2004

Investigations of avian diversity within a large-scale active firing range on the Quantico Marine Base

Joshua E. LeClerc
College of William and Mary

B. J. Paxton
The Center for Conservation Biology, bjpaxt@wm.edu

Recommended Citation

LeClerc, J. E. and B. J. Paxton. 2004. Investigations of avian diversity within a large-scale active firing range on the Quantico Marine Base. CCBTR-04-15. Center for Conservation Biology Technical Report Series. College of William and Mary, Williamsburg, VA. 42 pp.

December 2004

Investigations of avian diversity within a large-scale active firing range on the Quantico Marine Base

2004
Interim Report

Joshua E. LeClerc
Barton J. Paxton
Center for Conservation Biology
College of William and Mary
Williamsburg, VA 23187-8795

This paper is funded by grants from the Department of Defense, Natural Resources and Environmental Affairs Branch, Marine Corps Base Quantico. The views expressed herein are those of the authors and do not necessarily reflect the views of the Department of Defense.

Investigations of avian diversity within a large-scale active firing range on the Quantico Marine Base

2004
Interim Report

Joshua E. LeClerc
Barton J. Paxton
Center for Conservation Biology
College of William and Mary
Williamsburg, VA 23187-8795

Recommended Citation:
LeClerc, J. E. and B. J. Paxton. 2004. Investigations of avian diversity within a large-scale active firing range on the Quantico Marine Base CCBTR-04-15. Center for Conservation Biology, College of William and Mary, Williamsburg, VA. 42 pp.

Project Funded By:

Department of Defense,
Natural Resources and Environmental Affairs Branch,
Marine Corps Base Quantico

The Center for Conservation Biology is an organization dedicated to discovering innovative solutions to environmental problems that are both scientifically sound and practical within today's social context. Our philosophy has been to use a general systems approach to locate critical information needs and to plot a deliberate course of action to reach what we believe are essential information endpoints.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Early successional habitats have risen to the forefront in recent years as a priority habitat for birds within much of the mid-Atlantic and northeast region. Their value lies in their significance to a small and declining cohort of breeding species as well as their forage and cover significance to a broad range of migrants and wintering birds. Work completed by the Center for Conservation Biology has identified the Department of Defense (DOD) as owning over 40% of the early successional lands available within the Partners in Flight partnership in the mid-Atlantic region. These lands within the DOD framework also tend to be more persistent than other Partner-owned lands due to the very nature of the military. Equipment maneuvers, live-fire exercises, and troop training all combine to create a disturbance frequency ideal for perpetuating habitats in an early successional stage. Associated avian species are then able to exploit and maintain territories with potentially greater success than might be achieved in more ephemeral habitats under other ownerships.

This project seeks to profile the bird community associated with a 1,174 hectare artillery range, designated the 9A impact area, on Marine Corps Base Quantico. The impact area is subject to periodic burning due to live-fire exercises, potentially maintaining conditions favorable to early successional birds. This interim report discusses the first year of the study, which examined bird use of the impact area during the 2004 spring migration and breeding season.

A combination of fixed-radius and unlimited-radius point count techniques were used to measure bird density, relative abundance, and species richness at 22 survey points within and around the impact area. Due to restricted access to the impact area, all survey points were located along the perimeter road that circumnavigates and bisects a portion of the area. A total of 1,323 detections of 77 species were made within the impact area during the 2004 spring migration period. These consisted of 38 neotropical migrant species, 16 temperate migrant species, and 23 resident species. Outside the impact area, there were 374 detections of 50 species, consisting of 27 neotropical migrant species, 9 temperate migrant species, and 14 resident species. During the 2004 breeding season, a total of 1,179 detections of 64 bird species were made within the impact area. These detections consisted of 30 neotropical migrant species, 16 temperate migrant species, and 18 resident species. Outside the impact area, 342 birds representing 54 species were detected, consisting of 26 neotropical migrant species, 14 temperate migrant species, and 14 resident species.

The results of the spring migration and breeding season surveys indicate that species composition within the impact area is dominated by birds dependent upon early successional habitat, including many neotropical migrants. This suggests that the fire-maintained habitat within the 9A impact area is a valuable resource for birds of conservation concern. Further work will examine bird use of this area during fall migration and winter.

BACKGROUND

Context

Birds are essential components of natural ecosystems, effective indicators of environmental health, and the focus of an emerging ecotourism industry that represents a growing portion of the world's economy. During the course of the twentieth century, the living space and infrastructure required by an expanding human population has had a pervasive impact on the natural landscape, resulting in a direct change in the availability and distribution of the habitats required by many bird species. Restoring and maintaining healthy bird populations within these altered landscapes represents one of the most complex conservation challenges for the twenty-first century.

Early successional habitats have risen to the forefront in recent years as a priority habitat for birds within much of the mid-Atlantic and northeast region. Their value lies in their significance to a small and declining cohort of breeding species as well as their forage and cover significance to a broad range of migrants and wintering birds. Changes in natural and anthropogenic disturbance regimes, such as fire suppression practices and the decline of agriculture, have severely reduced the amount of early successional habitat over the last century (Hunter et al. 2001). Birds dependent upon this habitat, especially those that migrate to wintering grounds in the neotropics, are now the focus of regional conservation efforts (Robbins et al. 1989, Askins 1993).

Work completed by the Center for Conservation Biology has identified the Department of Defense (DOD) as owning over 40% of the early successional lands available within the Partners in Flight partnership in the mid-Atlantic region. These lands within the DOD framework also tend to be more persistent than other Partner-owned lands due to the very nature of the military. Equipment maneuvers, live-fire exercises, and troop training all combine to create a disturbance frequency ideal for perpetuating habitats in an early successional stage. Associated avian species are then able to exploit and maintain territories with potentially greater success than might be achieved in more ephemeral habitats under other ownerships. This project seeks to investigate this scenario and profile the bird community associated with such a landscape.

Marine Corps Base Quantico (MCBQ), which occupies portions of Fauquier, Prince William, and Stafford Counties, Virginia, operates a 1,174 hectare (ha) artillery range where live-fire exercises result in periodic burning of the vegetation. This area, designated the 9A impact area, is thereby maintained in an early successional stage, potentially providing valuable avian habitat.

Objectives

This project will attempt to generate seasonal profiles of the bird community present within the 9A impact area at MCBQ. Priority will be given to identifying those species that breed within, or in association with, the impact area. Secondary emphasis will be placed on identifying those species that utilize the impact area during migration for cover or foraging habitat, as well as winter visitors. This interim report focuses on the bird community utilizing the impact area during the 2004 spring migration and breeding season.

METHODS

Study Area

The focal area for this study was the 9A impact area, a 1,174 ha artillery range at MCBQ (Figure 1). Periodic burning from live-fire exercises maintains this area in an early successional stage. MCBQ occupies portions of Fauquier, Prince William, and Stafford Counties, Virginia. Due to restricted access into the impact area, surveys were conducted along perimeter roads.

Bird Surveys

A combination of fixed-radius and unlimited-radius point count techniques were used to measure bird density, relative abundance, and species richness. A network of 22 survey plots (point counts), each consisting of a 50-meter (m) radius circle with a wire flag at its center, was established along the perimeter road that circumnavigates and bisects a portion of the impact area (see Appendix I for point coordinates) (Figure 1). Points were separated by at least 250 m and did not exceed 500 m between points.

Point counts were conducted by a single observer standing at the plot center (road shoulder) and recording all birds seen or heard within a 7-minute period. Bird location was noted as within or outside the impact area and within or outside the 50-m radius point count circle. Eighteen of the 22 point counts were located along the road circumnavigating the impact area (Figure 1), so only half of the survey area for these points was within the impact area. The remaining 4 points were located along a road that bisects a portion of the impact area, and for these points the entire 50-m radius was considered within the impact area.

Three spring migration survey rounds were completed between 9 May and 28 May 2004, and 3 breeding season survey rounds were completed between 6 June and 11 July 2004. The order of surveys was alternated between rounds to reduce the impact of time-of-day effects. Surveys were conducted between 0.5 and 4.5 hours after sunrise on days with no precipitation and wind speeds of less than 15 mph.

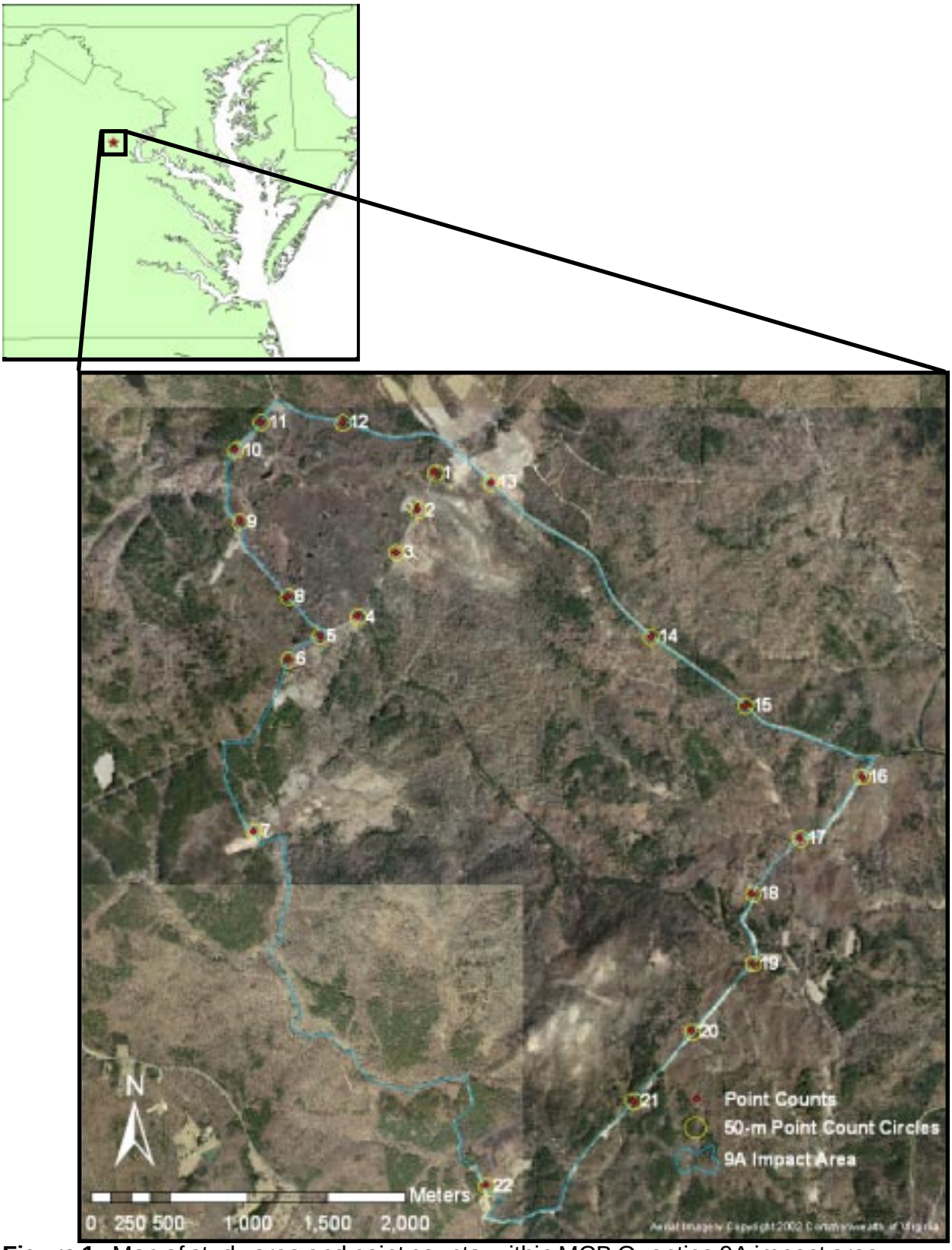

Figure 1. Map of study area and point counts within MCB Quantico 9A impact area.

Data Summary and Analysis

Bird survey data from inside the impact area were summarized to estimate bird density, abundance, and species richness. As a comparison, data from outside the impact area were also used to estimate bird abundance and species richness. Bird densities were calculated from the number of birds detected within the 50-m radius point counts. For each species, the survey visit with the greatest number of individuals detected was used for analysis. Species richness values were calculated using the accumulated number of species detected within or beyond the 50-m radius point counts over 3 survey visits.

RESULTS

Spring Migration

A total of 1,323 detections of 77 species were made within the impact area during the 2004 spring migration period. These consisted of 38 neotropical migrant species, 16 temperate migrant species, and 23 resident (non-migratory) species (see Appendix II for summary of spring migration detections by point and round and Appendix III for list of species with migration status). The most commonly detected species inside the impact area during spring migration were Indigo Bunting, Common Yellowthroat, Yellow-breasted Chat, Prairie Warbler, Eastern Towhee, and Red-Eyed Vireo, accounting for over 41% of the detections.

Outside the impact area, there were 374 detections of 50 species, consisting of 27 neotropical migrant species, 9 temperate migrant species, and 14 resident species. Red-eyed Vireo, Ovenbird, Prairie Warbler, Tufted Titmouse, Eastern Towhee, and Eastern Wood-Pewee were the most common species outside the impact area, accounting for over 40% of the detections.

Breeding Season

A total of 1,179 detections of 64 bird species were made within the impact area during the 2004 breeding season surveys. These consisted of 30 neotropical migrant species, 16 temperate migrant species, and 18 resident species (see Appendix IV for summary of breeding season detections by point and round). Indigo Bunting, Common Yellowthroat, Eastern Towhee, Field Sparrow, Yellow-breasted Chat, and Prairie Warbler were the most common species detected within the impact area during the breeding season, accounting for over 40% of all detections.

Outside the impact area, an additional 342 birds representing 54 species were detected. These consisted of 26 neotropical migrant species, 14 temperate migrant species, and 14 resident species. The most common species outside the impact area

were Red-eyed Vireo, Eastern Towhee, Indigo Bunting, Pine Warbler, Ovenbird, and Eastern Wood-Pewee, accounting for over 28% of the detections.

There were 15 species detected within the impact area that were not detected outside: Green Heron, Black Vulture, Turkey Vulture, Red-shouldered Hawk, Red-tailed Hawk, Ruby-throated Hummingbird, Purple Martin, Tree Swallow, White-breasted Nuthatch, Northern Mockingbird, Mourning Warbler, Song Sparrow, Red-winged Blackbird, Orchard Oriole, and Baltimore Oriole. Conversely, 5 species that were detected outside the impact area were not detected inside: American Kestrel, Red-headed Woodpecker, American Robin, Hooded Warbler, and Grasshopper Sparrow.

Density was calculated for birds detected within portions of the 50-m radius point count circles that fell within the impact area (Figure 1). The species at highest density within the impact area during the breeding season were Indigo Bunting (2.95 birds/ha), Blue-gray Gnatcatcher (2.26 birds/ha), Common Yellowthroat (2.26 birds/ha), Yellow-breasted Chat (1.79 birds/ha), Prairie Warbler (1.68 birds/ha), and American Goldfinch (1.68 birds/ha) (Table 1).

DISCUSSION

This initial study provides an account of bird abundance and species richness within and around the 9A impact area during the 2004 spring migration and breeding season. The species observed in this study are consistent with those normally found in early successional and mixed forest habitat in the mid-Atlantic region.

Species composition within the impact area was dominated by early successional specialists, suggesting that the fire-maintained area provides suitable habitat for this declining group of species. There was a clear difference in the species composition immediately outside the impact area, where several of the most common birds were forest breeders (e.g., Red-eyed Vireo, Ovenbird, and Eastern Wood-Pewee). This further demonstrates that the disturbance regime within the impact area is driving species composition. Several early successional species were observed in relatively high abundance outside the impact area (e.g., Eastern Towhee, Indigo Bunting, and Prairie Warbler), but this is most likely due to the extreme proximity of early successional habitat available within the impact area, as surveys were conducted along the impact area border. Indeed, it is remarkable that early successional species were so abundant given that 18 of the 22 survey plots were positioned only halfway within disturbed habitat.

In the breeding season surveys, the majority of species detected at high densities within the impact area were birds dependent upon early successional habitat for breeding, and the 5 most frequently observed species (Indigo Bunting, Blue-gray Gnatcatcher, Common Yellowthroat, Yellow-breasted Chat, and Prairie Warbler) were neotropical migrants (Table 1). This and other findings of this initial study suggest that the fire-maintained early

Table 1. Calculated bird densities for all birds detected at 50-m point counts within the 9A impact area during breeding season surveys.

Species	Mean Density (birds/ha)	Standard Deviation
Black Vulture	0.12	0.54
Red-tailed Hawk	0.06	0.27
Mourning Dove	0.23	0.64
Yellow-billed Cuckoo	0.52	1.01
Chimney Swift	0.69	1.79
Ruby-throated Hummingbird	0.23	0.75
Downy Woodpecker	0.87	1.20
Hairy Woodpecker	0.35	0.89
Northern Flicker	0.23	0.75
Eastern Wood-Pewee	1.22	1.64
Acadian Flycatcher	0.23	0.75
Eastern Phoebe	0.58	1.35
Great Crested Flycatcher	0.17	0.60
Eastern Kingbird	0.58	1.02
White-eyed Vireo	0.69	1.09
Yellow-throated Vireo	0.35	0.89
Red-eyed Vireo	1.62	2.01
Blue Jay	0.23	0.75
Purple Martin	0.69	1.95
Barn Swallow	0.75	1.95
Carolina Chickadee	1.04	1.83
Tufted Titmouse	0.81	1.65
White-breasted Nuthatch	0.12	0.54
Carolina Wren	0.75	1.60
Blue-gray Gnatcatcher	2.26	1.75
Eastern Bluebird	0.35	1.19
Wood Thrush	0.12	0.54
Gray Catbird	1.50	2.03
Brown Thrasher	1.04	1.70
European Starling	0.23	1.09
Cedar Waxwing	0.35	1.19
Pine Warbler	0.93	2.16
Prairie Warbler	1.68	1.94
Black-and-white Warbler	0.69	1.61
Ovenbird	0.12	0.54
Mourning Warbler	0.06	0.27
Common Yellowthroat	2.26	1.52
Yellow-breasted Chat	1.79	1.34
Summer Tanager	0.35	1.19
Scarlet Tanager	0.12	0.54
Eastern Towhee	1.39	2.00
Chipping Sparrow	0.98	1.47
Field Sparrow	1.10	1.49
Northern Cardinal	0.17	0.60
Blue Grosbeak	0.23	0.64
Indigo Bunting	2.95	2.02
Red-winged Blackbird	0.41	1.64
Brown-headed Cowbird	1.10	2.01
Orchard Oriole	0.58	1.02
Baltimore Oriole	0.12	0.54
American Goldfinch	1.68	2.98

successional habitat within the 9A impact area is a valuable resource for birds, including many of conservation concern.

A more complete analysis of the bird community using the 9A impact area, including birds utilizing cover and foraging habitat during the fall migration and winter, will appear in the final report to be issued after the second year of surveys.

ACKNOWLEDGMENTS

This project would not have been possible without the efforts of many people. The staff of the Natural Resources and Environmental Affairs Branch at Marine Corps Base Quantico provided site access and coordination with range control, and Tim Stamps and Mary Beth Geil were particularly helpful in providing logistical support, site recommendations, and maps. Fred Atwood conducted all bird surveys. Lydia Whitaker, Carlton Adams, Renee Peace, Anne Womack, Gloria Sciole, Mark Roberts, and Cheryl Pope provided important administrative support from the College of William and Mary. This study was funded by the Department of Defense, Natural Resources and Environmental Affairs Branch, Marine Corps Base Quantico.

LITERATURE CITED

Askins, R. A. 1993. Population trends in grassland, shrubland, and forest birds in eastern North America. Current Ornithology 11: 1-34.

Hunter, W. C., D. A. Buehler, R. A. Canterbury, J. L. Confer, and P. B. Hamel. 2001. Conservation of disturbance-dependent birds in eastern North America. Wildlife Society Bulletin 29(2): 440-455.

Robbins, C. S., J. R. Sauer, R. Greenberg, and S. Droege. 1989. Population declines in North American birds that migrate to the Neotropics. Proceedings of the National Academy of Science 86: 7658-7662.

Appendix I. Coordinates of bird point count centers for the 9A impact area surveys.

Point Number	Latitude	Longitude
1	38.56054	-77.53737
2	38.55841	-77.53866
3	38.55598	-77.54028
4	38.55232	-77.54313
5	38.55124	-77.54592
6	38.54990	-77.54825
7	38.54005	-77.55093
8	38.55350	-77.54824
9	38.55786	-77.55171
10	38.56196	-77.55196
11	38.56354	-77.55005
12	38.56348	-77.54410
13	38.55994	-77.53328
14	38.55099	-77.52171
15	38.54698	-77.51489
16	38.54283	-77.50642
17	38.53931	-77.51098
18	38.53616	-77.51450
19	38.53216	-77.51453
20	38.52830	-77.51899
21	38.52435	-77.52336
22	38.51957	-77.53420

Appendix II. Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
TUVU	4	0	0	1	0	0	0	1
TUVU	7	0	0	0	0	1	0	1
TUVU	22	3	0	0	0	3	0	6
Total		3	0	1	0	4	0	8
CAGO	4	2	0	0	0	0	0	2
CAGO	9	1	0	0	0	0	0	1
CAGO	11	0	0	0	0	1	0	1
Total		3	0	0	0	1	0	4
COHA	4	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
RSHA	22	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
RTHA	3	0	0	0	0	1	0	1
RTHA	13	0	0	1	0	1	0	2
RTHA	14	0	0	0	0	1	0	1
RTHA	17	0	0	0	0	1	0	1
Total		0	0	1	0	4	0	5
WITU	9	0	0	0	0	0	1	1
WITU	13	0	0	0	0	0	1	1
WITU	14	0	0	0	0	2	0	2
WITU	16	0	0	0	1	0	0	1
WITU	17	0	0	0	2	0	0	2
WITU	18	0	0	0	1	0	0	1
WITU	19	0	0	1	0	0	0	1
WITU	22	0	0	1	0	1	0	2
Total		0	0	2	4	3	2	11
NOBO	1	0	0	1	0	2	0	3
NOBO	2	0	0	1	0	1	0	2
NOBO	3	1	0	0	0	0	0	1
NOBO	6	0	0	1	0	0	0	1
NOBO	7	0	0	2	0	1	0	3
NOBO	9	0	0	1	0	0	0	1
NOBO	11	1	0	0	0	0	0	1
NOBO	13	1	1	3	1	3	2	11
NOBO	16	0	0	1	0	0	0	1
NOBO	20	0	0	0	1	0	0	1
NOBO	21	0	0	1	1	1	0	3
NOBO	22	0	0	1	0	0	0	1
Total		3	1	12	3	8	2	29
KILL	9	1	0	0	0	0	0	1
KILL	13	0	0	0	1	0	0	1
Total		1	0	0	1	0	0	2
MODO	1	0	0	1	0	1	0	2
MODO	2	0	0	0	0	1	0	1
MODO	3	1	0	1	0	1	0	3
MODO	4	0	0	0	0	1	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
MODO	7	0	0	0	0	1	0	1
MODO	8	0	0	0	0	1	0	1
MODO	9	0	0	1	0	1	0	2
MODO	10	0	0	1	0	0	0	1
MODO	13	0	0	0	3	1	0	4
MODO	14	0	0	1	0	0	0	1
MODO	15	0	0	1	0	0	0	1
MODO	16	0	0	1	0	1	0	2
MODO	17	0	0	0	0	1	1	2
MODO	18	0	0	1	0	0	0	1
MODO	20	0	0	1	0	0	0	1
MODO	21	0	0	1	0	1	0	2
Total		1	0	10	3	11	1	26
BBCU	16	1	0	0	0	0	0	1
BBCU	17	1	0	0	0	0	0	1
Total		2	0	0	0	0	0	2
YBCU	1	1	0	0	0	0	0	1
YBCU	2	0	0	2	0	1	0	3
YBCU	3	0	0	1	0	1	0	2
YBCU	5	0	0	1	1	0	0	2
YBCU	8	0	0	0	0	0	1	1
YBCU	9	0	0	0	1	1	0	2
YBCU	10	0	0	0	1	0	1	2
YBCU	11	0	0	2	0	1	0	3
YBCU	12	0	0	1	0	1	0	2
YBCU	13	0	0	0	0	1	0	1
YBCU	14	1	0	0	1	0	0	2
YBCU	15	0	0	1	0	0	0	1
YBCU	17	0	0	1	0	0	0	1
YBCU	18	0	0	1	1	0	0	2
YBCU	19	0	0	0	0	0	1	1
YBCU	21	1	1	0	0	1	0	3
Total		3	1	10	5	7	3	29
GHOW	3	1	0	0	0	0	0	1
Total		1	0	0	0	0	0	1
CHSW	14	0	0	1	0	0	0	1
CHSW	17	0	0	1	0	0	0	1
CHSW	20	0	0	0	0	3	0	3
CHSW	21	0	0	0	0	3	0	3
CHSW	22	0	0	1	0	6	0	7
Total		0	0	3	0	12	0	15
RTHU	1	0	0	1	0	0	0	1
RTHU	9	0	0	0	0	1	0	1
RTHU	16	0	0	1	0	0	0	1
RTHU	17	0	0	0	0	0	1	1
RTHU	18	0	0	1	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
RTHU	21	0	0	2	0	1	0	3
RTHU	22	0	0	1	0	0	0	1
Total		0	0	6	0	2	1	9
RHWO	8	0	0	1	0	0	0	1
RHWO	14	0	0	0	0	1	0	1
Total		0	0	1	0	1	0	2
RBWO	4	0	0	2	0	0	0	2
RBWO	6	0	0	1	0	1	0	2
RBWO	7	0	0	1	0	0	0	1
RBWO	10	1	0	1	0	0	0	2
RBWO	11	1	0	0	0	0	0	1
RBWO	13	0	0	0	0	1	0	1
RBWO	14	0	1	1	1	0	1	4
RBWO	15	1	0	1	1	0	0	3
RBWO	17	0	0	1	0	0	0	1
RBWO	22	0	1	0	0	0	0	1
Total		3	2	8	2	2	1	18
DOWO	4	0	0	0	0	1	0	1
DOWO	8	0	1	0	0	0	0	1
DOWO	9	0	0	1	0	0	0	1
DOWO	18	0	0	1	0	0	0	1
Total		0	1	2	0	1	0	4
HAWO	9	0	0	0	0	0	1	1
HAWO	12	0	0	0	0	1	0	1
HAWO	16	1	0	0	0	2	0	3
HAWO	20	0	0	0	1	0	0	1
Total		1	0	0	1	3	1	6
YSFL	1	1	0	0	0	0	0	1
YSFL	3	1	0	0	0	0	0	1
YSFL	7	0	0	1	0	0	0	1
YSFL	8	0	0	1	0	0	0	1
YSFL	9	1	0	1	0	0	0	2
YSFL	10	0	0	2	0	0	0	2
YSFL	13	0	0	1	0	0	0	1
YSFL	16	1	0	0	1	0	0	2
YSFL	22	0	0	0	0	1	0	1
Total		4	0	6	1	1	0	12
PIWO	14	0	0	1	0	0	0	1
PIWO	15	0	0	1	0	0	0	1
PIWO	22	0	0	0	0	1	0	1
Total		0	0	2	0	1	0	3
EAWP	1	1	0	1	0	1	0	3
EAWP	2	1	0	1	0	0	0	2
EAWP	3	0	0	1	0	1	0	2
EAWP	4	0	0	1	0	1	0	2
EAWP	5	0	0	1	2	0	2	5

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
EAWP	6	2	0	0	2	1	0	5
EAWP	7	1	0	0	0	0	0	1
EAWP	8	1	0	0	1	0	1	3
EAWP	9	1	0	1	0	1	1	4
EAWP	10	0	0	0	1	0	1	2
EAWP	11	0	0	1	0	1	0	2
EAWP	12	1	1	0	0	1	0	3
EAWP	14	0	1	1	1	0	1	4
EAWP	15	1	0	1	1	0	0	3
EAWP	16	0	0	1	0	0	0	1
EAWP	17	0	0	0	1	2	0	3
EAWP	19	0	0	1	0	1	0	2
EAWP	20	0	1	0	0	1	0	2
EAWP	21	0	0	1	0	0	0	1
Total		9	3	12	9	11	6	50
ACFL	8	0	1	0	1	0	1	3
ACFL	14	0	0	0	0	0	1	1
ACFL	15	1	0	0	0	0	1	2
ACFL	17	1	0	1	0	0	0	2
Total		2	1	1	1	0	3	8
WIFL	3	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
EAPH	1	0	0	0	0	1	0	1
EAPH	2	0	0	0	0	1	0	1
EAPH	6	1	0	0	0	0	0	1
EAPH	7	0	0	1	0	0	0	1
EAPH	9	1	0	0	0	0	0	1
EAPH	10	0	0	0	0	1	0	1
EAPH	13	0	0	1	0	0	0	1
EAPH	17	0	0	1	0	1	0	2
EAPH	22	0	0	1	0	1	0	2
Total		2	0	4	0	5	0	11
GCFL	1	0	0	0	0	1	0	1
GCFL	3	2	0	0	0	0	0	2
GCFL	6	2	0	1	0	0	0	3
GCFL	7	0	0	1	0	0	0	1
GCFL	9	0	1	1	0	1	0	3
GCFL	13	0	0	0	0	0	1	1
GCFL	14	0	0	2	0	0	0	2
GCFL	15	2	0	0	0	0	0	2
GCFL	17	0	0	0	0	1	0	1
GCFL	22	0	0	2	0	0	0	2
Total		6	1	7	0	3	1	18
EAKI	1	0	0	0	0	1	0	1
EAKI	2	2	0	0	0	0	0	2
EAKI	3	0	0	0	0	1	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
EAKI	4	0	0	0	0	1	0	1
EAKI	6	0	0	0	0	1	0	1
EAKI	7	0	1	0	0	1	0	2
EAKI	9	0	0	0	0	2	0	2
EAKI	10	0	0	0	0	1	0	1
EAKI	13	1	0	0	0	1	0	2
EAKI	16	1	1	1	2	1	1	7
EAKI	18	0	0	1	0	0	0	1
EAKI	20	0	1	0	0	0	0	1
EAKI	22	0	0	0	0	1	0	1
Total		4	3	2	2	11	1	23
WEVI	1	2	0	1	0	0	0	3
WEVI	2	0	0	1	0	1	0	2
WEVI	3	1	0	0	0	1	0	2
WEVI	10	0	0	0	0	1	0	1
WEVI	12	2	0	0	0	0	0	2
WEVI	17	1	1	1	1	0	1	5
WEVI	18	1	0	1	1	1	0	4
WEVI	19	1	1	0	1	1	0	4
WEVI	20	1	2	0	0	0	1	4
WEVI	22	2	0	1	0	1	0	4
Total		11	4	5	3	6	2	31
YTVI	3	0	0	1	0	0	0	1
YTVI	5	0	0	0	0	1	0	1
YTVI	7	0	0	1	0	1	0	2
YTVI	10	0	0	0	0	1	0	1
YTVI	11	1	0	0	1	0	0	2
YTVI	12	0	0	0	0	1	0	1
YTVI	19	0	0	0	0	1	0	1
YTVI	21	0	0	1	0	0	1	2
Total		1	0	3	1	5	1	11
REVI	1	1	0	0	0	1	0	2
REVI	2	0	0	2	0	1	0	3
REVI	3	2	0	2	0	2	0	6
REVI	4	0	0	1	0	1	0	2
REVI	5	0	1	1	1	1	1	5
REVI	6	2	1	2	1	1	0	7
REVI	7	1	3	1	2	0	0	7
REVI	8	1	0	0	1	2	0	4
REVI	9	1	1	2	2	0	1	7
REVI	10	1	1	0	1	1	2	6
REVI	11	2	1	0	2	0	1	6
REVI	12	0	2	2	2	0	1	7
REVI	13	0	0	1	1	1	0	3
REVI	14	0	0	1	1	1	1	4
REVI	15	2	2	1	1	2	0	8

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
REVI	16	3	0	1	0	3	0	7
REVI	17	0	0	1	0	0	0	1
REVI	18	1	2	1	0	0	1	5
REVI	19	1	0	0	0	1	1	3
REVI	20	0	0	2	1	2	1	6
REVI	21	0	1	2	0	1	0	4
REVI	22	1	0	1	1	2	0	5
Total		19	15	24	17	23	10	108
BLJA	5	1	0	0	0	0	0	1
BLJA	7	0	0	0	0	1	0	1
BLJA	9	0	0	1	0	2	1	4
BLJA	10	0	0	0	0	0	2	2
BLJA	12	1	0	2	0	0	0	3
BLJA	13	0	0	0	1	0	0	1
BLJA	15	0	0	0	0	2	0	2
BLJA	16	0	0	1	2	0	0	3
BLJA	20	0	0	1	1	0	0	2
BLJA	21	0	0	1	0	0	0	1
BLJA	22	0	1	0	0	0	0	1
Total		2	1	6	4	5	3	21
AMCR	1	0	0	0	0	2	0	2
AMCR	2	0	0	1	0	2	0	3
AMCR	3	0	0	1	0	0	0	1
AMCR	4	3	0	2	0	1	0	6
AMCR	6	1	0	0	0	1	2	4
AMCR	7	0	0	0	0	1	0	1
AMCR	8	0	0	0	1	1	2	4
AMCR	9	0	0	0	0	2	0	2
AMCR	10	0	0	0	0	1	0	1
AMCR	11	0	0	1	0	0	0	1
AMCR	12	0	0	0	0	0	1	1
AMCR	13	0	0	2	0	0	1	3
AMCR	14	0	0	0	1	0	1	2
AMCR	15	2	0	0	0	0	0	2
AMCR	16	0	0	1	0	0	0	1
AMCR	17	0	0	1	0	1	0	2
AMCR	18	0	0	0	0	0	1	1
AMCR	19	0	0	1	1	1	1	4
AMCR	20	0	0	1	1	0	0	2
AMCR	22	1	0	0	0	0	0	1
Total		7	0	11	4	13	9	44
CACH	1	1	0	3	0	0	0	4
CACH	3	0	0	1	0	0	0	1
CACH	9	2	0	0	0	0	0	2
CACH	10	0	0	0	1	0	0	1
CACH	12	1	0	0	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
CACH	15	2	0	0	0	0	0	2
CACH	19	1	0	0	0	0	0	1
CACH	20	0	0	1	0	0	0	1
CACH	21	0	1	0	0	0	1	2
CACH	22	0	0	1	0	0	0	1
Total		7	1	6	1	0	1	16
TUTI	2	0	0	1	0	0	0	1
TUTI	3	1	0	1	0	0	0	2
TUTI	5	1	0	0	0	0	0	1
TUTI	6	0	1	0	1	0	1	3
TUTI	7	0	0	1	1	0	0	2
TUTI	8	1	0	0	1	0	0	2
TUTI	9	0	0	0	0	1	0	1
TUTI	10	0	0	0	2	0	1	3
TUTI	11	0	0	0	0	0	1	1
TUTI	12	0	0	0	0	1	0	1
TUTI	13	2	0	1	0	0	0	3
TUTI	15	1	1	1	0	0	0	3
TUTI	16	1	0	0	0	1	0	2
TUTI	17	0	0	1	0	1	0	2
TUTI	18	0	0	1	1	0	0	2
TUTI	19	0	0	0	1	0	0	1
TUTI	20	0	0	0	2	1	1	4
TUTI	21	1	0	0	3	0	1	5
TUTI	22	0	0	0	1	0	0	1
Total		8	2	7	13	5	5	40
WBNU	3	0	0	0	0	1	0	1
WBNU	5	0	0	1	0	0	0	1
WBNU	14	1	0	1	0	0	0	2
WBNU	15	1	0	0	0	0	0	1
WBNU	17	1	0	1	0	0	0	2
WBNU	19	0	0	0	1	0	0	1
Total		3	0	3	1	1	0	8
CARW	8	0	0	1	0	0	0	1
CARW	10	0	1	0	1	0	1	3
CARW	22	0	0	1	0	0	0	1
Total		0	1	2	1	0	1	5
HOWR	1	1	0	1	0	1	0	3
HOWR	9	0	0	1	0	0	0	1
HOWR	16	0	0	0	1	0	0	1
Total		1	0	2	1	1	0	5
BGGN	1	1	0	0	0	2	0	3
BGGN	2	1	0	2	0	2	0	5
BGGN	3	2	0	1	0	1	0	4
BGGN	5	2	1	0	0	0	2	5
BGGN	6	0	0	0	0	0	1	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BGGN	7	0	0	0	0	1	0	1
BGGN	8	0	0	0	0	2	0	2
BGGN	9	0	0	0	0	1	0	1
BGGN	10	1	0	1	0	0	1	3
BGGN	11	1	0	0	0	2	0	3
BGGN	12	0	0	1	1	1	0	3
BGGN	14	1	0	1	0	1	1	4
BGGN	16	0	0	0	0	1	0	1
BGGN	17	0	0	1	0	1	1	3
BGGN	18	0	0	0	0	1	0	1
BGGN	19	1	0	1	0	0	0	2
BGGN	20	0	0	1	0	0	0	1
BGGN	21	1	0	1	0	0	0	2
BGGN	22	1	1	1	0	0	0	3
Total		12	2	11	1	16	6	48
EABL	2	0	0	1	0	0	0	1
EABL	4	1	0	0	0	0	0	1
EABL	5	0	0	1	0	0	0	1
EABL	6	0	0	0	0	1	0	1
EABL	13	0	0	1	0	1	0	2
EABL	14	1	0	0	0	0	0	1
EABL	16	0	1	0	0	0	0	1
EABL	22	1	0	0	0	0	0	1
Total		3	1	3	0	2	0	9
WOTH	4	0	0	0	0	1	0	1
WOTH	5	1	0	0	1	0	0	2
WOTH	8	0	0	0	2	0	0	2
WOTH	15	0	1	0	0	0	1	2
WOTH	21	0	0	0	1	1	0	2
WOTH	22	0	0	0	1	1	0	2
Total		1	1	0	5	3	1	11
AMRO	4	0	0	0	0	1	0	1
AMRO	14	1	0	0	0	0	0	1
AMRO	17	1	0	0	0	0	0	1
Total		2	0	0	0	1	0	3
GRCA	2	0	0	0	0	1	0	1
GRCA	4	0	0	0	0	1	0	1
GRCA	7	2	0	0	0	0	0	2
GRCA	10	2	1	0	0	2	2	7
GRCA	11	0	0	0	1	1	0	2
GRCA	16	0	0	0	0	3	2	5
GRCA	18	0	0	2	1	0	0	3
GRCA	20	0	1	0	1	0	0	2
GRCA	21	0	1	0	0	0	0	1
Total		4	3	2	3	8	4	24
NOMO	1	1	0	0	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
NOMO	2	1	0	0	0	0	0	1
NOMO	7	1	0	0	0	0	0	1
NOMO	13	2	0	0	0	0	0	2
NOMO	16	0	1	0	0	0	0	1
NOMO	22	1	0	0	0	0	0	1
Total		6	1	0	0	0	0	7
BRTH	1	1	0	0	0	0	0	1
BRTH	2	1	0	0	0	1	0	2
BRTH	3	0	0	0	0	2	0	2
BRTH	4	1	0	0	0	0	0	1
BRTH	5	0	0	0	1	1	0	2
BRTH	7	0	0	1	0	0	0	1
BRTH	11	0	0	2	1	0	0	3
BRTH	12	0	0	1	0	0	0	1
BRTH	13	0	0	0	0	1	0	1
BRTH	16	0	0	0	1	0	1	2
BRTH	17	0	0	1	1	0	0	2
BRTH	18	0	0	1	0	0	0	1
BRTH	20	0	0	0	1	0	0	1
Total		3	0	6	5	5	1	20
EUST	1	0	0	0	0	1	0	1
EUST	19	0	0	0	0	2	0	2
EUST	22	0	0	1	0	3	0	4
Total		0	0	1	0	6	0	7
CEDW	5	0	0	0	0	12	0	12
CEDW	6	0	0	0	0	4	0	4
CEDW	9	0	0	0	0	1	0	1
CEDW	10	0	0	0	0	4	0	4
CEDW	11	0	0	1	0	4	0	5
Total		0	0	1	0	25	0	26
BWWA	9	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
NOPA	9	1	0	0	0	0	0	1
NOPA	17	1	1	0	0	0	0	2
Total		2	1	0	0	0	0	3
YWAR	3	1	0	0	0	0	0	1
YWAR	13	0	1	0	0	0	0	1
YWAR	18	0	0	0	0	1	0	1
Total		1	1	0	0	1	0	3
MAWA	17	1	0	0	0	0	0	1
Total		1	0	0	0	0	0	1
BTNW	8	1	0	0	0	0	0	1
Total		1	0	0	0	0	0	1
PIWA	3	0	0	0	0	1	0	1
PIWA	5	0	0	0	0	2	1	3
PIWA	6	2	0	2	0	0	0	4

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
PIWA	8	2	0	1	0	0	0	3
PIWA	10	0	1	1	1	0	0	3
PIWA	11	1	0	0	1	1	0	3
PIWA	12	0	2	0	1	0	1	4
PIWA	14	1	0	0	0	0	1	2
PIWA	16	2	0	1	1	0	0	4
PIWA	17	0	0	0	0	1	0	1
PIWA	20	0	0	1	0	0	0	1
PIWA	21	0	0	1	0	0	0	1
PIWA	22	0	0	0	0	2	0	2
Total		8	3	7	4	7	3	32
PRAW	1	1	0	2	0	1	0	4
PRAW	2	1	0	2	0	2	0	5
PRAW	3	2	0	3	0	2	0	7
PRAW	4	0	0	3	0	1	0	4
PRAW	5	0	1	1	0	1	1	4
PRAW	7	1	0	0	0	1	0	2
PRAW	8	1	0	1	0	1	1	4
PRAW	9	3	0	2	0	1	0	6
PRAW	10	2	0	2	0	2	0	6
PRAW	11	1	1	3	0	2	0	7
PRAW	12	3	0	2	0	1	2	8
PRAW	13	1	1	1	1	1	1	6
PRAW	14	1	1	0	1	0	0	3
PRAW	15	0	0	0	0	1	0	1
PRAW	16	1	1	1	0	2	1	6
PRAW	18	1	1	0	1	1	1	5
PRAW	19	0	2	2	2	1	1	8
PRAW	20	1	0	1	1	1	0	4
PRAW	21	1	1	2	1	1	1	7
PRAW	22	1	0	2	0	0	0	3
Total		22	9	30	7	23	9	100
YPWA	7	1	0	0	0	0	0	1
Total		1	0	0	0	0	0	1
BLPW	1	1	0	0	0	0	0	1
BLPW	8	2	0	0	0	0	0	2
Total		3	0	0	0	0	0	3
BAWW	3	1	0	0	0	0	0	1
BAWW	4	2	0	0	0	1	0	3
BAWW	8	0	0	0	0	1	1	2
BAWW	9	0	0	1	0	1	1	3
BAWW	10	1	0	0	1	0	1	3
BAWW	11	0	1	1	0	1	1	4
BAWW	12	1	0	0	0	0	1	2
BAWW	17	0	2	0	0	0	0	2
BAWW	18	0	0	1	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BAWW	20	0	1	0	0	0	0	1
BAWW	22	0	0	0	0	1	0	1
Total		5	4	3	1	5	5	23
WEWA	17	0	0	1	0	0	0	1
WEWA	19	0	0	0	0	1	0	1
WEWA	20	0	0	0	0	1	0	1
Total		0	0	1	0	2	0	3
OVEN	5	0	1	0	0	0	0	1
OVEN	6	0	2	0	2	0	0	4
OVEN	7	1	1	1	0	2	0	5
OVEN	8	0	2	1	1	0	1	5
OVEN	9	0	0	0	1	0	0	1
OVEN	10	0	1	0	0	0	1	2
OVEN	12	0	0	0	1	0	1	2
OVEN	14	0	1	0	0	0	0	1
OVEN	15	0	1	0	0	0	2	3
OVEN	16	0	0	0	0	2	0	2
OVEN	18	0	1	0	2	0	1	4
OVEN	19	0	1	0	1	0	0	2
OVEN	20	1	1	1	0	1	0	4
OVEN	21	1	0	1	1	2	1	6
OVEN	22	0	0	0	0	1	0	1
Total		3	12	4	9	8	7	43
KEWA	18	0	0	0	0	0	1	1
KEWA	20	0	0	0	1	0	1	2
Total		0	0	0	1	0	2	3
COYE	1	2	0	3	0	1	0	6
COYE	2	2	0	0	0	0	0	2
COYE	3	2	0	2	0	4	0	8
COYE	4	3	0	3	0	4	0	10
COYE	5	1	0	2	0	2	0	5
COYE	6	5	0	3	0	1	0	9
COYE	7	2	0	3	0	0	0	5
COYE	8	1	0	0	0	3	0	4
COYE	9	2	0	0	0	2	0	4
COYE	10	2	0	5	0	1	0	8
COYE	11	1	0	2	0	2	0	5
COYE	12	2	0	2	0	3	0	7
COYE	13	1	0	4	0	3	0	8
COYE	14	3	0	1	0	0	0	4
COYE	16	0	0	1	2	1	1	5
COYE	17	1	0	1	1	1	0	4
COYE	18	2	1	1	1	3	0	8
COYE	19	2	1	1	0	1	1	6
COYE	20	0	1	1	0	0	0	2
COYE	21	2	0	0	0	3	0	5

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
COYE	22	3	0	4	0	3	0	10
Total		39	3	39	4	38	2	125
HOWA	6	0	0	0	0	0	1	1
HOWA	17	0	0	0	0	0	1	1
HOWA	18	0	1	0	1	1	0	3
HOWA	19	0	0	0	0	0	1	1
HOWA	20	0	0	0	0	1	0	1
HOWA	21	0	0	0	1	0	0	1
Total		0	1	0	2	2	3	8
CAWA	1	1	0	0	0	0	0	1
CAWA	8	1	0	0	0	0	0	1
CAWA	10	1	0	0	0	0	0	1
Total		3	0	0	0	0	0	3
YBCH	1	1	0	5	0	2	0	8
YBCH	2	3	0	3	0	2	0	8
YBCH	3	3	0	4	0	2	0	9
YBCH	4	2	0	2	0	2	0	6
YBCH	5	3	0	2	0	3	0	8
YBCH	6	2	0	0	1	1	0	4
YBCH	7	3	0	1	0	1	0	5
YBCH	8	1	0	2	0	1	0	4
YBCH	9	2	0	2	0	2	0	6
YBCH	10	1	0	1	0	0	0	2
YBCH	11	3	0	1	0	1	0	5
YBCH	12	2	0	1	0	1	0	4
YBCH	13	0	0	0	0	1	0	1
YBCH	14	0	0	1	0	1	0	2
YBCH	16	0	1	1	0	0	1	3
YBCH	17	0	1	1	0	0	0	2
YBCH	18	1	1	0	1	1	2	6
YBCH	19	0	1	0	2	0	2	5
YBCH	20	2	0	1	1	0	1	5
YBCH	21	1	0	1	0	1	0	3
YBCH	22	1	0	2	0	1	0	4
Total		31	4	31	5	23	6	100
SUTA	2	0	0	1	0	0	0	1
SUTA	3	0	0	1	0	1	0	2
SUTA	4	0	0	1	0	0	0	1
SUTA	5	1	0	0	0	1	0	2
SUTA	7	0	1	0	0	0	0	1
SUTA	10	1	0	0	1	0	0	2
SUTA	16	0	0	1	0	1	0	2
SUTA	17	0	0	0	0	1	0	1
SUTA	18	1	0	0	0	0	0	1
SUTA	20	1	0	0	0	0	0	1
SUTA	21	1	0	0	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
SUTA	22	0	1	0	0	0	0	1
Total		5	2	4	1	4	0	16
SCTA	4	1	0	0	0	0	0	1
SCTA	7	0	0	0	0	1	0	1
SCTA	9	0	0	1	0	0	0	1
SCTA	11	1	0	0	0	0	0	1
SCTA	12	0	1	0	0	0	0	1
SCTA	14	1	0	0	0	0	0	1
SCTA	15	0	0	1	0	0	0	1
SCTA	17	1	0	0	0	0	0	1
SCTA	19	1	0	0	0	0	0	1
SCTA	20	0	0	1	0	0	0	1
SCTA	21	0	0	0	0	1	0	1
SCTA	22	0	1	0	0	0	0	1
Total		5	2	3	0	2	0	12
EATO	1	3	0	2	0	1	0	6
EATO	2	0	0	1	0	2	0	3
EATO	3	1	0	2	0	2	0	5
EATO	4	3	0	1	0	2	0	6
EATO	5	1	0	0	0	2	1	4
EATO	6	0	0	0	0	1	1	2
EATO	7	1	1	2	0	1	0	5
EATO	8	0	0	1	0	2	1	4
EATO	9	2	0	2	1	2	0	7
EATO	10	0	0	0	0	1	0	1
EATO	11	0	0	1	0	1	0	2
EATO	12	1	0	2	0	1	0	4
EATO	13	1	0	1	0	0	0	2
EATO	14	0	0	3	0	1	0	4
EATO	15	0	0	1	0	0	0	1
EATO	16	0	0	2	1	0	0	3
EATO	17	1	1	0	0	1	1	4
EATO	18	2	0	0	1	2	0	5
EATO	19	0	0	0	1	0	1	2
EATO	20	0	1	1	2	3	1	8
EATO	21	1	1	1	2	1	1	7
EATO	22	0	0	1	0	0	0	1
Total		17	4	24	8	26	7	86
CHSP	1	0	0	4	0	1	0	5
CHSP	2	3	0	2	0	2	0	7
CHSP	4	3	0	0	0	1	0	4
CHSP	5	3	1	1	0	1	2	8
CHSP	6	0	0	2	0	2	0	4
CHSP	7	0	0	0	0	2	0	2
CHSP	8	0	0	0	0	1	0	1
CHSP	12	1	0	0	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
CHSP	13	0	0	1	0	0	0	1
CHSP	14	0	0	1	0	1	0	2
CHSP	16	1	0	1	0	2	0	4
CHSP	17	0	0	0	1	0	0	1
CHSP	18	0	0	1	0	0	0	1
CHSP	19	1	0	0	0	0	0	1
CHSP	20	0	0	0	0	1	0	1
CHSP	22	2	0	3	1	1	0	7
Total		14	1	16	2	15	2	50
FISP	1	1	0	0	0	0	0	1
FISP	2	1	0	0	0	1	0	2
FISP	3	0	0	2	0	0	0	2
FISP	4	2	0	3	0	1	0	6
FISP	5	1	0	1	0	1	0	3
FISP	6	0	0	0	0	1	0	1
FISP	7	2	0	1	0	2	0	5
FISP	8	0	0	3	0	1	0	4
FISP	9	1	0	0	0	1	0	2
FISP	10	1	0	1	0	1	0	3
FISP	11	1	0	1	0	2	0	4
FISP	12	2	0	1	0	1	0	4
FISP	13	2	1	1	0	1	1	6
FISP	14	1	0	2	0	0	0	3
FISP	16	0	1	0	0	1	0	2
FISP	18	0	0	0	0	1	0	1
FISP	19	0	0	0	0	2	1	3
FISP	20	0	0	1	0	0	0	1
FISP	21	1	0	0	0	0	0	1
FISP	22	1	0	1	0	1	0	3
Total		17	2	18	0	18	2	57
NOCA	3	0	0	0	0	1	0	1
NOCA	4	2	0	0	0	0	0	2
NOCA	5	0	2	0	0	2	0	4
NOCA	6	0	0	1	0	1	1	3
NOCA	8	0	1	0	0	0	0	1
NOCA	10	0	1	0	0	1	0	2
NOCA	19	0	0	0	0	1	0	1
NOCA	22	0	0	1	0	2	0	3
Total		2	4	2	0	8	1	17
RBGR	9	0	0	0	1	0	0	1
RBGR	12	0	1	0	0	0	0	1
Total		0	1	0	1	0	0	2
BLGR	1	1	0	1	0	0	0	2
BLGR	2	2	0	1	0	0	0	3
BLGR	3	0	0	0	0	1	0	1
BLGR	4	0	0	1	0	0	0	1

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BLGR	5	0	0	0	0	1	0	1
BLGR	6	0	0	0	0	1	0	1
BLGR	7	1	0	1	0	0	0	2
BLGR	8	0	0	1	0	0	0	1
BLGR	11	0	0	0	0	1	0	1
BLGR	12	0	0	1	0	0	0	1
BLGR	13	2	0	1	0	1	0	4
BLGR	19	0	0	1	0	0	0	1
BLGR	20	1	0	0	0	0	0	1
Total		7	0	8	0	5	0	20
INBU	1	5	0	0	0	3	0	8
INBU	2	2	0	3	0	2	0	7
INBU	3	3	0	2	0	2	0	7
INBU	4	5	0	3	0	4	0	12
INBU	5	3	0	2	0	3	0	8
INBU	6	5	0	2	0	2	0	9
INBU	7	0	0	4	0	3	0	7
INBU	8	2	2	1	0	1	0	6
INBU	9	3	0	2	0	3	0	8
INBU	10	3	0	2	1	2	0	8
INBU	11	2	0	2	0	3	1	8
INBU	12	3	0	3	0	2	0	8
INBU	13	1	1	1	1	2	1	7
INBU	14	2	0	3	0	2	0	7
INBU	15	0	0	1	0	1	0	2
INBU	16	2	0	0	1	3	2	8
INBU	17	1	0	1	0	0	0	2
INBU	18	3	1	1	1	2	0	8
INBU	19	0	1	2	2	1	1	7
INBU	20	0	0	2	0	1	0	3
INBU	21	1	0	0	0	1	0	2
INBU	22	3	0	0	0	4	0	7
Total		49	5	37	6	47	5	149
RWBL	1	0	0	0	0	1	0	1
RWBL	2	0	0	0	0	1	0	1
RWBL	13	0	0	3	0	2	0	5
Total		0	0	3	0	4	0	7
COGR	1	1	0	0	0	0	0	1
COGR	3	0	0	0	0	1	0	1
COGR	12	0	0	0	0	1	0	1
COGR	20	0	0	1	0	0	0	1
Total		1	0	1	0	2	0	4
BHCO	3	0	0	1	0	0	0	1
BHCO	5	2	0	0	0	0	0	2
BHCO	6	1	0	1	1	1	1	5
BHCO	7	1	0	1	1	1	0	4

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BHCO	8	0	0	1	0	1	0	2
BHCO	9	0	0	0	0	1	1	2
BHCO	10	1	0	0	0	0	0	1
BHCO	11	0	0	0	0	1	0	1
BHCO	13	0	0	0	0	1	0	1
BHCO	14	1	0	0	0	2	1	4
BHCO	18	1	0	0	0	0	0	1
BHCO	19	1	0	0	0	0	0	1
BHCO	21	0	1	0	0	1	0	2
BHCO	22	0	0	0	0	1	0	1
Total		8	1	4	2	10	3	28
ORORO	1	1	0	1	0	1	0	3
ORORO	3	1	0	2	0	0	0	3
ORORO	4	0	0	1	0	0	0	1
ORORO	11	0	0	1	0	0	0	1
ORORO	16	1	0	0	0	0	0	1
ORORO	18	0	0	0	0	1	0	1
ORORO	19	0	0	1	0	0	0	1
ORORO	20	0	1	0	0	0	0	1
ORORO	22	2	0	2	0	1	0	5
Total		5	1	8	0	3	0	17
BAOR	2	1	0	1	0	0	0	2
BAOR	3	2	0	0	0	1	0	3
BAOR	6	0	0	1	0	0	0	1
BAOR	8	1	0	0	0	1	0	2
BAOR	9	0	0	0	0	1	0	1
Total		4	0	2	0	3	0	9
HOFI	13	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
AMGO	1	0	0	3	0	0	0	3
AMGO	2	0	0	1	0	0	0	1
AMGO	3	0	0	1	0	0	0	1
AMGO	4	0	0	0	0	1	0	1
AMGO	6	0	0	0	0	1	0	1
AMGO	7	1	0	0	0	1	0	2
AMGO	9	2	0	1	0	0	0	3
AMGO	11	0	0	0	0	1	0	1
AMGO	12	1	0	0	0	0	0	1
AMGO	13	1	0	2	0	0	0	3
AMGO	14	0	0	1	0	0	0	1
AMGO	16	0	0	1	0	0	0	1
AMGO	17	0	0	0	0	1	0	1
AMGO	19	0	0	0	0	1	0	1
AMGO	20	0	0	1	0	0	0	1
AMGO	22	1	0	0	0	2	0	3
Total		6	0	11	0	8	0	25

Appendix II (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the spring migration surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
HOSP	22	0	0	1	0	0	0	1
Total		0	0	1	0	0	0	1
Column Total		398	106	440	145	485	123	1697

Appendix III. List of all species detected with scientific name, alpha code, and migration status.

Common Name	Genus	Species	AOU Alpha code	Migration Status
Green Heron	*Butorides*	*virescens*	GRHE	Temperate Migrant
Black Vulture	*Coragyps*	*atratus*	BLVU	Resident
Turkey Vulture	*Cathartes*	*aura*	TUVU	Temperate Migrant
Canada Goose	*Branta*	*canadensis*	CAGO	Resident
Cooper's Hawk	*Accipiter*	*cooperii*	COHA	Neotropical Migrant
Red-shouldered Hawk	*Buteo*	*lineatus*	RSHA	Resident
Red-tailed Hawk	*Buteo*	*jamaicensis*	RTHA	Temperate Migrant
American Kestrel	*Falco*	*sparverius*	AMKE	Temperate Migrant
Wild Turkey	*Meleagris*	*gallopavo*	WITU	Resident
Northern Bobwhite	*Colinus*	*virginianus*	NOBO	Resident
Killdeer	*Charadrius*	*vociferous*	KILL	Temperate Migrant
Mourning Dove	*Zenaida*	*macroura*	MODO	Resident
Black-billed Cuckoo	*Coccyzus*	*erythropthalmus*	BBCU	Neotropical Migrant
Yellow-billed Cuckoo	*Coccyzus*	*americanus*	YBCU	Neotropical Migrant
Great Horned Owl	*Bubo*	*virginianus*	GHOW	Resident
Chimney Swift	*Chaetura*	*pelagica*	CHSW	Neotropical Migrant
Ruby-throated Hummingbird	*Archilochus*	*colubris*	RTHU	Neotropical Migrant
Red-headed Woodpecker	*Melanerpes*	*erythrocephalus*	RHWO	Resident
Red-bellied Woodpecker	*Melanerpes*	*carolinus*	RBWO	Resident
Downy Woodpecker	*Picoides*	*pubescens*	DOWO	Resident
Hairy Woodpecker	*Picoides*	*villosus*	HAWO	Resident
Northern Flicker	*Colaptes*	*auratus*	YSFL	Temperate Migrant
Pileated Woodpecker	*Dryocopus*	*pileatus*	PIWO	Resident
Eastern Wood-Pewee	*Contopus*	*virens*	EAWP	Neotropical Migrant
Acadian Flycatcher	*Empidonax*	*virescens*	ACFL	Neotropical Migrant
Willow Flycatcher	*Empidonax*	*traillii*	WIFL	Neotropical Migrant
Eastern Phoebe	*Sayornis*	*phoebe*	EAPH	Temperate Migrant
Great Crested Flycatcher	*Myiarchus*	*crinitus*	GCFL	Neotropical Migrant
Eastern Kingbird	*Tyrannus*	*tyrannus*	EAKI	Neotropical Migrant
White-eyed Vireo	*Vireo*	*griseus*	WEVI	Neotropical Migrant
Yellow-throated Vireo	*Vireo*	*flavifrons*	YTVI	Neotropical Migrant
Red-eyed Vireo	*Vireo*	*olivaceus*	REVI	Neotropical Migrant
Blue Jay	*Cyanocitta*	*cristata*	BLJA	Temperate Migrant
American Crow	*Corvus*	*brachyrhynchos*	AMCR	Resident
Purple Martin	*Progne*	*subis*	PUMA	Neotropical Migrant
Tree Swallow	*Tachycineta*	*bicolor*	TRES	Neotropical Migrant
Barn Swallow	*Hirundo*	*rustica*	BARS	Neotropical Migrant
Carolina Chickadee	*Poecile*	*carolinensis*	CACH	Resident
Tufted Titmouse	*Baeolophus*	*bicolor*	TUTI	Resident
White-breasted Nuthatch	*Sitta*	*carolinensis*	WBNU	Resident
Carolina Wren	*Thryothorus*	*ludovicianus*	CARW	Resident
House Wren	*Troglodytes*	*aedon*	HOWR	Neotropical Migrant
Blue-gray Gnatcatcher	*Polioptila*	*caerulea*	BGGN	Neotropical Migrant
Eastern Bluebird	*Sialia*	*sialis*	EABL	Temperate Migrant
Wood Thrush	*Hylocichla*	*mustelina*	WOTH	Neotropical Migrant
American Robin	*Turdus*	*migratorius*	AMRO	Temperate Migrant
Gray Catbird	*Dumetella*	*carolinensis*	GRCA	Neotropical Migrant
Northern Mockingbird	*Mimus*	*polyglottos*	NOMO	Resident
Brown Thrasher	*Toxostoma*	*rufum*	BRTH	Temperate Migrant

Appendix III(continued). List of all species detected with scientific name, alpha code, and migration status.

Common Name	Genus	Species	AOU Alpha code	Migration Status
European Starling	*Sturnus*	*vulgaris*	EUST	Resident
Cedar Waxwing	*Bombycilla*	*cedrorum*	CEDW	Temperate Migrant
Blue-winged Warbler	*Vermivora*	*pinus*	BWWA	Neotropical Migrant
Northern Parula	*Parula*	*americana*	NOPA	Neotropical Migrant
Yellow Warbler	*Dendroica*	*petechia*	YWAR	Neotropical Migrant
Magnolia Warbler	*Dendroica*	*magnolia*	MAWA	Neotropical Migrant
Black-throated Green Warbler	*Dendroica*	*virens*	BTNW	Neotropical Migrant
Pine Warbler	*Dendroica*	*pinus*	PIWA	Temperate Migrant
Prairie Warbler	*Dendroica*	*discolor*	PRAW	Neotropical Migrant
Palm Warbler	*Dendroica*	*palmarum*	YPWA	Neotropical Migrant
Blackpoll Warbler	*Dendroica*	*striata*	BLPW	Neotropical Migrant
Black-and-white Warbler	*Mniotilta*	*varia*	BAWW	Neotropical Migrant
Worm-eating Warbler	*Helmitheros*	*vermivorum*	WEWA	Neotropical Migrant
Ovenbird	*Seiurus*	*aurocapilla*	OVEN	Neotropical Migrant
Kentucky Warbler	*Oporornis*	*formosus*	KEWA	Neotropical Migrant
Mourning Warbler	*Oporornis*	*philadelphia*	MOWA	Neotropical Migrant
Common Yellowthroat	*Geothlypis*	*trichas*	COYE	Neotropical Migrant
Hooded Warbler	*Wilsonia*	*citrina*	HOWA	Neotropical Migrant
Canada Warbler	*Wilsonia*	*canadensis*	CAWA	Neotropical Migrant
Yellow-breasted Chat	*Icteria*	*virens*	YBCH	Neotropical Migrant
Summer Tanager	*Piranga*	*rubra*	SUTA	Neotropical Migrant
Scarlet Tanager	*Piranga*	*olivacea*	SCTA	Neotropical Migrant
Eastern Towhee	*Pipilo*	*erythrophthalmus*	EATO	Temperate Migrant
Chipping Sparrow	*Spizella*	*passerina*	CHSP	Temperate Migrant
Field Sparrow	*Spizella*	*pusilla*	FISP	Temperate Migrant
Grasshopper Sparrow	*Ammodramus*	*savannarum*	GRSP	Neotropical Migrant
Song Sparrow	*Melospiza*	*melodia*	SOSP	Temperate Migrant
Northern Cardinal	*Cardinalis*	*cardinalis*	NOCA	Resident
Rose-breasted Grosbeak	*Pheucticus*	*ludovicianus*	RBGR	Neotropical Migrant
Blue Grosbeak	*Passerina*	*caerulea*	BLGR	Neotropical Migrant
Indigo Bunting	*Passerina*	*cyanea*	INBU	Neotropical Migrant
Red-winged Blackbird	*Agelaius*	*phoeniceus*	RWBL	Temperate Migrant
Common Grackle	*Quiscalus*	*quiscula*	COGR	Resident
Brown-headed Cowbird	*Molothrus*	*ater*	BHCO	Resident
Orchard Oriole	*Icterus*	*spurius*	OROR	Neotropical Migrant
Baltimore Oriole	*Icterus*	*galbula*	BAOR	Neotropical Migrant
House Finch	*Carpodacus*	*mexicanus*	HOFI	Resident
American Goldfinch	*Carduelis*	*tristis*	AMGO	Temperate Migrant
House Sparrow	*Passer*	*domesticus*	HOSP	Resident

Appendix IV. Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
GRHE	9	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
BLVU	7	1	0	0	0	0	0	1
Total		1	0	0	0	0	0	1
TUVU	1	2	0	0	0	0	0	2
Total		2	0	0	0	0	0	2
RSHA	1	0	0	0	0	1	0	1
RSHA	22	1	0	0	0	0	0	1
Total		1	0	0	0	1	0	2
RTHA	1	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
AMKE	13	0	0	0	1	0	0	1
Total		0	0	0	1	0	0	1
WITU	7	2	0	0	0	0	0	2
WITU	10	1	0	0	0	0	0	1
WITU	17	1	0	0	0	0	0	1
WITU	18	1	1	0	0	0	0	2
WITU	19	1	0	0	0	0	0	1
WITU	20	1	0	0	0	0	0	1
Total		7	1	0	0	0	0	8
NOBO	2	1	0	0	0	1	0	2
NOBO	3	0	0	0	0	2	0	2
NOBO	4	2	0	0	0	2	0	4
NOBO	5	1	0	0	0	0	0	1
NOBO	8	2	0	1	0	2	0	5
NOBO	9	0	0	1	0	2	0	3
NOBO	10	0	0	2	0	1	0	3
NOBO	11	1	0	1	0	1	0	3
NOBO	12	1	0	1	0	1	0	3
NOBO	13	1	1	0	2	0	0	4
NOBO	21	0	0	2	0	0	0	2
NOBO	22	0	0	1	0	1	0	2
Total		9	1	9	2	13	0	34
MODO	1	0	0	0	0	2	0	2
MODO	2	2	0	0	0	1	0	3
MODO	3	0	0	0	0	1	0	1
MODO	4	0	0	0	0	1	0	1
MODO	6	0	0	0	0	1	0	1
MODO	8	0	0	0	0	1	0	1
MODO	10	0	0	0	0	1	0	1
MODO	11	0	1	0	0	0	0	1
MODO	13	0	0	0	0	0	3	3
MODO	16	0	4	1	0	0	0	5
MODO	17	0	0	0	0	1	0	1
MODO	18	1	0	0	0	0	0	1
MODO	19	0	0	1	0	0	1	2
MODO	20	0	0	1	0	0	0	1
MODO	22	1	0	0	0	0	0	1

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
Total		4	5	3	0	9	4	25
YBCU	2	1	0	0	0	2	0	3
YBCU	5	0	0	0	0	1	0	1
YBCU	6	0	0	0	0	1	0	1
YBCU	7	0	0	2	0	1	0	3
YBCU	8	0	1	0	1	0	0	2
YBCU	9	0	0	0	0	0	1	1
YBCU	12	0	1	0	0	0	1	2
YBCU	13	0	0	0	0	1	0	1
YBCU	15	1	0	1	0	1	1	4
YBCU	17	0	0	2	0	1	1	4
YBCU	18	0	0	0	1	0	0	1
YBCU	19	1	1	0	1	0	0	3
YBCU	20	0	1	1	0	0	0	2
YBCU	22	1	0	1	0	0	0	2
Total		4	4	7	3	8	4	30
CHSW	5	1	0	0	0	0	0	1
CHSW	6	1	0	0	0	0	0	1
CHSW	9	0	0	1	0	0	0	1
CHSW	10	0	0	3	0	0	0	3
CHSW	13	0	0	0	1	0	0	1
CHSW	22	1	0	0	0	0	0	1
Total		3	0	4	1	0	0	8
RTHU	12	0	0	0	0	1	0	1
RTHU	19	0	0	0	0	1	0	1
Total		0	0	0	0	2	0	2
RHWO	14	0	0	0	1	0	0	1
Total		0	0	0	1	0	0	1
RBWO	4	1	0	0	0	1	0	2
RBWO	5	0	0	0	1	0	0	1
RBWO	6	0	0	1	0	0	0	1
RBWO	7	0	0	0	0	0	1	1
RBWO	10	0	0	0	1	0	0	1
RBWO	11	0	0	0	1	0	0	1
RBWO	13	0	0	0	0	1	0	1
RBWO	14	1	0	0	1	2	0	4
RBWO	16	1	0	0	0	0	0	1
RBWO	21	0	1	0	0	0	0	1
RBWO	22	2	0	0	0	0	0	2
Total		5	1	1	4	4	1	16
DOWO	1	0	0	0	0	1	0	1
DOWO	2	2	0	0	0	1	0	3
DOWO	3	0	0	2	0	0	0	2
DOWO	6	1	0	0	0	0	0	1
DOWO	7	0	0	1	1	1	1	4
DOWO	8	0	0	0	0	1	0	1
DOWO	9	0	0	0	0	1	0	1
DOWO	10	0	0	1	1	1	0	3

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
DOWO	11	0	0	1	0	0	1	2
DOWO	15	0	0	0	1	0	0	1
DOWO	16	0	1	0	0	0	1	2
DOWO	17	0	0	1	0	0	0	1
DOWO	19	0	0	0	1	0	0	1
DOWO	21	0	1	0	0	0	0	1
Total		3	2	6	4	6	3	24
HAWO	9	0	0	0	0	1	0	1
HAWO	11	0	0	1	0	0	0	1
HAWO	12	0	0	0	1	0	0	1
HAWO	15	0	0	1	1	0	0	2
HAWO	16	1	0	0	0	0	0	1
HAWO	20	1	0	1	1	0	0	3
HAWO	21	0	0	1	0	0	0	1
Total		2	0	4	3	1	0	10
YSFL	2	1	0	0	0	0	0	1
YSFL	3	0	0	0	0	1	0	1
YSFL	9	1	0	0	0	0	0	1
YSFL	10	1	0	0	0	0	0	1
YSFL	11	0	1	0	0	0	0	1
YSFL	13	1	0	0	0	0	1	2
YSFL	14	0	0	0	1	0	0	1
YSFL	15	1	0	0	0	0	0	1
YSFL	16	1	1	0	2	0	1	5
YSFL	17	0	1	0	0	0	0	1
YSFL	19	0	0	1	0	0	0	1
YSFL	21	0	0	1	0	0	0	1
Total		6	3	2	3	1	2	17
PIWO	1	0	0	0	0	1	0	1
PIWO	3	0	0	0	0	1	0	1
PIWO	11	2	0	0	0	0	0	2
PIWO	18	0	1	0	0	0	0	1
Total		2	1	0	0	2	0	5
EAWP	1	2	0	0	0	1	0	3
EAWP	2	2	0	1	0	2	0	5
EAWP	3	1	0	1	0	0	0	2
EAWP	4	0	0	1	0	2	0	3
EAWP	6	0	2	0	1	1	0	4
EAWP	8	0	0	0	1	2	0	3
EAWP	9	1	0	1	0	2	0	4
EAWP	10	0	0	0	0	0	1	1
EAWP	11	1	0	1	0	1	0	3
EAWP	12	1	0	2	0	0	1	4
EAWP	13	1	0	0	1	0	0	2
EAWP	14	0	0	0	1	0	0	1
EAWP	15	0	0	1	0	0	1	2
EAWP	16	1	0	1	0	3	0	5
EAWP	17	1	0	0	0	1	0	2

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
EAWP	18	1	0	0	1	0	0	2
EAWP	19	0	0	0	0	0	1	1
EAWP	20	1	1	2	0	0	0	4
EAWP	21	1	0	1	1	0	1	4
Total		14	3	12	6	15	5	55
ACFL	8	0	0	0	1	0	1	2
ACFL	11	0	0	0	1	0	1	2
ACFL	15	0	0	1	0	0	1	2
ACFL	17	0	1	2	0	1	0	4
ACFL	20	0	0	1	0	0	0	1
ACFL	21	1	0	0	0	0	0	1
Total		1	1	4	2	1	3	12
EAPH	5	0	0	1	1	0	0	2
EAPH	16	0	0	1	0	0	0	1
EAPH	17	2	0	2	0	0	0	4
EAPH	22	1	0	0	0	1	0	2
Total		3	0	4	1	1	0	9
GCFL	1	1	0	0	0	0	0	1
GCFL	5	1	0	0	0	0	0	1
GCFL	8	0	1	0	0	0	0	1
GCFL	12	0	1	0	0	0	0	1
GCFL	15	0	1	0	0	0	0	1
GCFL	16	1	0	0	0	0	0	1
GCFL	18	0	0	0	0	1	0	1
Total		3	3	0	0	1	0	7
EAKI	1	1	0	0	0	2	0	3
EAKI	2	1	0	2	0	2	0	5
EAKI	3	2	0	1	0	1	0	4
EAKI	4	1	0	0	0	2	0	3
EAKI	5	0	0	0	0	1	0	1
EAKI	6	0	0	1	0	0	0	1
EAKI	7	1	0	1	0	0	0	2
EAKI	9	1	0	0	0	0	0	1
EAKI	10	0	0	0	0	1	0	1
EAKI	11	0	0	1	0	1	0	2
EAKI	13	1	0	1	0	0	0	2
EAKI	16	0	1	0	1	0	1	3
EAKI	18	1	0	0	0	0	0	1
EAKI	20	1	0	0	2	0	0	3
Total		10	1	7	3	10	1	32
WEVI	1	1	0	0	0	1	0	2
WEVI	2	1	0	0	0	1	0	2
WEVI	3	0	0	1	0	2	0	3
WEVI	10	0	0	1	0	1	0	2
WEVI	11	0	0	0	0	1	0	1
WEVI	12	0	0	0	0	1	0	1
WEVI	16	0	0	1	0	0	0	1
WEVI	17	1	0	1	0	1	0	3

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
WEVI	18	1	1	1	0	1	0	4
WEVI	19	1	1	0	1	0	0	3
WEVI	20	0	0	0	1	0	1	2
WEVI	21	3	0	0	0	0	0	3
WEVI	22	1	0	0	0	0	0	1
Total		9	2	5	2	9	1	28
YTVI	7	0	0	0	0	0	1	1
YTVI	8	0	0	1	0	1	0	2
YTVI	9	1	0	0	1	0	0	2
YTVI	10	1	0	0	0	0	0	1
YTVI	11	0	0	0	0	0	1	1
YTVI	12	0	0	0	0	1	0	1
YTVI	14	0	0	1	1	0	1	3
YTVI	17	1	0	0	0	0	0	1
YTVI	18	0	1	1	0	0	0	2
YTVI	20	1	0	1	0	0	0	2
YTVI	21	0	1	0	0	0	0	1
Total		4	2	4	2	2	3	17
REVI	3	1	0	0	0	0	0	1
REVI	4	0	0	0	0	1	0	1
REVI	5	1	0	0	0	0	1	2
REVI	6	3	0	0	1	1	1	6
REVI	7	1	0	0	0	1	0	2
REVI	8	0	1	0	0	0	0	1
REVI	9	0	0	0	0	1	0	1
REVI	10	0	0	0	1	0	0	1
REVI	11	0	0	0	1	1	0	2
REVI	12	0	1	2	1	0	1	5
REVI	13	1	0	0	1	1	0	3
REVI	14	0	1	0	0	0	0	1
REVI	15	0	1	1	2	2	0	6
REVI	16	0	0	1	0	1	0	2
REVI	17	0	0	3	1	2	0	6
REVI	18	0	0	0	1	0	0	1
REVI	19	1	0	2	0	1	0	4
REVI	20	2	1	1	0	0	0	4
REVI	21	1	0	1	1	0	1	4
REVI	22	1	0	0	0	0	0	1
Total		12	5	11	10	12	4	54
BLJA	2	0	0	1	0	0	0	1
BLJA	6	0	1	0	0	0	0	1
BLJA	10	0	1	1	0	0	0	2
BLJA	14	0	0	2	0	0	0	2
BLJA	16	0	0	0	0	1	0	1
BLJA	20	0	0	1	0	1	0	2
Total		0	2	5	0	2	0	9
AMCR	1	2	0	0	0	0	0	2
AMCR	2	2	0	0	0	0	0	2

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
AMCR	3	0	0	1	0	2	0	3
AMCR	4	0	0	1	0	0	0	1
AMCR	5	0	0	1	0	0	1	2
AMCR	6	0	1	0	0	0	0	1
AMCR	7	2	0	1	0	1	0	4
AMCR	10	0	1	0	0	0	0	1
AMCR	11	1	0	0	0	0	0	1
AMCR	12	1	0	0	0	0	0	1
AMCR	13	0	0	0	1	0	0	1
AMCR	16	0	0	0	1	0	0	1
AMCR	17	1	0	1	0	0	0	2
AMCR	18	0	1	0	1	0	1	3
AMCR	20	0	0	0	1	0	1	2
AMCR	21	0	0	1	1	0	0	2
AMCR	22	1	0	0	0	1	0	2
Total		10	3	6	5	4	3	31
PUMA	5	0	0	0	0	1	0	1
PUMA	7	0	0	1	0	0	0	1
PUMA	9	0	0	0	0	14	0	14
PUMA	10	0	0	3	0	2	0	5
PUMA	16	0	0	0	0	2	0	2
Total		0	0	4	0	19	0	23
TRES	3	0	0	2	0	0	0	2
Total		0	0	2	0	0	0	2
BARS	1	0	0	1	0	2	0	3
BARS	4	0	0	0	0	1	0	1
BARS	5	0	0	3	0	0	0	3
BARS	13	0	0	2	0	0	2	4
Total		0	0	6	0	3	2	11
CACH	2	1	0	1	0	0	0	2
CACH	3	0	0	0	0	2	0	2
CACH	7	0	0	2	0	0	0	2
CACH	8	0	0	0	0	0	2	2
CACH	9	1	0	0	1	2	0	4
CACH	10	2	0	0	1	0	0	3
CACH	11	0	0	0	1	0	2	3
CACH	19	1	0	0	0	0	0	1
CACH	20	0	0	0	0	0	1	1
CACH	22	1	0	2	0	0	0	3
Total		6	0	5	3	4	5	23
TUTI	1	0	0	0	0	2	0	2
TUTI	2	1	0	0	0	0	0	1
TUTI	3	0	0	1	0	1	0	2
TUTI	4	0	0	1	0	0	0	1
TUTI	5	0	0	0	1	0	0	1
TUTI	6	1	1	0	0	0	0	2
TUTI	7	1	0	0	0	1	0	2
TUTI	8	0	0	1	0	4	0	5

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
TUTI	9	0	0	2	0	2	0	4
TUTI	10	0	0	0	0	1	0	1
TUTI	12	0	1	0	0	0	0	1
TUTI	13	1	0	1	0	0	0	2
TUTI	15	0	1	0	0	0	0	1
TUTI	16	0	0	1	0	2	0	3
TUTI	17	2	0	1	0	0	0	3
TUTI	18	0	0	0	1	0	0	1
TUTI	19	0	0	0	0	0	1	1
TUTI	20	0	2	0	1	0	1	4
TUTI	21	0	0	1	0	0	0	1
TUTI	22	1	0	3	0	1	0	5
Total		7	5	12	3	14	2	43
WBNU	9	0	0	0	0	1	0	1
WBNU	15	0	0	1	0	0	0	1
WBNU	17	0	0	1	0	0	0	1
WBNU	21	0	0	1	0	0	0	1
Total		0	0	3	0	1	0	4
CARW	1	0	0	1	0	1	0	2
CARW	3	0	0	0	0	1	0	1
CARW	4	0	0	0	0	1	0	1
CARW	6	0	0	0	0	1	0	1
CARW	7	0	0	0	0	1	0	1
CARW	8	0	0	0	0	0	1	1
CARW	10	0	1	0	0	0	0	1
CARW	12	0	0	0	0	0	1	1
CARW	14	0	0	0	1	0	1	2
CARW	15	0	0	1	0	0	0	1
CARW	16	0	0	2	0	0	0	2
CARW	19	0	0	2	0	0	0	2
CARW	20	0	0	1	0	0	0	1
CARW	21	0	0	1	0	0	0	1
CARW	22	0	0	2	0	1	0	3
Total		0	1	10	1	6	3	21
HOWR	1	0	0	0	0	1	0	1
HOWR	2	0	0	0	0	1	0	1
HOWR	13	0	0	1	0	0	0	1
HOWR	16	0	1	0	0	0	0	1
Total		0	1	1	0	2	0	4
BGGN	1	2	0	0	0	2	0	4
BGGN	2	2	0	1	0	1	0	4
BGGN	3	1	0	0	0	0	0	1
BGGN	5	1	2	0	0	1	0	4
BGGN	6	1	0	0	0	0	0	1
BGGN	7	1	0	1	0	0	1	3
BGGN	8	0	0	0	0	1	0	1
BGGN	9	0	1	0	0	0	0	1
BGGN	10	2	0	0	2	1	0	5

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BGGN	11	1	0	1	0	1	0	3
BGGN	12	0	1	1	0	2	0	4
BGGN	14	0	0	0	0	0	2	2
BGGN	15	1	0	0	0	0	0	1
BGGN	16	1	0	0	0	0	0	1
BGGN	17	2	0	2	1	0	1	6
BGGN	20	1	0	0	0	0	0	1
BGGN	21	0	1	1	0	0	0	2
BGGN	22	1	0	2	0	2	0	5
Total		17	5	9	3	11	4	49
EABL	1	0	0	0	0	1	0	1
EABL	5	1	0	0	0	2	0	3
EABL	8	0	0	1	0	0	0	1
EABL	13	0	0	0	0	0	2	2
EABL	14	0	0	1	0	0	0	1
EABL	16	0	0	0	0	0	1	1
Total		1	0	2	0	3	3	9
WOTH	4	0	0	0	0	1	0	1
WOTH	8	0	1	0	0	0	1	2
WOTH	9	0	0	0	1	0	1	2
WOTH	10	0	1	0	1	0	0	2
WOTH	11	0	0	0	1	0	0	1
WOTH	15	0	1	1	1	0	1	4
WOTH	22	1	0	0	0	0	0	1
Total		1	3	1	4	1	3	13
AMRO	20	0	0	0	1	0	0	1
Total		0	0	0	1	0	0	1
GRCA	1	2	0	3	0	2	0	7
GRCA	2	1	0	1	0	1	0	3
GRCA	3	1	0	1	0	1	0	3
GRCA	4	1	0	0	0	0	0	1
GRCA	6	0	0	0	0	1	0	1
GRCA	7	1	0	3	0	2	0	6
GRCA	10	1	1	0	0	1	1	4
GRCA	17	0	0	1	4	0	0	5
GRCA	18	1	1	0	1	0	0	3
GRCA	19	0	1	2	0	0	0	3
GRCA	20	1	1	1	2	1	0	6
GRCA	22	3	0	1	0	0	0	4
Total		12	4	13	7	9	1	46
NOMO	5	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
BRTH	1	0	0	1	0	2	0	3
BRTH	2	1	0	0	0	1	0	2
BRTH	4	2	0	0	0	0	0	2
BRTH	5	1	0	0	0	0	0	1
BRTH	6	2	0	0	0	2	0	4
BRTH	8	1	0	0	0	0	0	1

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
BRTH	10	0	0	1	0	3	0	4
BRTH	11	0	0	0	1	0	0	1
BRTH	13	0	0	1	0	0	0	1
BRTH	16	0	0	0	0	1	2	3
BRTH	20	0	0	0	0	0	1	1
BRTH	22	1	0	0	0	0	0	1
Total		8	0	3	1	9	3	24
EUST	13	0	0	8	0	0	4	12
EUST	22	2	0	0	0	0	0	2
Total		2	0	8	0	0	4	14
CEDW	2	2	0	0	0	0	0	2
CEDW	6	0	0	0	0	2	0	2
CEDW	19	0	0	0	0	0	2	2
Total		2	0	0	0	2	2	6
YWAR	18	1	0	0	0	0	0	1
YWAR	20	0	1	0	0	0	0	1
Total		1	1	0	0	0	0	2
PIWA	5	1	0	2	0	0	0	3
PIWA	6	1	0	1	0	0	0	2
PIWA	8	0	0	0	0	1	1	2
PIWA	9	0	0	0	1	1	0	2
PIWA	10	0	1	0	2	1	1	5
PIWA	11	0	2	0	0	4	0	6
PIWA	12	0	1	0	2	0	0	3
PIWA	14	0	0	1	1	0	2	4
PIWA	15	0	0	0	0	0	1	1
PIWA	16	1	0	0	0	0	0	1
PIWA	17	0	0	0	0	1	0	1
PIWA	19	0	0	1	0	0	0	1
PIWA	21	2	0	1	0	0	0	3
PIWA	22	1	0	2	0	0	0	3
Total		6	4	8	6	8	5	37
PRAW	1	1	0	1	0	1	0	3
PRAW	2	1	0	2	0	2	0	5
PRAW	3	1	0	1	0	0	0	2
PRAW	4	1	0	0	0	1	0	2
PRAW	6	0	1	0	0	0	0	1
PRAW	7	2	0	0	0	0	0	2
PRAW	8	2	0	0	0	0	0	2
PRAW	9	1	0	1	0	1	0	3
PRAW	10	1	0	0	0	0	0	1
PRAW	11	2	0	1	0	1	0	4
PRAW	12	2	1	1	0	0	0	4
PRAW	14	0	0	1	0	3	0	4
PRAW	16	1	1	0	0	0	1	3
PRAW	17	1	1	0	0	0	0	2
PRAW	18	1	2	1	0	0	0	4
PRAW	19	1	0	0	0	0	0	1

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
PRAW	20	2	1	0	0	0	0	3
PRAW	22	1	0	3	0	1	0	5
Total		21	7	12	0	10	1	51
BAWW	9	0	0	0	0	2	0	2
BAWW	11	0	0	0	0	2	0	2
BAWW	14	0	1	1	1	0	1	4
BAWW	16	0	0	0	1	1	0	2
BAWW	18	1	0	0	1	0	0	2
BAWW	19	0	0	0	1	0	0	1
BAWW	20	1	0	0	0	0	0	1
BAWW	21	1	0	0	0	0	0	1
BAWW	22	1	0	0	0	0	0	1
Total		4	1	1	4	5	1	16
OVEN	6	0	2	0	0	0	0	2
OVEN	7	2	0	0	0	0	0	2
OVEN	8	0	1	0	0	0	0	1
OVEN	10	0	0	0	0	0	1	1
OVEN	11	0	2	0	0	0	1	3
OVEN	12	0	2	0	0	0	0	2
OVEN	15	0	1	0	2	0	0	3
OVEN	17	0	0	1	1	0	0	2
OVEN	21	1	1	2	0	0	0	4
OVEN	22	1	0	0	0	0	0	1
Total		4	9	3	3	0	2	21
MOWA	2	0	0	1	0	0	0	1
Total		0	0	1	0	0	0	1
COYE	1	2	0	4	0	1	0	7
COYE	2	2	0	1	0	3	0	6
COYE	3	0	0	2	0	4	0	6
COYE	4	3	0	2	0	2	0	7
COYE	5	3	0	2	0	1	0	6
COYE	6	3	0	2	0	3	1	9
COYE	7	3	0	1	0	3	0	7
COYE	8	0	0	0	0	1	0	1
COYE	9	1	0	0	0	0	0	1
COYE	10	0	0	2	0	3	0	5
COYE	11	2	0	1	0	3	0	6
COYE	12	3	0	3	0	3	0	9
COYE	13	0	1	3	0	4	0	8
COYE	14	1	0	1	0	4	0	6
COYE	16	0	0	0	0	1	1	2
COYE	17	1	1	0	0	0	1	3
COYE	18	1	1	2	0	0	0	4
COYE	19	2	0	2	0	2	0	6
COYE	20	0	0	1	1	0	1	3
COYE	21	0	0	2	1	1	0	4
COYE	22	4	0	3	0	4	0	11
Total		31	3	34	2	43	4	117

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
HOWA	14	0	1	0	0	0	1	2
HOWA	18	0	1	0	1	0	0	2
HOWA	19	0	0	0	1	0	0	1
Total		0	2	0	2	0	1	5
YBCH	1	1	0	1	0	1	0	3
YBCH	2	1	0	2	0	2	0	5
YBCH	3	2	0	1	0	2	0	5
YBCH	4	2	0	2	0	2	0	6
YBCH	5	1	0	1	0	1	0	3
YBCH	6	0	0	0	0	1	0	1
YBCH	7	0	0	0	0	2	0	2
YBCH	8	1	0	1	0	1	0	3
YBCH	9	2	0	2	0	1	0	5
YBCH	10	1	0	0	0	0	0	1
YBCH	11	2	0	1	0	2	0	5
YBCH	12	2	0	1	0	0	0	3
YBCH	13	2	0	1	0	0	0	3
YBCH	14	0	0	1	0	1	0	2
YBCH	16	0	3	1	1	0	1	6
YBCH	17	1	1	0	0	1	0	3
YBCH	18	2	1	2	0	1	0	6
YBCH	19	1	0	0	0	0	0	1
YBCH	20	1	1	0	2	1	0	5
YBCH	21	1	0	0	0	0	0	1
YBCH	22	2	0	1	0	1	0	4
Total		25	6	18	3	20	1	73
SUTA	8	0	1	0	0	0	0	1
SUTA	9	1	0	0	0	1	0	2
SUTA	11	0	1	0	0	0	0	1
SUTA	13	0	0	0	0	0	1	1
SUTA	16	0	0	0	0	2	0	2
SUTA	17	0	2	0	0	0	0	2
SUTA	18	0	0	0	0	2	0	2
Total		1	4	0	0	5	1	11
SCTA	5	0	0	0	0	1	0	1
SCTA	6	0	1	0	0	0	0	1
SCTA	7	0	0	1	0	0	1	2
SCTA	14	0	0	1	1	1	0	3
SCTA	15	0	1	0	1	1	0	3
SCTA	21	0	0	1	0	0	0	1
SCTA	22	0	0	1	0	0	0	1
Total		0	2	4	2	3	1	12
EATO	1	2	0	1	0	1	0	4
EATO	2	0	0	1	0	3	0	4
EATO	3	2	0	1	0	4	0	7
EATO	4	2	0	2	0	1	0	5
EATO	5	0	0	0	0	2	0	2
EATO	6	0	0	1	0	2	0	3

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
EATO	7	2	0	1	0	1	0	4
EATO	8	3	0	2	0	2	0	7
EATO	9	1	0	3	0	2	0	6
EATO	10	2	0	0	0	1	0	3
EATO	11	2	0	1	0	1	0	4
EATO	12	0	0	2	1	1	0	4
EATO	13	0	0	0	0	1	0	1
EATO	14	0	0	1	0	2	0	3
EATO	16	1	1	3	1	1	0	7
EATO	17	2	0	1	2	0	2	7
EATO	18	0	0	1	1	2	2	6
EATO	19	1	1	2	2	0	1	7
EATO	20	1	0	2	1	1	2	7
EATO	21	1	0	1	0	0	1	3
EATO	22	0	0	3	0	1	0	4
Total		22	2	29	8	29	8	98
CHSP	1	1	0	0	0	0	0	1
CHSP	2	2	0	2	0	0	0	4
CHSP	4	0	0	0	0	3	0	3
CHSP	5	3	2	1	0	2	0	8
CHSP	6	1	0	1	0	1	0	3
CHSP	7	1	0	0	0	1	0	2
CHSP	13	0	1	0	1	0	3	5
CHSP	14	1	0	0	0	0	1	2
CHSP	15	0	0	0	0	1	0	1
CHSP	18	0	0	1	0	0	0	1
CHSP	19	0	1	0	0	0	0	1
CHSP	20	1	0	1	1	0	0	3
CHSP	22	0	0	1	0	1	0	2
Total		10	4	7	2	9	4	36
FISP	1	3	0	2	0	0	0	5
FISP	2	1	0	2	0	1	0	4
FISP	3	0	0	1	0	3	0	4
FISP	4	3	0	4	0	2	0	9
FISP	5	2	0	1	0	1	0	4
FISP	6	1	0	0	0	1	0	2
FISP	7	3	0	2	0	2	0	7
FISP	8	1	0	0	0	2	0	3
FISP	9	1	0	0	0	1	0	2
FISP	10	4	0	1	0	1	0	6
FISP	11	0	0	2	0	1	0	3
FISP	12	2	0	0	0	1	0	3
FISP	13	3	0	0	1	0	0	4
FISP	14	0	0	1	0	0	0	1
FISP	16	0	2	2	1	0	0	5
FISP	18	0	0	2	0	0	0	2
FISP	19	2	0	1	0	0	0	3
FISP	20	0	0	1	0	0	0	1

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
FISP	22	1	0	2	0	1	0	4
Total		27	2	24	2	17	0	72
GRSP	13	0	0	0	0	0	2	2
Total		0	0	0	0	0	2	2
SOSP	22	0	0	0	0	1	0	1
Total		0	0	0	0	1	0	1
NOCA	3	1	0	0	0	0	0	1
NOCA	4	1	0	0	0	0	0	1
NOCA	5	0	0	0	1	1	0	2
NOCA	6	0	0	0	1	0	0	1
NOCA	7	0	0	1	0	1	0	2
NOCA	14	2	0	0	0	0	0	2
NOCA	21	1	1	1	0	0	0	3
NOCA	22	0	0	0	0	1	0	1
Total		5	1	2	2	3	0	13
BLGR	1	0	0	0	0	1	0	1
BLGR	2	0	0	1	0	1	0	2
BLGR	4	0	0	1	0	1	0	2
BLGR	5	0	0	0	1	1	0	2
BLGR	6	0	0	1	0	0	0	1
BLGR	13	1	1	1	0	1	0	4
Total		1	1	4	1	5	0	12
INBU	1	2	0	1	0	5	0	8
INBU	2	2	0	2	0	1	0	5
INBU	3	3	0	1	0	1	0	5
INBU	4	3	0	1	0	3	0	7
INBU	5	2	0	3	0	3	0	8
INBU	6	2	0	2	1	3	0	8
INBU	7	1	0	3	0	3	0	7
INBU	8	0	0	0	0	1	0	1
INBU	9	4	0	1	0	2	1	8
INBU	10	2	0	2	0	2	0	6
INBU	11	2	0	2	0	1	0	5
INBU	12	2	0	3	0	3	0	8
INBU	13	4	1	1	2	3	1	12
INBU	14	1	0	2	0	1	0	4
INBU	15	0	0	1	0	0	0	1
INBU	16	3	1	0	2	2	1	9
INBU	17	0	1	2	1	0	0	4
INBU	18	2	1	3	0	3	0	9
INBU	19	2	0	1	1	1	0	5
INBU	20	1	1	1	0	0	1	4
INBU	21	1	0	1	0	0	0	2
INBU	22	3	0	2	0	3	0	8
Total		42	5	35	7	41	4	134
RWBL	1	0	0	0	0	1	0	1
RWBL	3	0	0	0	0	1	0	1
RWBL	7	0	0	0	0	1	0	1

Appendix IV (continued). Bird species and number of detections by point, round, and whether inside or outside the 9A impact area for the summer breeding surveys.

Species	Point	Round 1		Round 2		Round 3		Total
		Inside	Outside	Inside	Outside	Inside	Outside	
RWBL	13	2	0	3	0	1	0	6
RWBL	22	0	0	1	0	0	0	1
Total		2	0	4	0	4	0	10
BHCO	1	1	0	0	0	0	0	1
BHCO	2	0	0	4	0	0	0	4
BHCO	9	1	0	1	0	0	0	2
BHCO	10	1	0	3	0	0	0	4
BHCO	11	0	0	1	0	0	0	1
BHCO	13	0	1	0	1	0	0	2
BHCO	14	2	0	0	0	0	0	2
BHCO	16	0	0	2	0	0	4	6
BHCO	20	0	1	0	0	0	0	1
Total		5	2	11	1	0	4	23
OROR	1	1	0	0	0	0	0	1
OROR	2	1	0	0	0	0	0	1
OROR	3	1	0	0	0	0	0	1
OROR	4	0	0	1	0	0	0	1
OROR	9	0	0	1	0	0	0	1
OROR	11	0	0	1	0	0	0	1
OROR	13	1	0	0	0	0	0	1
OROR	16	0	0	0	0	1	0	1
OROR	18	0	0	1	0	0	0	1
Total		4	0	4	0	1	0	9
BAOR	2	1	0	0	0	0	0	1
BAOR	16	1	0	0	0	0	0	1
Total		2	0	0	0	0	0	2
AMGO	2	1	0	1	0	1	0	3
AMGO	3	0	0	0	0	1	0	1
AMGO	7	1	0	1	0	5	0	7
AMGO	8	0	0	0	0	1	0	1
AMGO	9	0	0	1	0	0	0	1
AMGO	10	0	0	1	0	0	0	1
AMGO	11	1	0	0	0	0	0	1
AMGO	12	1	0	0	0	0	0	1
AMGO	13	0	0	1	1	0	0	2
AMGO	14	0	0	1	0	0	0	1
AMGO	18	1	0	1	0	2	0	4
AMGO	19	0	0	2	0	0	0	2
AMGO	21	1	0	0	0	0	0	1
AMGO	22	0	0	1	0	0	0	1
Total		6	0	10	1	10	0	27
Column Total		390	115	384	122	405	105	1521