

Appendix 1 of Rodenhouse et al. 2007. Potential Effects of Climate Change on Birds of the Northeast.

**Appendix 1.** Bird species included in the analysis of common bird species. Each species is classified based on migratory status and the breeding habitat guild used to summarize the data. We also report the % of the species occupancy in the northeast for occupancy based on the habitat model under current conditions. Finally, we report the projected change in incidence and occupancy within the Northeast.

Species	Breeding Guild	Habitat Guild	Current % occupancy	HADHI change (%)	GCM3HI change (%)	GCM3LO change (%)	PCMLO change (%)				
Common Loon	migrant	wetland	28	-91.6	-20.1	-92.9	-21.4	-83.2	-17.5	-75.5	-13.8
Ringbilled Gull	partial migrant	wetland	49.3	-85.9	-37.2	-82.7	-34.5	-76.6	-28.9	-74.6	-29.2
Laughing Gull	partial migrant	wetland	4.2	-14.8	1	-14.6	1.1	-15.8	0.3	-14.2	0.3
Black Tern	migrant	wetland	2.8	128.4	4.7	-57.6	-1.3	-47.1	-1.2	-89.5	-2.4
Mallard	partial migrant	wetland	98.2	-38.5	1.8	-36.3	1.1	-18	-3.7	-8.4	-0.8
Bluewinged Teal	migrant	wetland	8.8	>200	29.4	139.5	19.5	-35.5	-1	-70.2	-5.5
Canada Goose	partial migrant	wetland	77.4	-39.3	3.9	-29.3	4.3	5.1	8.9	20.5	11.4
White Ibis	partial migrant	wetland	0.1	>200	4.3	>200	0.7	>200	0.2	>200	0.3
American Bittern	migrant	wetland	43.6	-67.9	-11.2	-71.8	-14.2	-60.1	-13.4	-53.5	-11.3
Great Blue Heron	partial migrant	wetland	99.5	16.4	0.5	6	0.5	-20.2	0.5	-26.4	-0.6
Great Egret	partial migrant	wetland	6.6	>200	73.5	>200	40.8	78.9	4.2	15.9	1.3
Snowy Egret	partial migrant	wetland	5.3	>200	72.5	>200	33.9	-51.5	-1.3	-50.6	-1.7
Little Blue Heron	partial migrant	wetland	0.4	>200	89.2	>200	66.7	>200	11.4	>200	5.3
Cattle Egret	migrant	wetland	2.4	>200	87.5	>200	65.5	>200	15.6	>200	8
Green Heron	migrant	wetland	94.9	130.3	5.1	115.3	5.1	56.6	5.1	34.7	5.1
Yellowcrowned Nightheron	partial migrant	wetland	0.2	>200	76.3	>200	41.8	>200	8.6	>200	5
Sora	migrant	wetland	2.9	-65.6	-1.7	-100	-2.9	-85.4	-2.3	-100	-2.9
American Coot	migrant	wetland	1.8	-8.6	-0.4	-24.5	-0.5	-39.4	-0.7	-61	-1
Common	migrant	wetland	48.1	-80.4	-19.4	-82.2	-20.3	-68.4	-17	-60.3	-15.7

Snipe	migrant	wetland	76.4	-77.2	-52.4	-72.5	-49.1	-47.8	-28.1	-36.1	-17.6
Spotted Sandpiper	temperate	unclass	100	5.4	0	7.4	0	3.9	0	1.5	0
Killdeer	resident	unclass	1.1	>200	9.9	>200	3.3	45.2	0.8	-48.6	-0.6
Gray Partridge	resident	shrubland	39.7	>200	60.3	>200	60.1	>200	46	199.4	37.5
Northern Bobwhite	resident	forest	75.7	-57.7	-23.3	-57.5	-23.6	-44.4	-16.5	-38.3	-11.6
Ruffed Grouse	resident	grassland	75.9	-33.3	19	-33.9	8.1	-18.2	4.2	-10.3	5.8
Ringnecked Pheasant	resident	urban	100	-29.1	0	-20.7	0	-4.6	0	-1.1	0
Rock Dove	temperate	urban	100	4.4	0	4.9	0	5.6	0	5.3	0
Mourning Dove	resident	shrubland	0	na	14.7	na	1.8	na	0.2	na	0.2
Common GroundDove	temperate	unclass	75.7	136.8	24.3	114.6	24.3	62	19.1	47.9	16
Turkey Vulture	resident	unclass	4.1	>200	90.7	>200	65.2	>200	19.4	>200	14.1
Black Vulture	neotropical	unclass	0	na	80	na	45.8	na	2.8	na	0.5
Mississippi Kite	temperate	grassland	36.1	-87.2	-29.9	-83.8	-28.4	-78.8	-26.5	-81.2	-27.5
Northern Harrier	temperate	unclass	87	34.9	13	32.3	13	16.2	10.7	9.9	7.5
Redtailed Hawk	temperate	forest	53.4	>200	46.6	>200	44.5	62.5	17.3	21.1	5.7
Redshouldered Hawk	neotropical	forest	89	16.9	11	5.4	10.3	-1	8.4	-0.1	8.9
Broadwinged Hawk	temperate	unclass	100	-31.8	0	-24.6	0	-8.9	0	-5.8	0
American Kestrel	resident	unclass	42	>200	58	>200	54.8	75.5	19.1	17.9	3.6
Great Horned Owl	neotropical	forest	74	>200	26	>200	26	126.6	23.6	86.2	18.7
Yellowbilled Cuckoo	neotropical	forest	99.9	-71.1	-38.6	-58.2	-33.3	-24.2	-12.9	-12.3	-5.6
Blackbilled Cuckoo	resident	forest	100	-2.4	0	3	0	6.6	0	5.7	0
Downy Woodpecker	temperate	forest	69.7	-73	-34.4	-70.6	-34.5	-49.8	-30	-39.6	-26

Pileated Woodpecker	resident	forest	99.4	58.9	0.6	50.5	0.6	26.1	0.6	14.6	0.6
Redheaded Woodpecker	temperate	unclass	37.4	>200	62.6	>200	62.2	>200	33.2	93.8	12.1
Redbellied Woodpecker	resident	forest	55.9	>200	44.1	>200	44.1	145.5	32.1	104.1	25
ChuckWills Widow	neotropical	forest	1.4	>200	97.9	>200	83	>200	33.3	>200	18.7
Whippoorwill	neotropical	forest	47.9	>200	52	>200	51.5	>200	34.6	96.3	19.3
Common Nighthawk	neotropical	unclass	13	>200	87	>200	76.2	163.3	16.5	-23.5	-3.6
Chimney Swift	neotropical	urban	100	3.8	0	6.2	0	10.6	0	10.4	0
Rubythroated Hummingbird	neotropical	forest	98.6	94.6	1.4	78.5	1.4	30.7	1.4	14.9	1.4
Scissor-tailed Flycatcher	neotropical	unclass	0	na	96.5	na	76.1	na	16.8	na	3.1
Eastern Kingbird	neotropical	unclass	98.3	14.8	1.7	22.2	1.7	10.9	1.7	2	1.5
Eastern Phoebe	temperate	unclass	98.9	34.8	1.1	42.4	1.1	28	1.1	20	1.1
Eastern Wood Pewee	neotropical	forest	98.4	33.2	1.6	36.7	1.6	14.2	1.6	7.2	1.6
Acadian Flycatcher	neotropical	forest	33	>200	67	>200	66.8	>200	52.1	194.8	39.7
Willow Flycatcher	neotropical	shrubland	86.2	-37.2	-30	-13.2	-18.4	18.4	-0.9	21.9	2.8
Least Flycatcher	neotropical	forest	88.1	-59.9	-25.4	-53.3	-24.6	-31.6	-16.3	-21.1	-10.5
Horned Lark	temperate	grassland	26.4	>200	73.5	>200	73	>200	45.8	187.1	23
Blue Jay	temperate	urban	99.2	6.4	0.8	16	0.8	9.4	0.8	2.5	0.8
American Crow	temperate	unclass	99.4	5.2	0.6	14.7	0.6	8.7	0.6	2.6	0.6
Fish Crow	temperate	unclass	16.3	163.9	52.8	99.7	33.5	24.8	10.8	16.6	7.3
European Starling	temperate	urban	100	-21.7	0	-10.1	0	2.1	0	2.9	0
Bobolink	neotropical	grassland	96.3	-88.4	-47.8	-81.8	-56.3	-47.1	-25.3	-32.6	-14.9
Brown-headed Cowbird	temperate	unclass	100	1.3	0	2.8	0	4.6	0	4.3	0

Yellowheaded Blackbird	neotropical	wetland	0.9	>200	6.8	121.1	0.8	-84.6	-0.8	-100	-0.9
Eastern Meadowlark	temperate	grassland	100	18.2	0	18	0	12.5	0	9.6	0
Orchard Oriole	neotropical	unclass	41.1	>200	58.9	>200	58.7	>200	42.5	178.6	33
Baltimore Oriole	neotropical	unclass	100	-46.6	0	-35.5	0	-9	0	-1.5	0
Brewers Blackbird	temperate	unclass	7.4	-45.3	-2.5	-95.6	-7	-53.1	-4.2	-69.9	-5.1
Evening Grosbeak	temperate	forest	32.1	-89.9	-23.1	-90.3	-23.3	-77.4	-15.3	-67	-11.8
Purple Finch	temperate	shrubland	89.7	-70.2	-27.8	-66.5	-25.7	-45.4	-19.2	-32.9	-12.4
House Finch	temperate	urban	99.2	-48.4	-6.4	-34.1	-4.9	-6.1	-1.9	4.9	0.6
American Goldfinch	temperate	shrubland	100	-41	0	-25.6	0	-2.6	0	0.7	0
Vesper Sparrow	temperate	grassland	87.7	-64.4	-40.1	-54.5	-32.5	-34.1	-6.4	-33.1	-2.7
Savannah Sparrow	temperate	grassland	96.3	-89.9	-59.6	-81.8	-57.9	-49.8	-23.8	-37	-10.7
Grasshopper Sparrow	neotropical	grassland	66.4	105.9	33.6	113.6	33.2	60.3	22	28.9	13.2
Whitethroated Sparrow	temperate	shrubland	72.2	-70.4	-36.4	-67.7	-37.3	-47.1	-33.1	-37.2	-28.7
Chipping Sparrow	neotropical	urban	100	-35.4	0	-26.6	0	-6.5	0	-2	0
Claycolored Sparrow	neotropical	shrubland	8.2	-86.7	-6.8	-100	-8.2	-75.1	-6.1	-79	-6.2
Field Sparrow	temperate	shrubland	100	9.7	0	16.7	0	19.2	0	16.2	0
dark eyed junco	temperate	forest	71.5	-81.8	-36.5	-78.8	-34.5	-57.4	-19.4	-46.7	-14.1
Bachmans Sparrow	temperate	forest	0.6	>200	42.6	>200	19.3	>200	3.9	>200	2.3
Song Sparrow	temperate	shrubland	100	-69	-3.5	-54	-2.9	-15.8	0	-5.7	0
Lincolns Sparrow	neotropical	grassland	22.5	-100	-22.5	-100	-22.5	-92.4	-19.7	-81.8	-16.4
Swamp Sparrow	temperate	wetland	92.4	-77.8	-40.6	-71.9	-40.8	-44.7	-25.6	-30.2	-16.4

Eastern Towhee	temperate	shrubland	97.1	-5.2	2.9	5.1	2.9	17.6	2.9	18	2.9
Northern Cardinal	resident	shrubland	92.2	33	7.8	33.4	7.8	25.2	7.7	20.3	7.2
Rosebreasted Grosbeak	neotropical	forest	97.9	-70.7	-14.7	-66.4	-21.9	-36.2	-14.6	-23	-10.1
Blue Grosbeak	neotropical	shrubland	10.1	>200	89.9	>200	83.7	>200	43.8	>200	25
Indigo Bunting	neotropical	shrubland	100	6.3	0	10.5	0	11.8	0	10.7	0
Painted Bunting	neotropical	shrubland	0	na	81.3	na	44.7	na	2.8	na	0.3
Dickcissel	neotropical	grassland	8.2	>200	91.8	>200	91.1	>200	50.5	>200	28.6
Summer Tanager	neotropical	forest	12.5	>200	87.2	>200	77	>200	42.1	>200	28.8
Purple Martin	neotropical	urban	78.6	>200	21.4	>200	21.3	100.8	10.1	51.3	4.3
Cliff Swallow	neotropical	unclass	91.4	-32	8.6	-44.3	8.4	-42.5	-3.2	-35.1	-6.2
Barn Swallow	neotropical	unclass	100	-2.8	0	0	0	1.4	0	1.5	0
Tree Swallow	temperate	unclass	99.7	-80	-23.7	-73.7	-19.9	-45.5	-9.3	-31.9	-5
Bank Swallow	neotropical	unclass	94.2	-76.9	-43.2	-70	-42.6	-36.8	-18.2	-24.1	-11.3
Cedar Waxwing	temperate	unclass	100	-79.1	-19.2	-68.8	-13.7	-32.1	-5.2	-17.8	-1
Loggerhead Shrike	temperate	unclass	1.3	>200	98.7	>200	88.9	>200	41.6	>200	22.3
Redeyed Vireo	neotropical	forest	100	-25.4	0	-20.2	0	-6.2	0	-1.9	0
Warbling Vireo	neotropical	forest	99.6	-27.3	0.4	-17.3	0.3	-0.6	0	-0.5	0.2
Yellowthroated Vireo	neotropical	forest	90.3	55	9.7	60.2	9.7	56.5	9.7	44.4	9.4
Blueheaded Vireo	neotropical	forest	86.7	-61.5	-7.1	-59.5	-7.1	-43.4	-8.6	-32.4	-6.2
Whiteeyed Vireo	neotropical	shrubland	35.7	>200	64.3	>200	61.2	>200	41.4	168.4	33.5
Blackandwhite Warbler	neotropical	forest	97	-20.2	3	-19.7	2.9	-7.8	2.3	-1.7	2
Prothonotary Warbler	neotropical	shrubland	4.9	>200	94.8	>200	84.4	>200	36.2	>200	19
Wormeating Warbler	neotropical	forest	40	189.3	57.7	164.9	53.2	88.2	39.1	62.4	31.1

Bluewinged Warbler	neotropical	shrubland	74.7	-10.2	20.7	-2.3	21.7	14.9	17.8	20.5	15.8
Goldenwinged Warbler	neotropical	shrubland	47.3	70.6	29.9	61.8	28.9	29.3	14.7	26.3	9.5
Nashville Warbler	neotropical	shrubland	63.9	-74.8	-29.4	-73	-29.8	-54.4	-26.1	-43.5	-23.4
Northern Parula	neotropical	forest	78	87.4	22	71.4	22	14.6	20.9	-3.1	16.5
Yellow Warbler	neotropical	shrubland	100	-72	-3.5	-59.4	-2.5	-20.1	0	-7.2	0
Blackthroated Blue Warbler	neotropical	forest	70.7	-55.2	-21.8	-54.1	-22.8	-35.6	-14.2	-26.2	-10.1
Yellowrumped Warbler	temperate	forest	73.4	-75	-38.1	-70.7	-38.3	-51.1	-33.6	-39.7	-27.5
Magnolia Warbler	neotropical	forest	73.3	-74.7	-25.2	-72.9	-24.6	-56.3	-18.6	-44.6	-12.7
Cerulean Warbler	neotropical	forest	31.3	188	58.9	167.4	57.8	120.6	37.8	93.1	29.3
Blackburnian Warbler	neotropical	forest	77.7	-73.5	-25.7	-71.5	-26	-52.1	-14.9	-39.9	-11.1
Yellowthroated Warbler	neotropical	forest	11.1	>200	88.8	>200	81.2	>200	49.2	>200	31.8
Blackthroated Green Warbler	neotropical	forest	89.1	-68	-11.1	-64.8	-11.9	-44	-8.2	-29.9	-5
Pine Warbler	temperate	forest	66.2	173.8	33.8	118.2	33.1	14.8	10.6	-3.9	3.2
Prairie Warbler	neotropical	shrubland	69	91.6	30.9	87.5	30.9	79.7	22.7	70.3	19.1
Ovenbird	neotropical	forest	100	-45.6	-1.5	-39	-1.3	-16.7	-0.1	-7.2	0
Northern Waterthrush	neotropical	forest	70.4	-67.9	-21.4	-67.6	-22.2	-54.4	-19.1	-46	-17.2
Kentucky Warbler	neotropical	forest	28.2	>200	71.8	>200	68.3	>200	45.2	>200	35.1
Mourning Warbler	neotropical	shrubland	66.3	-82.4	-36.8	-83.9	-40	-65.6	-32.3	-53.5	-19
Common Yellowthroat	neotropical	shrubland	100	-24.9	0	-15.5	0	-1	0	-0.1	0
Yellowbreasted Chat	neotropical	shrubland	41.7	>200	58.3	>200	58	>200	40.9	183.7	32.7

Hooded Warbler	neotropical	forest	49.1	116.7	49.3	96.2	48.6	62.6	32.2	58.5	24.8
Canada Warbler	neotropical	forest	77.6	-69.2	-25.9	-69.1	-27.4	-52.4	-20.4	-40.5	-12.7
American Redstart	neotropical	forest	99.6	-58.3	-3.7	-53.4	-3.8	-28.4	-3.2	-15.9	-0.9
House Sparrow	resident	urban	100	1.8	0	6.5	0	8.6	0	7.6	0
Northern Mockingbird	resident	urban	97.5	96.4	2.5	89.4	2.5	61.6	2.5	48.3	2.1
Gray Catbird	neotropical	shrubland	100	-47.4	0	-33.1	0	-4.5	0	0.7	0
Brown Thrasher	temperate	shrubland	100	21.2	0	26.4	0	23.5	0	17	0
Carolina Wren	resident	shrubland	43.1	>200	56.9	>200	53.8	165.2	35.4	124.6	29.5
House Wren	neotropical	shrubland	99.7	-66.7	-3.2	-49.9	-8.3	-10.6	-3	-0.9	-0.1
Winter Wren	temperate	forest	64.9	-73.4	-24.8	-73.3	-27.7	-54.8	-24.5	-42	-19.1
Sedge Wren	temperate	grassland	10.6	145.9	9.4	10.8	2.9	-6.7	1.1	-52.6	-3.7
Brown Creeper	temperate	forest	84.2	-55	-19.2	-52.1	-18.5	-39.3	-17	-31	-11.4
Whitebreasted Nuthatch	resident	forest	100	-3.6	0	8	0	15	0	13.2	0
Redbreasted Nuthatch	temperate	forest	71.8	-74.2	-34.2	-71.2	-35.2	-50.5	-30.9	-40.1	-26.7
Brownheaded Nuthatch	resident	forest	0.4	>200	36.8	>200	15.6	>200	5.5	>200	5.3
Tufted Titmouse	resident	forest	80.3	94.7	19.7	93.6	19.7	65.5	13.4	55.3	11.2
Blackcapped Chickadee	resident	forest	97.4	-66.6	-1.2	-59.7	-6.7	-32.9	-10.1	-20.4	-7.4
Bluegray Gnatcatcher	neotropical	forest	59.6	>200	40.4	>200	40.3	161.3	30.1	113	24.4
Wood Thrush	neotropical	forest	100	-27	0	-19.5	0	-3	0	0.9	0
Veery	neotropical	forest	98.5	-68.9	-18.4	-64.2	-17.8	-38	-12.6	-25.4	-7.9
Swainsons Thrush	neotropical	forest	36	-94.9	-28.5	-95	-28.6	-83.7	-23.3	-72.4	-19.3
Hermit Thrush	temperate	forest	83.5	-79.6	-32.6	-76.6	-32.9	-54.7	-18.7	-40.8	-11.2
American Robin	temperate	urban	100	-17.7	0	-8.2	0	-0.5	0	-0.1	0

