

# **2022 Breeding Bird Survey Report, Lawton Farm Recreation Area, Scituate Rhode Island**



**Prepared for: Scituate Conservation Commission  
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## 1. Executive Summary:

This report describes the results of a series of breeding bird point count surveys conducted at the Lawton Farm Recreation Area in Scituate, Rhode Island during May and June 2022. To identify breeding birds and evaluate habitat preferences of different species, point count surveys were conducted at three sites within Lawton Farm representing shrubland, forest, and field habitats. Survey results in 2022 showed an increase in species richness with a total of 56 species observed across the 3 sites. Highlights of the 2022 survey results are listed below:

- 1) *The total number of species observed this year (56) was slightly higher than observed in 2021 (49). This year the most abundant species were Tree Swallow (68), Bobolink (52), Red-winged Blackbird (44), American Goldfinch (32), and Red-eyed Vireo (28).*
- 2) *Over the 11 consecutive years, a total of 77 unique species have been recorded at Lawton Farm.*
- 3) *Bobolink continue to be observed at Lawton Farm in substantial numbers in Field 1, and, unlike 2021, were not observed in the other fields. However, Lawton Farm continues to provide important habitat for Bobolinks, a species of conservation concern in Rhode Island.*
- 4) *Total abundance across all sites in 2022 was 713 individuals, a 35% increase over that observed in 2021.*
- 5) *Eighteen shrubland species were observed during all surveys in 2022, which is similar to the 17 reported in 2021. A total of 20 unique shrubland species have been reported over the past eight survey years (2012-2021). These findings suggest that Lawton Farm continues to provide important habitat for shrubland species.*

Lawton Farm provides unique habitats to a variety of bird species, and thus contributes to maintaining regional bird diversity within New England. From a conservation point of view this is extremely valuable as this area is helping to maintain and enhance local and regional biodiversity. The property is particularly important to shrubland species and a grassland species, since both categories of birds have suffered regional declines due to habitat loss and forest succession in recent years.

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## 2. Introduction

This report describes the results of a series of breeding bird point count surveys conducted at the Lawton Farm Recreation Area in Scituate, Rhode Island in May and June 2022. Lawton Farm is a 54.4-acre parcel consisting primarily of open fields and shrubland, except for approximately 20 acres of forested wetlands and a small stand of upland hardwoods in the southwest corner. The ownership of the property is divided between the Scituate Land Trust, which purchased 39.4 acres (plat 9-1, lot 9) of the property via a conservation easement in 1990 through an Open Space Grant from the Rhode Island Department of Environmental Management (RIDEM), and the Town of Scituate, which purchased the remaining 15 acres (plat 9-1, lot 272) the same year. The 15 acres owned by the Town does not have a conservation easement or any other type of protection that would prevent development. The Scituate Town Council has assigned the task of managing the Lawton Farm property to the Scituate Conservation Commission (SCC). The SCC is an advisory board that works to promote and develop natural resources, protect watershed resources, and to preserve natural aesthetic areas within the Town of Scituate. A property management plan for Lawton Farm was developed in 2009 and the SCC continues to implement the conservation and management objectives described within the plan.

An important objective for the property is to maintain grassland habitat for Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*). To evaluate the progress of this management objective and to better understand bird use of the valuable shrub and grassland habitat that the property offers, point count surveys have been conducted since 2012. This report provides results of the 11<sup>th</sup> consecutive year of point count surveys at Lawton Farm.

## 3. Methods

The 2022 point count surveys were conducted at the same sites used in the 2012-2021 surveys. The three sites were originally selected based on the different types of shrubland in addition to forest and field habitats (Table 1 and Figure 1).

**Table 1:** Lawton Farm point count site habitat descriptions 2022.

Site	Description
Site 1	Field with periodic mowing, forested perimeter
Site 2	Field, shrubland and forest on perimeter
Site 3	Shrubland created by irregular mowing of the field, a meadow, and forest



**Figure 1:** Point count sampling sites at Lawton Farm, Scituate, Rhode Island in 2020. These sites are the same as the point counts conducted from 2012-2022.

**Site 1:** The first survey site was in the central portion of the property on the edge of Field 1 (Figure 1; 41.75792° N, -71.55652° W, Figure 2). The field was bordered by small patches of shrubland to the north and west. This site included a hedgerow of mature trees which was



removed in 2012 to connect Fields 1 and 2 to improve habitat for bobolink and other grassland bird species. The eastern portion of the shrubland was dominated by multiflora rose (*Rosa multiflora*), which transitioned into a small herbaceous wetland to the west. To the north of the shrubland was a small area of forest where red maple (*Acer rubrum*) and white ash (*Fraxinus americana*) are the dominant species. To the east and south of the sampling site was Field 1, which is mowed every other year to maintain grassland habitat; mowing occurs in September to prevent disturbance of nesting birds. The hay bales are sold as construction hay. Bluebird nesting boxes have been maintained in this field in over the last 3 years.



**Figure 2:** A view of Site 1 looking southerly with field 1 to the left. In an effort to improve nesting habitat for grassland species, this year some of the walking trails have been closed and allowed to naturally re-vegetate. The former walking path is just barely evident in the middle of the photo.

**Site 2:** The second sampling site was in the western portion of the property on the southwestern edge of Field 3 (41.75715° N, -71.55952° W) adjacent to a patch of shrubland which began management in 2012 for invasive plant removal of species such as autumn olive (*Elaeagnus umbellata*) multiflora rose. Prominent species in this area included saplings of black cherry (*Prunus serotina*), Oriental bittersweet (*Celastrus orbiculatus*), and poison ivy (*Toxicodendron radicans*). The sampling site also included upland forest dominated by white ash and white oak (*Quercus alba*) (Figure 3).



**Figure 3.** *A view of Site 2 looking northwest.*

**Site 3:** The third sampling site was along the northern boundary of the property on the northern edge of Field 4 (41.75745° N, -71.55952° W). Field 4 included patchy regeneration of saplings of black cherry, American ash, and white oak. This sampling site provided the most heterogeneous vegetation mixture which contained short grasses and forbs interspersed with shrubs that measure up to four feet tall (Figure 4). White oak and American ash were the dominant species within the upland forest located on the northern limits of the survey site.





**Figure 4.** A south-facing view of the heterogeneous shrub habitat at Site 3. The forested line in the background divides this site from Site 2.

The methodology used in the 2022 point count surveys followed the same protocol used in the 2012-2021 surveys, with the exception that they were conducted the last 3 years by one observer instead of two. The purpose of the point count surveys was to identify breeding birds within Lawton Farm and to evaluate habitat preferences of different species. The three selected survey sites were separated by greater than 100 m to minimize the possibility recording the same bird at more than one site. Point counts were preceded by a three-minute wait period in order to minimize the disturbance to birds and to allow them to acclimate to the observers' presence. Point counts were conducted by a primary observer facing south for half of the time and north for the rest of the time to achieve a 360° view of the site. Species identification and abundance were recorded based on songs, calls, direct observations, and fly overs within 100 m of the observation site during each ten-minute point count. The observer made distinctions between birds present  $\leq 50$  m from the site and those between 50 and 100 m from the site. Each site was surveyed on three separate occasions on May 27<sup>th</sup>, June 9<sup>th</sup> and June 21<sup>st</sup>, 2022 and all were conducted between 0600 and 0900 hours.

To examine bird species associations with the survey sites, we classified birds into five guilds based on their preferred nesting and foraging habitat. Shrubland birds were those identified as primarily nesting in shrub habitat according to King and Schlossberg (2012). Forest birds were those described as cavity nesting species by Scott et al. (1977). Woodland, grassland, and open habitat birds were classified based on their primary habitat preference listed in Ehrlich et al. (1988).

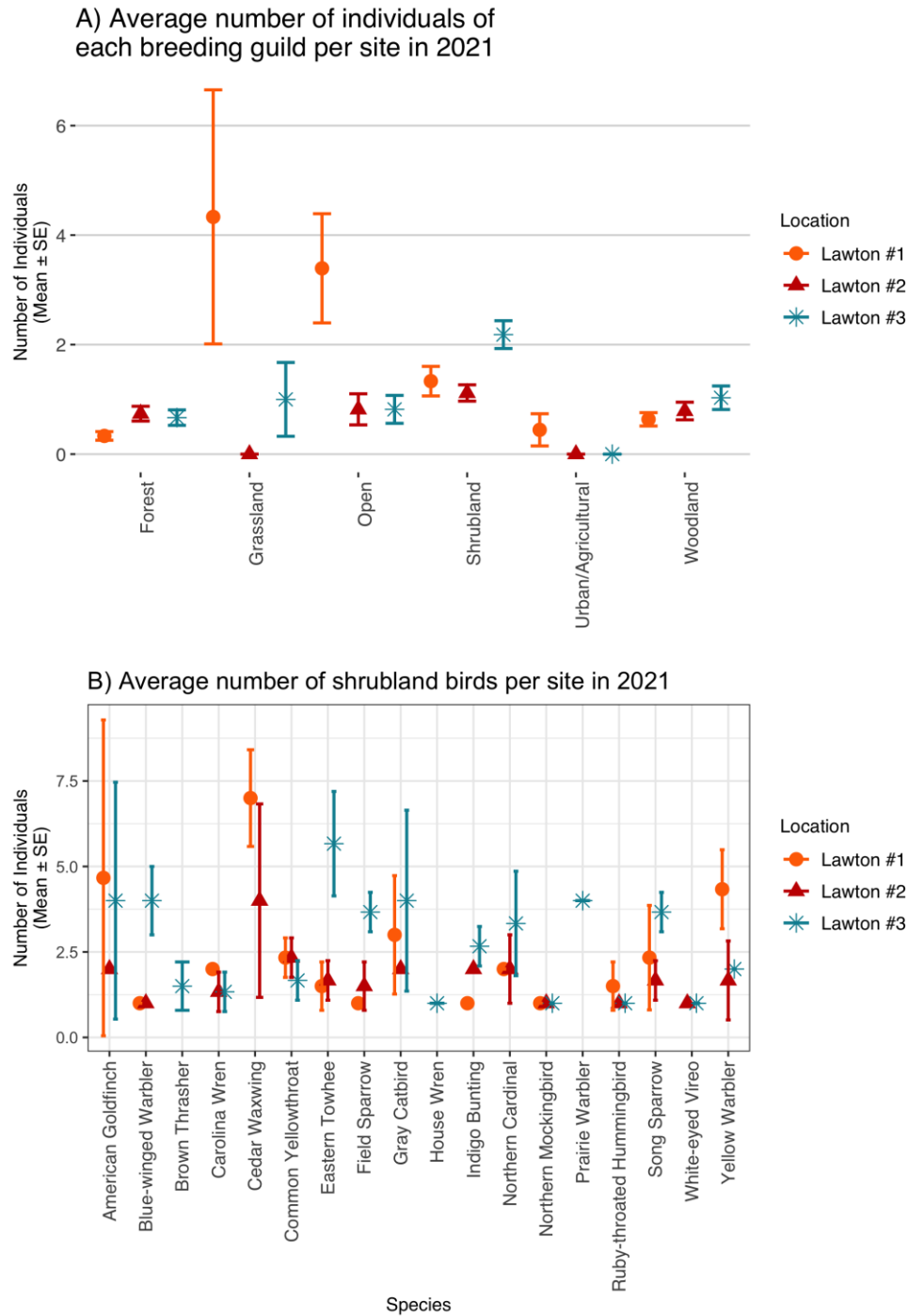
#### 4. Results

We observed 56 unique bird species within 50 m in 2022 across the three sites during the three survey periods, seven more species than were observed in 2021 (44). The most abundant species were Tree Swallows (*Tachycineta bicolor*; 68 recorded, mostly flyovers), Bobolink (*Dolichonyx oryzivorus*; 52 recorded), Red-winged Blackbird (*Agelaius phoeniceus*; 44 recorded), American Goldfinch (*Spinus tristis*; 32 recorded), and Red-eyed Vireo (*Vireo olivaceus*; 28 recorded). Bobolinks continue to be observed at Lawton Farm in substantial numbers in Field 1 where they nest and use the area for foraging and cover. Bobolinks were not observed in Fields 2 or 3 this year. Over the 11 consecutive years that this series of surveys has been carried out, a total of 77 unique species have been recorded at Lawton Farm.

A total of 31 species were observed across all three sites, and 41 species were observed across at least two sites. Site 1 had 4 unique recorded species (species observed only at Site 1), while Site 2 had 3 and Site 3 had 3 unique species (Table 3). A total of 45 species were observed at Site 3 during the 3 survey days, followed by Site 2 with 43 species and Site 1 with 42 species. On average, more individuals in the grassland guild at Site 2 and 3 were observed as compared to any other guild (Figure 5a), although this trend was, as usual, driven by the high number of Bobolink at Site 1.

Eighteen species of the 56 unique species observed were shrubland bird species, slightly higher than the number of shrubland bird species observed in 2021 (Figure 5b). The most abundant shrubland bird at Site 1 were Cedar Waxwings (*Bombycilla cedrorum*; total count = 14) and American Goldfinch (total count = 14). At Site 2 Tree Swallows (total count = 12) and Cedar Waxwings were most abundant (total count = 8). At Site 3, Eastern Towhees were the most abundant shrubland bird (Site 3 total count = 17). Site 3 had the highest numbers of shrubland species ( $n = 17$ ), followed by Site 2 ( $n = 15$ ). Site 1, the grassland site, had fourteen species of shrubland birds (Figure 6). Although Palm Warblers (*Setophaga palmarum*) and Willow Flycatchers (*Empidonax traillii*) have been observed at Lawton Farm in the past, they were not observed this year.



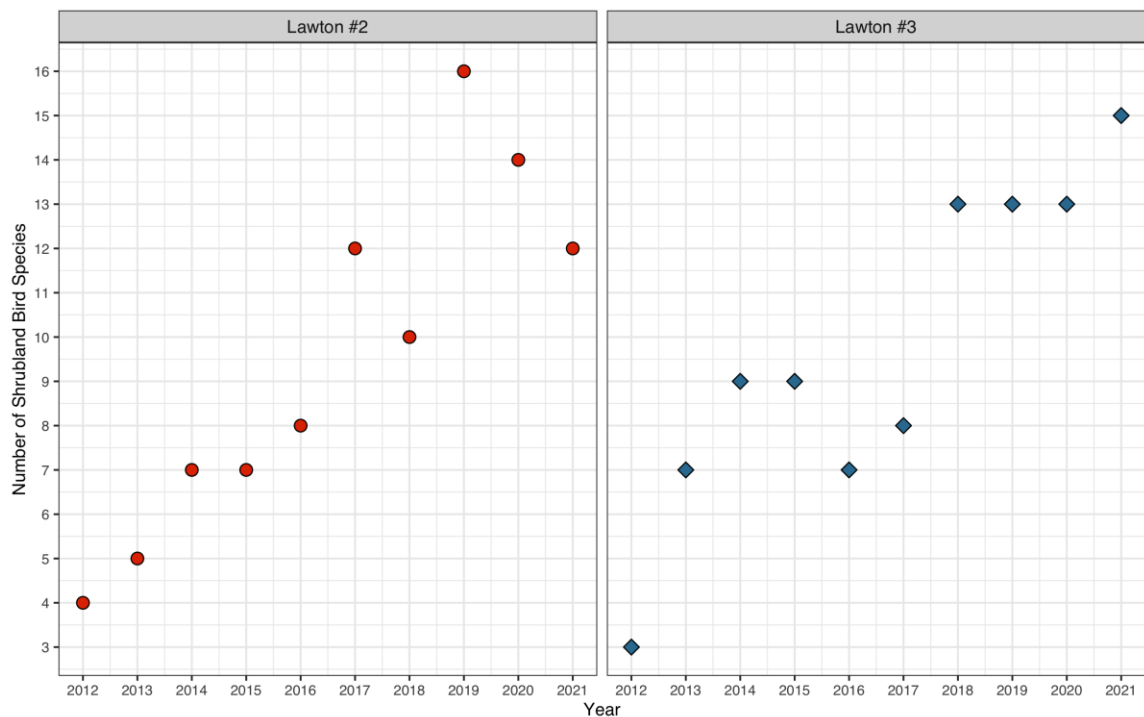


**Figure 5:** A) The number of individuals (mean  $\pm$  standard error) in the forest, grassland, open habitat, shrubland, and woodland breeding guilds observed at each point count location (Lawton Farm Site #1, Lawton Farm Site #2, Lawton Farm Site #3) in 2022. B) The number of individuals (mean  $\pm$  standard error) of each shrubland species over the three point count days at each site in 2022.

Total abundance across all sites in 2022 was 713 individuals, a 35% increase over that observed in 2021 (Table 2).

Date	Number of Individuals	Number of Species
5/27/22	276	42
6/9/22	245	43
6/21/22	192	45

**Table 2:** Number of individual birds and the number of species counted at the 3 Lawton Farm point count sites during the survey events in May and June 2022. Species reported are not unique species and may reflect species counted at more than one site during a survey event.



**Figure 6:** Number of shrubland bird species observed at a) Site 2 and b) Site 3 from Lawton Farm surveys carried out during the years 2012 – 2022.

## 5. Discussion

The number of species and individuals observed this year at Lawton continues the trend from past years which shows that more birds are using the habitats provided by Lawton Farm. Although several factors, including the variability in data generated from point counts and year-to-year fluctuations in the abundance of some species, may contribute to the number of species observed at Lawton in any given year, the consistent increasing trend is still a positive sign and confirms the conservation value of the area. Eastern Bluebirds (*Sialis sialis*) were observed for the third year in a row indicating that management for this species

has been successful, at least in the short term. Several species observed during this year's survey are regulars at Lawton Farm: eleven species, including 4 shrubland species (Common Yellowthroat *Geothlypis trichas*, Eastern Towhee, Gray Catbird, Northern Cardinal *Cardinalis cardinalis*), were observed during each of the 10 surveys conducted since 2012.

We recorded Bobolinks only in Field 1 this year, but with similar abundance to past surveys. From 2016 – 2022, we recorded on average ~15 individual Bobolinks per survey event, and of these 15 about 30% were singing. Singing males are assumed to be defending nesting territory and can be considered a surrogate for a breeding pair, resulting in an average of 4 breeding pairs within the survey segment. The survey segment itself includes about 0.9 ha of the field, which is about 10% of the total area of the field. If we assume breeding pairs are uniformly distributed throughout the entire field, we could estimate about 45 breeding pairs of Bobolinks at Lawton Farm based on our point count data. This would be about twice that predicted based on a minimum breeding habitat area requirement for Bobolinks of 0.49 ha (Dechant et al. 1999), or about 18 breeding pairs for Field 1. The difference may result from our assumption of uniform distribution being incorrect, or perhaps food resources are sufficiently abundant and nesting conditions favorable enough to support additional breeding pairs and effectively lower the minimum area requirement. Either way we can conclude that Lawton Farm provides important breeding habitat for Bobolinks, a species of conservation concern in Rhode Island.

Total abundance increased across all sites in 2022. The total number observed, 713 individuals, was a 35% increase over that observed in 2021. A number of factors, many of which not directly tied to the Lawton Farm habitats, can influence bird abundance, but the numbers observed indicate that abundance this year was higher than the last few years and could indicate that the habitats continue to be utilized for both breeding and foraging, which, in turn promotes bird nesting success. In addition, this type of habitat may provide important cover for hatch year birds once they fledge from the nest, but prior to migration for many of these species that depend on early-successional (shrubland/woodland) habitats (Brenner and McWilliams, 2020).

The current series of annual surveys was started to observe potential changes in shrubland bird use of Lawton Farm habitats after several management actions were taken in the earlier part of the decade to increase shrub habitat, particularly near our sites 2 and 3 (i.e., Fields 3 and 4). Results over the last several surveys point to the success of these actions, and the increased use of Fields 3 and 4 as shrub vegetation becomes more prominent. This year we observed a steady number of shrubland bird species utilizing these areas, and a consistent increase over all the years surveyed. The shrubland birds observed at Lawton Farm represents almost half of the identified 41 shrubland bird species in New England and is important because many of these species are declining due to regional losses in shrubland habitat (Schlossberg and King 2012, Buffum *et al.*, 2011). Although relatively small, the shrubland habitats at Lawton Farm continue to contribute to the local conservation of shrubland bird species.

## Literature Cited

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Species	Banding Code	Guild	Lawton #1	Lawton #2	Lawton #3
American Crow	AMCR	W	1	0	1
American Goldfinch	AMGO	S	1	1	1
American Redstart	AMRE	W	1	1	1
American Robin	AMRO	W	1	1	1
Baltimore Oriole	BAOR	W	1	1	1
Barn Swallow	BASW	O	1	1	1
Black-and-white Warbler	BAWW	F	1	0	1
Black-capped Chickadee	BCCH	F	1	1	1
Black-throated Blue Warbler	BTBW	F	1	0	1
Black-throated Green Warbler	BTGW	F	0	0	0
Blue Jay	BLJA	W	1	1	1
Blue-winged Warbler	BWWA	S	1	1	1
Bobolink	BOBO	G	1	0	0
Brown-headed Cowbird	BHCO	W	1	1	1

Brown Thrasher	BRTH	S	0	0	1
Canada Goose	CAGO	O	0	0	0
Carolina Wren	CARW	S	1	1	1
Cedar Waxwing	CEDW	S	1	1	0
Chipping Sparrow	CHSP	W	1	1	1
Common Grackle	COGR	O	1	1	0
Common Yellowthroat	COYE	S	1	1	1
Chimney Swift	CHSW	U	1	0	0
Chestnut-sided Warbler	CSWA	W	0	0	0
Double-crested Cormorant	DCCO	O	0	0	1
Downy Woodpecker	DOWO	F	1	0	0
Eastern Bluebird	EABL	O	1	1	0
Eastern Kingbird	EAKI	O	0	0	1
Eastern Phoebe	EAPH	W	1	1	1
Eastern Towhee	EATO	S	1	1	1
Eastern Wood-Pewee	EAWP	F	0	1	0
European Starling	EUST	U	0	0	0
Field Sparrow	FISP	S	1	1	1
Gray Catbird	GRCA	S	1	1	1
Great Crested Flycatcher	GCFL	F	1	1	1
Hairy Woodpecker	HAWO	F	0	0	0
House Finch	HOFI	O	0	0	0
House Sparrow	HOSP	U	0	0	0
House Wren	HOWR	S	0	0	1
Indigo Bunting	INBU	S	1	1	1
Least Flycatcher	LEFL	W	0	0	0

Magnolia Warbler	MAWA	F	0	1	1
Mourning Dove	MODO	O	1	1	1
Northern Cardinal	NOCA	S	1	1	1
Northern Flicker	NOFL	F	1	1	1
Northern Mockingbird	NOMA	S	1	1	1
Northern Rough-winged Swallow	NRWS	O	1	0	0
Ovenbird	OVEN	F	0	1	1
Palm Warbler	PAWA	S	0	0	0
Pine Warbler	PIWA	F	0	0	0
Prairie Warbler	PRWA	S	0	0	1
Red-bellied Woodpecker	RBWO	F	0	1	1
Red-eyed Vireo	REVI	F	1	1	1
Red-winged Blackbird	RWBL	O	1	1	1
Rose-breasted Grosbeak	RBGR	F	1	1	1
Red-tailed Hawk	RTHA	W	1	1	0
Ring-necked Pheasant	RNPH	G	0	0	0
Ruby-throated Hummingbird	RTHU	S	1	1	1
Scarlet Tanager	SCTA	F	0	1	0
Song Sparrow	SOSP	S	1	1	1
Tree Swallow	TRSW	O	1	1	1
Tufted Titmouse	TUTI	F	1	1	1
Turkey Vulture	TUVU	F	1	1	1
Veery	VEER	F	0	1	0
Vesper Sparrow	VESP	G	0	0	0
White-eyed Vireo	WEVI	S	0	1	1
White-breasted Nuthatch	WBNU	F	0	1	1



White-throated Sparrow	WTSP	F	0	0	0
Wild Turkey	WITU	G	0	0	1
Willow Flycatcher	WIFL	S	0	0	0
Wood Thrush	WOTH	F	0	0	0
Yellow Warbler	YEWA	S	1	1	1
Yellow-rumped Warbler	YRWA	F	0	0	0

**Table 3.** Bird species observed within 100 m of the point count center during three survey events consisting of 10 minute counts at three sites within Lawton Farm Recreation Area, Scituate, Rhode Island, in 2022. Observations were based on singing, calls, visual observation, and fly overs. Guilds were assigned based on preferred breeding habitat; S = shrubland, F = forest, W = woodland, G = grassland, O = open land, U = urban/agricultural, M = marshland/riparian areas. Presence of a species was indicated by a “1” in the presence / absence columns, absence was indicated by a “0”.