildlife species were seen flying near the park. Vaux's Swifts were seen at the Tolt Pipeline-Sammamish River Trail and Gold Creek County Park in June and July. One Great Blue Heron was seen at the Tolt Pipeline-Sammamish River Trail in August. Adult Bald Eagles were observed flying over the Tolt Pipeline-Sammamish River Trail during five of the monthly surveys, and in January at

21 Acres. One Osprey flew over the Tolt Pipeline-Sammamish River Trail in July and another in September. The surveyors detected no evidence that these birds nested or roosted in any of the survey areas.

Summary Comments

The EAS survey team is confident that the resident and migrating birds that use the three survey sites in the Woodinville area for breeding and as a rest stop on migration have been successfully counted. We hope the knowledge of bird distribution and abundance in the Woodinville area in three distinct habitat types will be helpful for future planning especially in the area along 148th Ave, NE south of Woodinville in the protected areas outside the urban growth boundary.

References

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Sullivan, B.L., C.L. Wood, M.J. Iliff, R.E. Bonney, D. Fink, and S. Kellig. (2009). eBird: A citizen-based observation network in the biological sciences. *Biological Conservation*, 142: 2282-2292.

EAS is grateful for the team members who conducted this survey over the course of a full year. EAS Bird Survey Team members are: Sharon Aagaard, Sophie Chang, Nancy Hubly, Carol Carlson-Ray, Margaret Snell, and Andrew McCormick.



Andrew McCormick, Bird Survey Leader

Peter Marshall, Conservation Chair

Jan McGruder, President

Table and Attachments

Table 1: Resident and Migratory Breeding Birds

Attachment #1: Spreadsheet for Woodinville Three-Site Survey including birds observed at Tolt Pipeline-Sammamish River Trail, Gold Creek Park, and 21 Acres

Attachment #2: Spreadsheet for Tolt Pipeline-Sammamish River Trail

Attachment #3: Spreadsheet for Gold Creek Park

Attachment #4: Spreadsheet for 21 Acres

Table 1: Resident and Migratory Breeding Birds in Woodinville 3-Area Survey, 2016-17

Bird Species	Evidence ¹	Status ²	Areas Observed ³
Canada Goose	T, FL	R	TPT, 21A
Mallard	FL	R	TPT, 21A
Cooper's Hawk	H	M	TPT, 21A
Red-tailed Hawk	CN	R	TPT, 21A
Rock Pigeon	H	R	TPT, 21A
Band-tailed Pigeon	S	R	GCP
Anna's Hummingbird	FL	R	TPT, GCP, 21A
Red-breasted Sapsucker	P	R	TPT, GCP, 21A
Downy Woodpecker	FL	R	TPT, GCP, 21A
Hairy Woodpecker	FL	R	TPT, GCP, 21A
Northern Flicker	H	R	TPT, GCP, 21A
Pileated Woodpecker	H	R	TPT, GCP
Pacific-slope Flycatcher	M	M	GCP
Hutton's Vireo	S	R	GCP, 21A
Steller's Jay	H	R	TPT, GCP, 21A
Black-capped Chickadee	H, S	R	TPT, GCP, 21A
Chestnut-backed Chickadee	H	R	TPT, GCP, 21A
Bushtit	CF	M	TPT, 21A
Red-breasted Nuthatch	H	R	GCP, 21A
Brown Creeper	S, N	R	TPT, GCP
Pacific Wren	S, NB	R	TPT, GCP
Marsh Wren	S	M	TPT
Bewick's Wren	S	R	TPT, GCP, 21A
Golden-crowned Kinglet	FL	R	TPT, GCP
Swainson's Thrush	S	M	GCP
American Robin	CF, FL,	M	TPT, GCP, 21A
European Starling	FL	R	TPT, 21A
Cedar Waxwing	C	M	TPT, 21A
Common Yellowthroat	P, FL	M	TPT, 21A
Black-throated Gray Warbler	S, P	M	TPT, GCP
Wilson's Warbler	P	M	GCP

Dark-eyed Junco	S, CF	R	TPT, GCP, 21A
White-crowned Sparrow	S, M	M	TPT, 21A
Savannah Sparrow	S, C	M	TPT, 21A
Song Sparrow	S, FL	R	TPT, GCP, 21A
Spotted Towhee	S, P, CN, M	R	TPT, GCP, 21A
Black-headed Grosbeak	S	M	TPT, GCP, 21A
Red-winged Blackbird	H, C	M	TPT, 21A
Brown-headed Cowbird	S, P, FL	M	TPT, GCP, 21A
Brewer's Blackbird	C, CN, FL	M	TPT
House Finch	S, P, C	R	TPT, GCP
Purple Finch	S, FL	M	TPT, GCP, 21A
Pine Siskin	S	M	TPT, GCP, 21A
American Goldfinch	P	M	TPT, 21A
House Sparrow	S	R	TPT

¹ eBird breeding codes are used. Multiple notations refer to different observation days. On each day a bird was observed, the highest level of breeding code was chosen from the following hierarchy: Feeding young (FY), carrying food (CF), recently fledged young (FL), nest building (NB), visiting a probable nest site (N), courtship display(C), territorial defense (T), a pair in suitable habitat (P), multiple (7+) singing males (M), singing male (S), and a bird in appropriate habitat (H). A higher-level breeding code indicates a stronger case for breeding in the area.

² Residence status: R = Year-long resident species, M = summer migratory species.

³ The areas where a bird species was observed. TPT = Tolt Pipeline-Sammamish River Trail, GCP = Gold Creek Park, 21A = 21 Acres
