

**ENVIRONMENTAL IMPACT ASSESSMENT REGISTRATION DOCUMENT FOR 138 KV RELIABILITY FOR
FREDERICTON SOUTH**

Appendix E Vegetation and Wetlands, and Wildlife and Wildlife Habitat Environment Survey Data
November 1, 2019

**Appendix E VEGETATION AND WETLANDS, AND WILDLIFE
AND WILDLIFE HABITAT ENVIRONMENT SURVEY
DATA**



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Appendix E Vegetation and Wetlands, and Wildlife and Wildlife Habitat Environment Survey Data
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Table E.1 Functional Assessment Scores for Wetland 1

Assessment Area (AA) Results:						
Wetland ID: Wetland 1, Rainsford						
Date: July 23, 2018						
Observer: Heather Button						
Latitude & Longitude (decimal degrees): 45.947, -66.704						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.57	Moderate	2.83	Moderate	3.71	2.89
Stream Flow Support (SFS)	2.92	Lower	6.75	Moderate	1.56	3.93
Water Cooling (WC)	4.92	Moderate	1.76	Moderate	3.28	1.06
Sediment Retention & Stabilization (SR)	1.35	Lower	7.53	Moderate	4.08	4.57
Phosphorus Retention (PR)	2.61	Lower	6.45	Higher	4.76	6.17
Nitrate Removal & Retention (NR)	2.90	Moderate	10.00	Higher	5.62	10.00
Carbon Sequestration (CS)	3.09	Lower			5.90	
Organic Nutrient Export (OE)	8.72	Higher			6.96	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	7.92	Higher	4.21	Moderate	4.72	2.99
Aquatic Invertebrate Habitat (INV)	8.15	Higher	7.39	Higher	6.74	5.23
Amphibian & Turtle Habitat (AM)	8.40	Higher	8.65	Higher	7.74	7.34
Waterbird Feeding Habitat (WBF)	8.71	Higher	10.00	Higher	6.93	10.00
Waterbird Nesting Habitat (WBN)	8.09	Higher	10.00	Higher	6.91	10.00
Songbird, Raptor, & Mammal Habitat (SBM)	6.13	Moderate	10.00	Higher	5.08	10.00
Pollinator Habitat (POL)	7.19	Moderate	10.00	Higher	5.79	10.00
Native Plant Habitat (PH)	6.55	Higher	8.02	Higher	5.73	6.96
Public Use & Recognition (PU)			2.84	Moderate		2.35



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Wetland ID: Wetland 1, Rainsford						
Date: July 23, 2018						
Observer: Heather Button						
Latitude & Longitude (decimal degrees): 45.947, -66.704						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Wetland Sensitivity (Sens)			6.76	Higher		4.23
Wetland Ecological Condition (EC)			5.66	Moderate		7.50
Wetland Stressors (STR) (higher score means more stress)			3.00	Moderate		3.36
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.57	Moderate	2.83	Moderate	3.71	2.89
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.79	Lower	9.00	Higher	5.49	8.46
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.45	Higher	6.35	Higher	5.80	4.32
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.67	Higher	8.29	Higher	6.50	8.03
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.91	Moderate	9.67	Higher	5.66	9.49
WETLAND CONDITION (EC)			5.66	Moderate		7.50
WETLAND RISK (average of Sensitivity & Stressors)			4.88	Higher		3.79
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among the 98 NB calibration wetlands that were assessed previously.						



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Table E.2 Functional Assessment Scores for Wetland 6

Assessment Area (AA) Results:						
Wetland ID: Wetland 6, Rainsford						
Date: July 24, 2018						
Observer: Heather Button						
Latitude & Longitude (decimal degrees): 45.938, -66.738						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	3.50	Moderate	2.81	Moderate	4.43	2.87
Stream Flow Support (SFS)	3.44	Moderate	5.07	Moderate	1.83	2.96
Water Cooling (WC)	4.63	Moderate	1.75	Moderate	3.08	1.05
Sediment Retention & Stabilization (SR)	1.89	Moderate	7.53	Moderate	4.45	4.57
Phosphorus Retention (PR)	2.38	Lower	6.45	Higher	4.59	6.17
Nitrate Removal & Retention (NR)	1.38	Lower	10.00	Higher	4.68	10.00
Carbon Sequestration (CS)	3.91	Moderate			6.25	
Organic Nutrient Export (OE)	7.12	Higher			6.11	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	2.38	Moderate	2.29	Moderate	1.42	1.62
Aquatic Invertebrate Habitat (INV)	1.46	Lower	4.29	Moderate	4.39	3.55
Amphibian & Turtle Habitat (AM)	5.45	Moderate	5.59	Moderate	6.18	5.48
Waterbird Feeding Habitat (WBF)	5.18	Moderate	5.00	Moderate	4.12	5.00
Waterbird Nesting Habitat (WBN)	2.67	Moderate	5.00	Moderate	2.28	5.00
Songbird, Raptor, & Mammal Habitat (SBM)	8.84	Higher	5.00	Moderate	7.33	5.00
Pollinator Habitat (POL)	10.00	Higher	0.00	Lower	8.27	0.00
Native Plant Habitat (PH)	7.65	Higher	5.99	Moderate	6.17	5.20
Public Use & Recognition (PU)			1.90	Lower		1.68



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Assessment Area (AA) Results:						
Wetland ID: Wetland 6, Rainsford						
Date: July 24, 2018						
Observer: Heather Button						
Latitude & Longitude (decimal degrees): 45.938, -66.738						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Wetland Sensitivity (Sens)			4.14	Moderate		3.44
Wetland Ecological Condition (EC)			7.59	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			1.41	Lower		2.78
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	3.50	Moderate	2.81	Moderate	4.43	2.87
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.15	Moderate	9.00	Higher	5.62	8.46
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	5.64	Moderate	4.39	Moderate	4.98	3.04
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.29	Moderate	4.58	Moderate	4.49	4.45
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	9.42	Higher	4.83	Moderate	7.76	4.30
WETLAND CONDITION (EC)			7.59	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			2.78	Moderate		3.11
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among the 98 NB calibration wetlands that were assessed previously.						



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Table E.3 Functional Assessment Scores for Wetland 12

Assessment Area (AA) Results:						
Wetland ID: Wetland 12, Rainsford						
Date: July 25, 2018						
Observer: Heather Button & Richard LaPaix						
Latitude & Longitude (decimal degrees): 45.937, -66.761						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	2.31	Lower	1.30	Lower	3.51	1.38
Stream Flow Support (SFS)	6.35	Moderate	7.49	Higher	3.39	4.37
Water Cooling (WC)	4.29	Moderate	4.36	Moderate	2.86	2.62
Sediment Retention & Stabilization (SR)	2.44	Moderate	6.77	Moderate	4.82	4.11
Phosphorus Retention (PR)	2.66	Lower	5.53	Higher	4.79	5.33
Nitrate Removal & Retention (NR)	2.74	Moderate	10.00	Higher	5.52	10.00
Carbon Sequestration (CS)	3.03	Lower			5.87	
Organic Nutrient Export (OE)	8.37	Higher			6.78	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	6.04	Moderate	7.37	Higher	3.60	5.23
Aquatic Invertebrate Habitat (INV)	6.35	Higher	5.64	Moderate	6.11	4.28
Amphibian & Turtle Habitat (AM)	6.08	Moderate	3.76	Moderate	6.51	4.37
Waterbird Feeding Habitat (WBF)	6.87	Higher	5.00	Moderate	5.47	5.00
Waterbird Nesting Habitat (WBN)	5.82	Higher	2.50	Moderate	4.98	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	6.21	Moderate	2.50	Lower	5.15	2.50
Pollinator Habitat (POL)	8.54	Higher	0.00	Lower	6.88	0.00
Native Plant Habitat (PH)	9.68	Higher	4.62	Moderate	6.99	4.01
Public Use & Recognition (PU)			2.73	Moderate		2.28



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Date: July 25, 2018						
Observer: Heather Button & Richard LaPaix						
Latitude & Longitude (decimal degrees): 45.937, -66.761						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Wetland Sensitivity (Sens)			7.00	Higher		4.30
Wetland Ecological Condition (EC)			7.59	Higher		8.61
Wetland Stressors (STR) (higher score means more stress)			3.96	Moderate		3.72
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	2.31	Lower	1.30	Lower	3.51	1.38
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	2.87	Lower	8.72	Higher	5.56	8.24
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.36	Higher	6.66	Higher	5.78	4.06
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	5.92	Moderate	5.55	Moderate	5.31	4.32
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	8.91	Higher	3.50	Moderate	6.66	3.09
WETLAND CONDITION (EC)			7.59	Higher		8.61
WETLAND RISK (average of Sensitivity & Stressors)			5.48	Higher		4.01
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among the 98 NB calibration wetlands that were assessed previously.						



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Table E.4 Functional Assessment Scores for Wetland 58

Assessment Area (AA) Results:						
Wetland ID: Wetland 58, Rainsford						
Date: September 24, 2018						
Observer: Heather Button & Michael Crowell						
Latitude & Longitude (decimal degrees): 45.955, -66.838						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	3.18	Moderate	10.00	Higher	4.18	10.00
Stream Flow Support (SFS)	3.18	Moderate	2.50	Moderate	1.69	1.46
Water Cooling (WC)	4.58	Moderate	1.08	Lower	3.06	0.65
Sediment Retention & Stabilization (SR)	2.58	Moderate	7.53	Moderate	4.92	4.57
Phosphorus Retention (PR)	2.94	Moderate	6.45	Higher	4.99	6.17
Nitrate Removal & Retention (NR)	2.53	Moderate	10.00	Higher	5.39	10.00
Carbon Sequestration (CS)	4.44	Moderate			6.48	
Organic Nutrient Export (OE)	7.95	Higher			6.55	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	9.61	Higher	6.56	Higher	7.26	4.78
Amphibian & Turtle Habitat (AM)	9.13	Higher	5.58	Moderate	8.13	5.48
Waterbird Feeding Habitat (WBF)	9.37	Higher	4.17	Moderate	7.46	4.17
Waterbird Nesting Habitat (WBN)	7.76	Higher	2.50	Moderate	6.63	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	7.80	Higher	2.50	Lower	6.47	2.50
Pollinator Habitat (POL)	7.93	Higher	10.00	Higher	6.38	10.00
Native Plant Habitat (PH)	8.00	Higher	10.00	Higher	6.31	10.00
Public Use & Recognition (PU)			2.82	Moderate		2.34



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Table E.4 Functional Assessment Scores for Wetland 58

Assessment Area (AA) Results:						
Wetland ID: Wetland 58, Rainsford						
Date: September 24, 2018						
Observer: Heather Button & Michael Crowell						
Latitude & Longitude (decimal degrees): 45.955, -66.838						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Wetland Sensitivity (Sens)			6.39	Higher		4.12
Wetland Ecological Condition (EC)			7.83	Higher		8.75
Wetland Stressors (STR) (higher score means more stress)			3.43	Moderate		3.52
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	3.18	Moderate	10.00	Higher	4.18	10.00
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.78	Moderate	9.00	Higher	5.96	8.46
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	7.97	Higher	4.97	Moderate	5.95	3.54
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	7.31	Higher	4.01	Moderate	6.29	3.95
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	7.96	Higher	8.75	Higher	6.43	8.75
WETLAND CONDITION (EC)			7.83	Higher		8.75
WETLAND RISK (average of Sensitivity & Stressors)			4.91	Higher		3.82
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among the 98 NB calibration wetlands that were assessed previously.						



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Table E.5 Functional Assessment Scores for Wetland 59

Assessment Area (AA) Results:						
Wetland ID: Wetland 59, Rainsford						
Date: July 25, 2018						
Observer: Heather Button & Michael Crowell						
Latitude & Longitude (decimal degrees): 45.956, -66.839						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Water Storage & Delay (WS)	4.23	Moderate	10.00	Higher	4.99	10.00
Stream Flow Support (SFS)	2.47	Lower	2.05	Lower	1.31	1.19
Water Cooling (WC)	6.63	Higher	0.27	Lower	4.42	0.16
Sediment Retention & Stabilization (SR)	3.02	Moderate	1.97	Lower	5.22	1.19
Phosphorus Retention (PR)	3.65	Moderate	7.00	Higher	5.49	6.67
Nitrate Removal & Retention (NR)	0.89	Lower	6.25	Moderate	4.38	6.67
Carbon Sequestration (CS)	4.12	Moderate			6.34	
Organic Nutrient Export (OE)	7.75	Higher			6.44	
Anadromous Fish Habitat (FA)	0.00	Lower	0.00	Lower	0.00	0.00
Resident Fish Habitat (FR)	0.00	Lower	0.00	Lower	0.00	0.00
Aquatic Invertebrate Habitat (INV)	4.23	Moderate	3.89	Moderate	5.36	3.34
Amphibian & Turtle Habitat (AM)	3.52	Moderate	4.05	Moderate	5.16	4.55
Waterbird Feeding Habitat (WBF)	6.66	Moderate	4.17	Moderate	5.30	4.17
Waterbird Nesting Habitat (WBN)	4.38	Moderate	2.50	Moderate	3.74	2.50
Songbird, Raptor, & Mammal Habitat (SBM)	7.05	Moderate	2.50	Lower	5.85	2.50
Pollinator Habitat (POL)	7.19	Moderate	0.00	Lower	5.79	0.00
Native Plant Habitat (PH)	3.88	Lower	4.47	Moderate	4.65	3.88
Public Use & Recognition (PU)			4.38	Moderate		3.45



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Table E.5 Functional Assessment Scores for Wetland 59

Assessment Area (AA) Results:						
Wetland ID: Wetland 59, Rainsford						
Date: July 25, 2018						
Observer: Heather Button & Michael Crowell						
Latitude & Longitude (decimal degrees): 45.956, -66.839						
Wetland Functions or Other Attributes:	Function Score (normalized)	Function Rating	Benefits Score (normalized)	Benefits Rating	Function Score (raw)	Benefits Score (raw)
Wetland Sensitivity (Sens)			4.20	Moderate		3.46
Wetland Ecological Condition (EC)			0.00	Lower		4.17
Wetland Stressors (STR) (higher score means more stress)			4.30	Moderate		3.84
Summary Ratings for Grouped Functions:						
HYDROLOGIC Group (WS)	4.23	Moderate	10.00	Higher	4.99	10.00
WATER QUALITY SUPPORT Group (max+avg/2 of SR, PR, NR, CS)	3.52	Moderate	6.04	Moderate	5.85	5.75
AQUATIC SUPPORT Group (max+avg/2 of SFS, INV, OE, WC)	6.51	Higher	2.98	Moderate	5.41	2.45
AQUATIC HABITAT Group (max+avg/2 of FA, FR, AM, WBF, WBN)	4.79	Moderate	3.16	Moderate	4.07	3.40
TRANSITION HABITAT Group (max+avg/2 of SBM, PH, POL)	6.61	Moderate	3.40	Moderate	5.64	3.00
WETLAND CONDITION (EC)			0.00	Lower		4.17
WETLAND RISK (average of Sensitivity & Stressors)			4.25	Moderate		3.65
NOTE: A score of 0 does not mean the function or benefit is absent from the wetland. It means only that this wetland has a capacity that is equal or less than the lowest-scoring one, for that function or benefit, from among the 98 NB calibration wetlands that were assessed previously.						



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Table E.6 Vascular Plant Species Observed During Field Surveys

Scientific Name	Common Name	AC CDC S Rank ¹
<i>Abies balsamea</i>	balsam fir	S5
<i>Acer negundo</i>	Manitoba maple	SNA
<i>Acer pensylvanicum</i>	striped maple	S5
<i>Acer rubrum</i>	red maple	S5
<i>Acer saccharum</i>	sugar maple	S5
<i>Acer spicatum</i>	mountain maple	S5
<i>Achillea millefolium</i>	common yarrow	S5
<i>Acorus calamus</i>	European sweetflag	SNA
<i>Actaea pachypoda</i>	white baneberry	S4
<i>Actaea rubra</i>	red baneberry	S5
<i>Agrimonia gryposepala</i>	hooked agrimony	S4
<i>Agrimonia striata</i>	woodland agrimony	S5
<i>Agrostis canina</i>	velvet bent grass	SNA
<i>Agrostis capillaris</i>	colonial bent grass	SNA
<i>Agrostis gigantea</i>	redtop	SNA
<i>Agrostis perennans</i>	upland bent grass	S5
<i>Agrostis scabra</i>	rough bent grass	S5
<i>Agrostis stolonifera</i>	creeping bent grass	S5
<i>Alisma triviale</i>	northern water plantain	S5
<i>Alnus incana</i>	speckled alder	S5
<i>Alnus viridis</i>	green alder	S5
<i>Alopecurus pratensis</i>	meadow foxtail	SNA
<i>Amelanchier sp.</i>	a serviceberry	-
<i>Amphicarpaea bracteata</i>	American hog peanut	S4S5
<i>Anaphalis margaritacea</i>	pearly everlasting	S5
<i>Anemone canadensis</i>	Canada anemone	S5
<i>Angelica sp.</i>	an angelica	-
<i>Angelica sylvestris</i>	woodland angelica	SNA
<i>Anthoxanthum odoratum</i>	large sweet vernal grass	SNA
<i>Apios americana</i>	American groundnut	S4S5
<i>Apocynum androsaemifolium</i>	spreading dogbane	S5
<i>Apocynum cannabinum</i>	Indian hemp	S4



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Arabis drummondii</i>	Drummond's rockcress	S2
<i>Arabis hirsuta</i>	western hairy rockcress	S3
<i>Aralia nudicaulis</i>	wild sarsaparilla	S5
<i>Arctium lappa</i>	great burdock	SNA
<i>Argentina anserina</i>	common silverweed	S5
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	S5
<i>Artemisia vulgaris</i>	common wormwood	SNA
<i>Asclepias incarnata</i>	swamp milkweed	S4
<i>Asclepias syriaca</i>	common milkweed	S4S5
<i>Athyrium filix-femina</i>	common lady fern	S5
<i>Betula alleghaniensis</i>	yellow birch	S5
<i>Betula papyrifera</i>	paper birch	S5
<i>Betula papyrifera var. cordifolia</i>	heart-leaved birch	S5
<i>Betula populifolia</i>	gray birch	S5
<i>Bidens cernua</i>	nodding beggarticks	S5
<i>Bidens frondosa</i>	devil's beggarticks	S5
<i>Bidens sp.</i>	a beggarticks	-
<i>Brachyelytrum septentrionale</i>	northern shorthusk	S5
<i>Brasenia schreberi</i>	water-shield	S4
<i>Bromus ciliatus</i>	fringed brome	S5
<i>Bromus inermis</i>	smooth brome	SNA
<i>Calamagrostis canadensis</i>	bluejoint reed grass	S5
<i>Callitriche palustris</i>	marsh water-starwort	S5
<i>Campanula rotundifolia</i>	common harebell	S5
<i>Cardamine maxima</i>	large toothwort	S3
<i>Carex arctata</i>	black sedge	S5
<i>Carex bebbii</i>	Bebb's sedge	S4
<i>Carex brunnescens</i>	brownish sedge	S5
<i>Carex canescens</i>	silvery sedge	S5
<i>Carex castanea</i>	chestnut sedge	S4
<i>Carex communis</i>	fibrous-root sedge	S5
<i>Carex crawfordii</i>	Crawford's sedge	S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Carex crinita</i>	fringed sedge	S5
<i>Carex debilis</i>	white-edged sedge	S5
<i>Carex deweyana</i>	Dewey's sedge	S5
<i>Carex disperma</i>	two-seeded sedge	S5
<i>Carex echinata</i>	star sedge	S5
<i>Carex flava</i>	yellow sedge	S5
<i>Carex gracillima</i>	graceful sedge	S5
<i>Carex gynandra</i>	nodding sedge	S5
<i>Carex intumescens</i>	bladder sedge	S5
<i>Carex leptalea</i>	bristly-stalked sedge	S5
<i>Carex leptoneuria</i>	finely-nerved sedge	S5
<i>Carex lurida</i>	sallow sedge	S5
<i>Carex magellanica ssp. irrigua</i>	boreal bog sedge	S5
<i>Carex novae-angliae</i>	New England sedge	S5
<i>Carex pallescens</i>	pale sedge	S5
<i>Carex projecta</i>	necklace sedge	S5
<i>Carex pseudocyperus</i>	cyperuslike sedge	S5
<i>Carex radiata</i>	eastern star sedge	S4
<i>Carex retrorsa</i>	retorse sedge	S4
<i>Carex rosea</i>	rosy sedge	S3
<i>Carex scabrata</i>	rough sedge	S5
<i>Carex scoparia</i>	broom sedge	S5
<i>Carex stipata</i>	awl-fruited sedge	S5
<i>Carex tribuloides</i>	blunt broom sedge	S4S5
<i>Carex trisperma</i>	three-seeded sedge	S5
<i>Carex vulpinoidea</i>	fox sedge	S4S5
<i>Centaurea biebersteinii</i>	spotted knapweed	SNA
<i>Chamaedaphne calyculata</i>	leatherleaf	S5
<i>Chamaesyce vermiculata</i>	worm-seeded spurge	S4
<i>Chamerion angustifolium</i>	fireweed	S5
<i>Chelone glabra</i>	white turtlehead	S5
<i>Chenopodium album</i>	common lamb's quarters	SNA



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Chenopodium sp.</i>	a goosefoot	-
<i>Chimaphila umbellata</i>	common pipsissewa	S5
<i>Chrysosplenium americanum</i>	American golden saxifrage	S5
<i>Cichorium intybus</i>	wild chicory	SNA
<i>Cicuta bulbifera</i>	bulbous water-hemlock	S5
<i>Cicuta maculata</i>	spotted water-hemlock	S5
<i>Cinna latifolia</i>	drooping wood reed grass	S5
<i>Circaea alpina</i>	small enchanter's nightshade	S5
<i>Circaea lutetiana</i>	broad-leaved enchanter's nightshade	S4
<i>Cirsium arvense</i>	Canada thistle	SNA
<i>Cirsium vulgare</i>	bull thistle	SNA
<i>Clematis virginiana</i>	Virginia clematis	S5
<i>Clintonia borealis</i>	yellow bluebead lily	S5
<i>Comptonia peregrina</i>	sweet-fern	S5
<i>Conyza canadensis</i>	Canada horseweed	S5
<i>Coptis trifolia</i>	goldthread	S5
<i>Cornus alternifolia</i>	alternate-leaved dogwood	S5
<i>Cornus canadensis</i>	bunchberry	S5
<i>Cornus sericea</i>	red osier dogwood	S5
<i>Coronilla varia</i>	purple crown-vetch	SNA
<i>Corylus cornuta</i>	beaked hazel	S5
<i>Crataegus sp.</i>	a hawthorn	-
<i>Crepis capillaris</i>	smooth hawksbeard	SNA
<i>Cyperus esculentus</i>	perennial yellow nutsedge	S3
<i>Cypripedium acaule</i>	pink lady's-slipper	S5
<i>Cystopteris fragilis</i>	fragile fern	S4
<i>Dalibarda repens</i>	dewdrop	S5
<i>Danthonia spicata</i>	poverty oat grass	S5
<i>Daucus carota</i>	Queen Anne's lace	SNA
<i>Dennstaedtia punctilobula</i>	eastern hay-scented fern	S5
<i>Deschampsia caespitosa</i>	tufted hair grass	S5
<i>Desmodium canadense</i>	Canada tick-trefoil	S4S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Dichanthelium acuminatum</i>	woolly panic grass	S5
<i>Dichanthelium boreale</i>	northern panic grass	S5
<i>Diervilla lonicera</i>	northern bush honeysuckle	S5
<i>Doellingeria umbellata</i>	hairy flat-top white aster	S5
<i>Drosera rotundifolia</i>	round-leaved sundew	S5
<i>Dryopteris campyloptera</i>	mountain wood fern	S5
<i>Dryopteris carthusiana</i>	spinulose wood fern	S5
<i>Dryopteris cristata</i>	crested wood fern	S5
<i>Dryopteris intermedia</i>	evergreen wood fern	S5
<i>Dryopteris marginalis</i>	marginal wood fern	S5
<i>Dryopteris x boottii</i>	a hybrid wood-fern	SNA
<i>Dulichium arundinaceum</i>	three-way sedge	S5
<i>Echinochloa muricata</i>	prickly barnyard grass	SNA
<i>Echinocystis lobata</i>	wild cucumber	S5
<i>Eleocharis acicularis</i>	needle spikerush	S5
<i>Eleocharis erythropoda</i>	red-stemmed spikerush	S4
<i>Eleocharis obtusa</i>	blunt spikerush	S5
<i>Eleocharis sp.</i>	a spikerush	-
<i>Elodea nuttallii</i>	Nuttall's waterweed	S2
<i>Elymus canadensis</i>	Canada wild rye	S2
<i>Elymus repens</i>	quack grass	SNA
<i>Elymus virginicus</i>	Virginia wild rye	S5
<i>Epifagus virginiana</i>	beechnuts	S4
<i>Epilobium ciliatum</i>	northern willowherb	S5
<i>Epilobium leptophyllum</i>	bog willowherb	S5
<i>Epilobium palustre</i>	marsh willowherb	S5
<i>Epipactis helleborine</i>	helleborine	SNA
<i>Equisetum arvense</i>	field horsetail	S5
<i>Equisetum fluviatile</i>	water horsetail	S5
<i>Equisetum sylvaticum</i>	woodland horsetail	S5
<i>Erechtites hieraciifolia</i>	eastern burnweed	S5
<i>Erigeron annuus</i>	annual fleabane	S4S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Erigeron strigosus</i>	rough fleabane	S5
<i>Eriophorum virginicum</i>	tawny cottongrass	S5
<i>Eriophorum viridicarinatum</i>	green-keeled cottongrass	S4
<i>Erysimum cheiranthoides</i>	worm-seeded wallflower	S5
<i>Eupatorium maculatum</i>	spotted Joe-Pye-weed	S5
<i>Eupatorium perfoliatum</i>	common boneset	S5
<i>Euphrasia nemorosa</i>	common eyebright	SNA
<i>Eurybia macrophylla</i>	large-leaved aster	S5
<i>Euthamia graminifolia</i>	grass-leaved goldenrod	S5
<i>Fagus grandifolia</i>	American beech	S4
<i>Festuca rubra</i>	red fescue	S5
<i>Fragaria vesca</i>	woodland strawberry	S4
<i>Fragaria virginiana</i>	wild strawberry	S5
<i>Fraxinus americana</i>	white ash	S4S5
<i>Fraxinus nigra</i>	black ash	S4S5
<i>Fraxinus pennsylvanica</i>	red ash	S4
<i>Galeopsis tetrahit</i>	common hemp-nettle	SNA
<i>Galium asprellum</i>	rough bedstraw	S5
<i>Galium mollugo</i>	smooth bedstraw	SNA
<i>Galium palustre</i>	common marsh bedstraw	S5
<i>Galium trifidum</i>	three-petaled bedstraw	S5
<i>Galium triflorum</i>	three-flowered bedstraw	S5
<i>Gaultheria hispidula</i>	creeping snowberry	S5
<i>Gaultheria procumbens</i>	eastern teaberry	S5
<i>Geum aleppicum</i>	yellow avens	S5
<i>Geum macrophyllum</i>	large-leaved avens	S5
<i>Geum rivale</i>	water avens	S5
<i>Geum urbanum</i>	wood avens	SNA
<i>Glechoma hederacea</i>	ground ivy	SNA
<i>Glyceria borealis</i>	northern manna grass	S5
<i>Glyceria canadensis</i>	Canada manna grass	S5
<i>Glyceria grandis</i>	common tall manna grass	S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Glyceria melicaria</i>	slender manna grass	S5
<i>Glyceria striata</i>	fowl manna grass	S5
<i>Gnaphalium uliginosum</i>	marsh cudweed	SNA
<i>Gratiola neglecta</i>	clammy hedge-hyssop	S4
<i>Gymnocarpium dryopteris</i>	common oak fern	S5
<i>Halenia deflexa</i>	spurred gentian	S4S5
<i>Hieracium aurantiacum</i>	orange hawkweed	SNA
<i>Hieracium caespitosum</i>	field hawkweed	SNA
<i>Hieracium canadense</i>	Canada hawkweed	S5
<i>Hieracium murorum</i>	wall hawkweed	SNA
<i>Hieracium pilosella</i>	mouse-ear hawkweed	SNA
<i>Hieracium piloselloides</i>	tall hawkweed	SNA
<i>Hieracium praealtum</i>	king devil hawkweed	SNA
<i>Hieracium scabrum</i>	rough hawkweed	S5
<i>Hieracium tridentatum</i>	three-tooth hawkweed	SNA
<i>Hieracium x floribundum</i>	smoothish hawkweed	SNA
<i>Huperzia lucidula</i>	shining firmoss	S5
<i>Hydrocotyle americana</i>	American marsh pennywort	S5
<i>Hylotelephium telephium</i>	garden stonecrop	SNA
<i>Hypericum boreale</i>	northern St. John's-wort	S5
<i>Hypericum canadense</i>	Canada St. John's-wort	S5
<i>Hypericum ellipticum</i>	pale St. John's-wort	S5
<i>Hypericum perforatum</i>	common St. John's-wort	SNA
<i>Ilex verticillata</i>	common winterberry	S5
<i>Impatiens capensis</i>	spotted jewelweed	S5
<i>Iris versicolor</i>	harlequin blue flag	S5
<i>Juglans cinerea</i>²	butternut	S1
<i>Juncus alpinoarticulatus</i>	a rush	S4
<i>Juncus articulatus</i>	jointed rush	S5
<i>Juncus brevicaudatus</i>	narrow-panicked rush	S5
<i>Juncus bufonius</i>	toad rush	S5
<i>Juncus tenuis</i>	slender rush	S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Kalmia angustifolia</i>	sheep laurel	S5
<i>Lactuca biennis</i>	tall blue lettuce	S5
<i>Lactuca canadensis</i>	Canada lettuce	S5
<i>Laportea canadensis</i>	Canada wood nettle	S5
<i>Lathyrus pratensis</i>	meadow vetchling	SNA
<i>Ledum groenlandicum</i>	common Labrador tea	S5
<i>Leersia oryzoides</i>	rice cut grass	S5
<i>Lemna minor</i>	lesser duckweed	SNA
<i>Leontodon autumnalis</i>	fall dandelion	SNA
<i>Leucanthemum vulgare</i>	oxeye daisy	SNA
<i>Lilium bulbiferum</i>	orange lily	SNA
<i>Linaria vulgaris</i>	butter-and-eggs	SNA
<i>Lindernia dubia</i>	yellow-seeded false pimperel	S4
<i>Linnaea borealis</i>	twinflower	S5
<i>Lobelia inflata</i>	Indian tobacco	S5
<i>Lolium arundinaceum</i>	tall fescue	SNA
<i>Lonicera canadensis</i>	Canada fly honeysuckle	S5
<i>Lonicera tatarica</i>	Tartarian honeysuckle	SNA
<i>Lotus corniculatus</i>	garden bird's-foot trefoil	SNA
<i>Ludwigia palustris</i>	marsh seedbox	S4
<i>Luzula multiflora</i>	common woodrush	S5
<i>Lycopodium annotinum</i>	stiff clubmoss	S5
<i>Lycopodium clavatum</i>	running clubmoss	S5
<i>Lycopodium complanatum</i>	northern clubmoss	S4S5
<i>Lycopodium dendroideum</i>	round-branched tree-clubmoss	S5
<i>Lycopodium hickeyi</i>	hickey's tree-clubmoss	S4
<i>Lycopus americanus</i>	American water horehound	S5
<i>Lycopus uniflorus</i>	northern water horehound	S5
<i>Lysimachia ciliata</i>	fringed yellow loosestrife	S5
<i>Lysimachia nummularia</i>	creeping yellow loosestrife	SNA
<i>Lysimachia terrestris</i>	swamp yellow loosestrife	S5
<i>Lysimachia thysiflora</i>	tufted yellow loosestrife	S4



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Lythrum salicaria</i>	purple loosestrife	SNA
<i>Maianthemum canadense</i>	wild lily-of-the-valley	S5
<i>Maianthemum racemosum</i>	large false Solomon's seal	S5
<i>Maianthemum trifolium</i>	three-leaved false Soloman's seal	S5
<i>Malus prunifolia</i>	pear-leaved Crabapple	SNA
<i>Malus pumila</i>	common apple	SNA
<i>Malva moschata</i>	musk mallow	SNA
<i>Matricaria discoidea</i>	pineapple weed	SNA
<i>Matteuccia struthiopteris</i>	ostrich fern	S5
<i>Medicago lupulina</i>	black medick	SNA
<i>Melampyrum lineare</i>	American cow wheat	S5
<i>Melilotus albus</i>	white sweet-clover	SNA
<i>Mentha arvensis</i>	wild mint	S5
<i>Menyanthes trifoliata</i>	bog buckbean	S5
<i>Mimulus ringens</i>	square-stemmed monkeyflower	S5
<i>Mitchella repens</i>	partridgeberry	S5
<i>Mitella nuda</i>	naked bishop's-cap	S5
<i>Mollugo verticillata</i>	green carpetweed	SNA
<i>Moneses uniflora</i>	one-flowered wintergreen	S5
<i>Monotropa hypopithys</i>	piresap	S4
<i>Monotropa uniflora</i>	Indian pipe	S5
<i>Muhlenbergia richardsonis</i>	mat muhly	S3
<i>Myosotis laxa</i>	small forget-me-not	S5
<i>Nemopanthus mucronatus</i>	mountain holly	S5
<i>Oclemena acuminata</i>	whorled wood aster	S5
<i>Oenothera biennis</i>	common evening primrose	S5
<i>Oenothera pilosella</i>	meadow evening primrose	SNA
<i>Onoclea sensibilis</i>	sensitive fern	S5
<i>Oryzopsis asperifolia</i>	white-grained mountain rice	S5
<i>Osmunda cinnamomea</i>	cinnamon fern	S5
<i>Osmunda claytoniana</i>	interrupted fern	S5
<i>Ostrya virginiana</i>	ironwood	S4S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Oxalis montana</i>	common wood sorrel	S5
<i>Oxalis stricta</i>	European wood sorrel	S5
<i>Packera schweinitziana</i>	Schweinitz's groundsel	S4
<i>Panicum capillare</i>	common witch grass	S5
<i>Parthenocissus quinquefolia</i>	Virginia creeper	SNA
<i>Pastinaca sativa</i>	wild parsnip	SNA
<i>Penthorum sedoides</i>	ditch stonecrop	S3
<i>Persicaria sp.</i>	a knotweed	-
<i>Phalaris arundinacea</i>	reed canary grass	S5
<i>Phegopteris connectilis</i>	northern beech fern	S5
<i>Phleum pratense</i>	common timothy	SNA
<i>Picea glauca</i>	white spruce	S5
<i>Picea mariana</i>	black spruce	S5
<i>Picea rubens</i>	red spruce	S5
<i>Pimpinella saxifraga</i>	burnet saxifrage	SNA
<i>Pinus strobus</i>	eastern white pine	S5
<i>Plantago lanceolata</i>	English plantain	SNA
<i>Plantago major</i>	common plantain	SNA
<i>Plantago rugelii</i>	Rugel's plantain	S4
<i>Platanthera aquilonis</i>	tall northern green orchid	S4
<i>Poa compressa</i>	Canada blue grass	SNA
<i>Poa palustris</i>	fowl blue grass	S5
<i>Poa pratensis</i>	Kentucky blue grass	S5
<i>Polygonum amphibium var. emersum</i>	water smartweed	S2
<i>Polygonum cuspidatum</i>	Japanese knotweed	SNA
<i>Polygonum hydropiper</i>	marshpepper smartweed	SNA
<i>Polygonum pennsylvanicum</i>	Pennsylvania smartweed	S4
<i>Polygonum persicaria</i>	spotted lady's-thumb	SNA
<i>Polygonum punctatum</i>	dotted smartweed	S3
<i>Polygonum sagittatum</i>	arrow-leaved smartweed	S5
<i>Polypodium appalachianum</i>	Appalachian polypody	S3
<i>Populus balsamifera</i>	balsam poplar	S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Populus grandidentata</i>	large-toothed aspen	S5
<i>Populus tremuloides</i>	trembling aspen	S5
<i>Potamogeton foliosus</i>	leafy pondweed	S4
<i>Potamogeton gramineus</i>	variable-leaved pondweed	S5
<i>Potamogeton obtusifolius</i>	blunt-leaved pondweed	S3
<i>Potamogeton sp.</i>	a pondweed	-
<i>Potentilla argentea</i>	silvery cinquefoil	SNA
<i>Potentilla norvegica</i>	rough cinquefoil	S5
<i>Potentilla recta</i>	sulphur cinquefoil	SNA
<i>Potentilla simplex</i>	old field cinquefoil	S5
<i>Prenanthes altissima</i>	tall rattlesnakeroot	S5
<i>Prenanthes trifoliolata</i>	three-leaved rattlesnakeroot	S5
<i>Prunella vulgaris</i>	common self-heal	S5
<i>Prunus nigra</i>	Canada plum	SNA
<i>Prunus pensylvanica</i>	pin cherry	S5
<i>Prunus serotina</i>	black cherry	S5
<i>Prunus virginiana</i>	chokecherry	S5
<i>Pteridium aquilinum</i>	bracken fern	S5
<i>Puccinellia distans</i>	spreading alkali grass	SNA
<i>Pyrola chlorantha</i>	green-flowered pyrola	S4
<i>Pyrola elliptica</i>	shinleaf	S5
<i>Quercus rubra</i>	northern red oak	S5
<i>Ranunculus abortivus</i>	kidney-leaved buttercup	S5
<i>Ranunculus acris</i>	common buttercup	SNA
<i>Ranunculus pensylvanicus</i>	Pennsylvania buttercup	S4
<i>Ranunculus recurvatus</i>	hooked buttercup	S4
<i>Ranunculus repens</i>	creeping buttercup	SNA
<i>Raphanus raphanistrum</i>	wild radish	SNA
<i>Rhamnus alnifolia</i>	alder-leaved buckthorn	S4S5
<i>Rhinanthus minor</i>	little yellow rattle	SNA
<i>Rhus typhina</i>	staghorn sumac	S5
<i>Ribes glandulosum</i>	skunk currant	S5



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Scientific Name	Common Name	AC CDC S Rank ¹
<i>Ribes lacustre</i>	bristly black currant	S5
<i>Rorippa microphylla</i>	one-rowed yellowcress	SNA
<i>Rorippa palustris</i>	bog yellowcress	S5
<i>Rorippa sylvestris</i>	creeping yellowcress	SNA
<i>Rosa blanda</i>	smooth rose	S5
<i>Rubus allegheniensis</i>	Alleghaney blackberry	S5
<i>Rubus canadensis</i>	smooth blackberry	S5
<i>Rubus hispidus</i>	bristly dewberry	S5
<i>Rubus idaeus</i>	red raspberry	S5
<i>Rubus occidentalis</i>	black raspberry	S3
<i>Rubus pubescens</i>	dwarf red raspberry	S5
<i>Rudbeckia hirta</i>	black-eyed Susan	SNA
<i>Rumex crispus</i>	curled dock	SNA
<i>Rumex obtusifolius</i>	bitter dock	SNA
<i>Rumex orbiculatus</i>	greater water dock	S5
<i>Rumex salicifolius</i>	triangular-valve dock	S4
<i>Rumex sp.</i>	a dock	-
<i>Sagittaria latifolia</i>	broad-leaved arrowhead	S5
<i>Salix bebbiana</i>	Bebb's willow	S5
<i>Salix discolor</i>	pussy willow	S5
<i>Salix eriocephala</i>	cottony willow	S5
<i>Salix humilis</i>	upland willow	S5
<i>Salix nigra</i>	black willow	S3
<i>Salix pyrifolia</i>	balsam willow	S5
<i>Salix sp.</i>	a willow	-
<i>Salix viminalis</i>	basket willow	SNA
<i>Salix x rubens</i>	a willow	SNA
<i>Sambucus nigra</i>	black elderberry	S5
<i>Sambucus racemosa</i>	red elderberry	S5
<i>Sanguinaria canadensis</i>	bloodroot	S4
<i>Saxifraga virginiana</i>	early saxifrage	S1S2
<i>Schoenoplectus subterminalis</i>	water bulrush	S5



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Table E.6 Vascular Plant Species Observed During Field Surveys

Scientific Name	Common Name	AC CDC S Rank ¹
<i>Scirpus atrocinctus</i>	black-girdled bulrush	S5
<i>Scirpus cyperinus</i>	common woolly bulrush	S5
<i>Scirpus hattorianus</i>	mosquito bulrush	S5
<i>Scirpus microcarpus</i>	small-fruited bulrush	S5
<i>Scutellaria lateriflora</i>	mad-dog skullcap	S5
<i>Senecio viscosus</i>	sticky ragwort	SNA
<i>Setaria viridis</i>	green foxtail	SNA
<i>Silene vulgaris</i>	bladder campion	SNA
<i>Sisyrinchium montanum</i>	mountain blue-eyed-grass	S5
<i>Solanum dulcamara</i>	bittersweet nightshade	SNA
<i>Solidago canadensis</i>	Canada goldenrod	S5
<i>Solidago flexicaulis</i>	zigzag goldenrod	S5
<i>Solidago gigantea</i>	giant goldenrod	S5
<i>Solidago hispida</i>	hairy goldenrod	S4
<i>Solidago juncea</i>	early goldenrod	S5
<i>Solidago puberula</i>	downy goldenrod	S5
<i>Solidago rugosa</i>	rough-stemmed goldenrod	S5
<i>Solidago squarrosa</i>	stout goldenrod	S4
<i>Solidago uliginosa</i>	northern bog goldenrod	S5
<i>Sorbus americana</i>	American mountain ash	S5
<i>Sparganium emersum</i>	green-fruited burreed	S5
<i>Sparganium natans</i>	small burreed	S4
<i>Spartina pectinata</i>	prairie cord grass	S5
<i>Spergularia rubra</i>	ruby sandspurrey	SNA
<i>Spiraea alba</i>	white meadowsweet	S5
<i>Spiraea tomentosa</i>	steplebush	S5
<i>Spiranthes romanzoffiana</i>	hooded ladies'-tresses	S4
<i>Stachys palustris</i>	marsh hedge-nettle	SNA
<i>Streptopus amplexifolius</i>	clasping-leaved twisted-stalk	S5
<i>Streptopus lanceolatus</i>	rose twisted-stalk	S5
<i>Symphyotrichum ciliolatum</i>	fringed blue aster	S5
<i>Symphyotrichum cordifolium</i>	heart-leaved aster	S5



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Table E.6 Vascular Plant Species Observed During Field Surveys

Scientific Name	Common Name	AC CDC S Rank ¹
<i>Symphotrichum lanceolatum</i>	lance-leaved aster	S5
<i>Symphotrichum lateriflorum</i>	calico aster	S5
<i>Symphotrichum novi-belgii</i>	New York aster	S5
<i>Symphotrichum puniceum</i>	purple-stemmed aster	S5
<i>Tanacetum vulgare</i>	common tansy	SNA
<i>Taraxacum officinale</i>	common dandelion	SNA
<i>Taxus canadensis</i>	Canada yew	S5
<i>Thalictrum pubescens</i>	tall meadow-rue	S5
<i>Thalictrum venulosum</i>	northern meadow-rue	S3
<i>Thelypteris noveboracensis</i>	New York fern	S5
<i>Thelypteris palustris</i>	eastern marsh fern	S5
<i>Thuja occidentalis</i>	eastern white cedar	S5
<i>Tiarella cordifolia</i>	heart-leaved foamflower	S4
<i>Tilia americana</i>	white basswood	S4
<i>Torreyochloa pallida</i>	pale false manna grass	S5
<i>Toxicodendron rydbergii</i>	northern poison oak	S5
<i>Tragopogon pratensis</i>	meadow goatsbeard	SNA
<i>Triadenum fraseri</i>	Fraser's marsh St John's-wort	S5
<i>Trientalis borealis</i>	northern starflower	S5
<i>Trifolium arvense</i>	rabbit's-foot clover	SNA
<i>Trifolium aureum</i>	yellow clover	SNA
<i>Trifolium campestre</i>	low hop clover	SNA
<i>Trifolium pratense</i>	red clover	SNA
<i>Trifolium repens</i>	white clover	SNA
<i>Trillium cernuum</i>	nodding trillium	S5
<i>Trillium erectum</i>	red trillium	S5
<i>Trillium sp.</i>	a trillium	-
<i>Tsuga canadensis</i>	eastern hemlock	S5
<i>Tussilago farfara</i>	coltsfoot	SNA
<i>Typha latifolia</i>	broad-leaved cattail	S5
<i>Ulmus americana</i>	white elm	S4
<i>Utricularia geminiscapa</i>	twin-stemmed bladderwort	S4



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Table E.6 Vascular Plant Species Observed During Field Surveys

Scientific Name	Common Name	AC CDC S Rank ¹
<i>Utricularia minor</i>	lesser bladderwort	S4S5
<i>Uvularia sessilifolia</i>	sessile-leaved bellwort	S5
<i>Vaccinium angustifolium</i>	late lowbush blueberry	S5
<i>Vaccinium myrtilloides</i>	velvet-leaved blueberry	S5
<i>Verbascum thapsus</i>	common mullein	SNA
<i>Verbena hastata</i>	blue vervain	S4
<i>Veronica americana</i>	American speedwell	S5
<i>Veronica officinalis</i>	common speedwell	S5
<i>Veronica scutellata</i>	marsh speedwell	S5
<i>Viburnum edule</i>	squashberry	S4?
<i>Viburnum lantanoides</i>	hobblebush	S5
<i>Viburnum nudum</i>	northern wild raisin	S5
<i>Viburnum opulus</i>	highbush cranberry	S4
<i>Vicia cracca</i>	tufted vetch	SNA
<i>Viola cucullata</i>	marsh blue violet	S5
<i>Viola sp.</i>	a violet	-
<i>Vitis riparia</i>	riverbank grape	S4
<i>Zizia aurea</i>	golden Alexanders	S4

¹ S1 = critically imperiled, S2 = imperiled, S3 = vulnerable, S4 = apparently secure, S5 = secure, and SNA = not applicable. S#S# = range rank, i.e., the status is uncertain but between two listed ranks (AC CDC 2019)

¹ Butternut is a SAR, listed as listed as *endangered* under the federal *Species at Risk Act* and the New Brunswick *Species at Risk Act*



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
Canada goose	<i>Branta canadensis</i>				SNAB,S5M	AC CDC, MBBA
wood duck	<i>Aix sponsa</i>				S4B,S4M	AC CDC, MBBA
American wigeon	<i>Anas americana</i>				S4B,S4S5M	AC CDC
American black duck	<i>Anas rubripes</i>				S5B,S4N,S5M	AC CDC, MBBA
mallard	<i>Anas platyrhynchos</i>				S5B,S4N,S5M	AC CDC, MBBA
northern shoveler	<i>Anas clypeata</i>				S2S3B,S2S3M	MBBA
northern pintail	<i>Anas acuta</i>				S3B,S5M	MBBA
common goldeneye	<i>Bucephala clangula</i>				S4B,S5M,S4N	AC CDC, MBBA
hooded merganser	<i>Lophodytes cucullatus</i>				S4B,S5M	AC CDC, MBBA
common merganser	<i>Mergus merganser</i>				S5B,S4N,S5M	AC CDC, MBBA
red-breasted merganser	<i>Mergus serrator</i>				S3B,S5M,S4S5N	AC CDC
ruffed grouse	<i>Bonasa umbellus</i>				S5	AC CDC, MBBA
spruce grouse	<i>Falcapennis canadensis</i>				S5	AC CDC
common loon	<i>Gavia immer</i>		Not at Risk		S4B,S4M,S4N	AC CDC, MBBA
double-crested cormorant	<i>Phalacrocorax auritus</i>		Not at Risk		S5B,S5M	AC CDC, MBBA
American bittern	<i>Botaurus lentiginosus</i>				S4B,S4S5M	AC CDC, MBBA
least bittern	<i>Ixobrychus exilis</i>	Schedule 1, threatened	threatened	threatened	S1S2B,S1S2M	MBBA
great blue heron	<i>Ardea herodias</i>				S4B,S4M	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
turkey vulture	<i>Cathartes aura</i>				S3B,S3M	MBBA
bald eagle	<i>Haliaeetus leucocephalus</i>		Not at Risk	Endangered	S4	MBBA
northern harrier	<i>Circus cyaneus</i>		Not at Risk		S4B,S4S5M	AC CDC, MBBA
sharp-shinned hawk	<i>Accipiter striatus</i>		Not at Risk		S4B,S5M	AC CDC, MBBA
Cooper's hawk	<i>Accipiter cooperii</i>		Not at Risk		S1S2B,S1S2M	MBBA
red-shouldered hawk	<i>Buteo lineatus</i>		Not at Risk		S2B,S2M	MBBA
broad-winged hawk	<i>Buteo platypterus</i>				S5B,S5M	AC CDC, MBBA
red-tailed hawk	<i>Buteo jamaicensis</i>		Not at Risk		S4	MBBA
American kestrel	<i>Falco sparverius</i>				S4B,S4S5M	AC CDC, MBBA
merlin	<i>Falco columbarius</i>		Not at Risk		S5B,S5M	AC CDC, MBBA
sora	<i>Porzana carolina</i>				S4B,S4M	AC CDC, MBBA
killdeer	<i>Charadrius vociferus</i>				S3B,S3M	AC CDC, MBBA
spotted sandpiper	<i>Actitis macularius</i>				S3S4B,S5M	MBBA
lesser yellowlegs	<i>Tringa flavipes</i>				S4M	AC CDC
least sandpiper	<i>Calidris minutilla</i>				S4M	AC CDC
Wilson's snipe	<i>Gallinago delicata</i>				S3S4B,S5M	MBBA
American woodcock	<i>Scolopax minor</i>				S5B,S5M	AC CDC, MBBA
herring gull	<i>Larus argentatus</i>				S5	AC CDC, MBBA
great black-backed gull	<i>Larus marinus</i>				S5	AC CDC, MBBA
common tern	<i>Sterna hirundo</i>		Not at Risk		S3B,SUM	MBBA
rock pigeon	<i>Columba livia</i>				SNA	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
mourning dove	<i>Zenaida macroura</i>				S5B,S5M,S4N	AC CDC, MBBA
black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>				S3B,S3M	MBBA
great horned owl	<i>Bubo virginianus</i>				S4	AC CDC, MBBA
barred owl	<i>Strix varia</i>				S5	AC CDC, MBBA
long-eared owl	<i>Asio otus</i>				S2S3	MBBA
common nighthawk	<i>Chordeiles minor</i>	Schedule 1, threatened	special concern	threatened	S3B,S4M	AC CDC, MBBA
eastern whip-poor-will	<i>Antrostomus vociferus</i>	Schedule 1, threatened	threatened	threatened	S2B,S2M	AC CDC
chimney swift	<i>Chaetura pelagica</i>	Schedule 1, threatened	threatened	threatened	S2S3B,S2M	AC CDC, MBBA
ruby-throated hummingbird	<i>Archilochus colubris</i>				S5B,S5M	AC CDC, MBBA
belted kingfisher	<i>Megaceryle alcyon</i>				S5B,S5M	AC CDC, MBBA
yellow-bellied sapsucker	<i>Sphyrapicus varius</i>				S5B,S5M	AC CDC, MBBA
downy woodpecker	<i>Picoides pubescens</i>				S5	AC CDC, MBBA
hairy woodpecker	<i>Picoides villosus</i>				S5	AC CDC, MBBA
American three-toed woodpecker	<i>Picoides dorsalis</i>				S2S3	AC CDC
northern flicker	<i>Colaptes auratus</i>				S5B,S5M	AC CDC, MBBA
pileated woodpecker	<i>Dryocopus pileatus</i>				S5	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
olive-sided flycatcher	<i>Contopus cooperi</i>	Schedule 1, <i>threatened</i>	<i>special concern</i>	<i>threatened</i>	S3B,S3M	MBBA
eastern wood-pewee	<i>Contopus virens</i>	Schedule 1, <i>special concern</i>	<i>special concern</i>	<i>special concern</i>	S4B,S4M	AC CDC, MBBA
yellow-bellied flycatcher	<i>Empidonax flaviventris</i>				S4S5B,S5M	AC CDC, MBBA
alder flycatcher	<i>Empidonax alnorum</i>				S5B,S5M	AC CDC, MBBA
willow flycatcher	<i>Empidonax traillii</i>				S1S2B,S1S2M	AC CDC
least flycatcher	<i>Empidonax minimus</i>				S5B,S5M	AC CDC, MBBA
eastern phoebe	<i>Sayornis phoebe</i>				S5B,S5M	AC CDC, MBBA
great crested flycatcher	<i>Myiarchus crinitus</i>				S2S3B,S2S3M	AC CDC, MBBA
eastern kingbird	<i>Tyrannus tyrannus</i>				S3S4B,S3S4M	AC CDC, MBBA
blue-headed vireo	<i>Vireo solitarius</i>				S5B,S5M	AC CDC, MBBA
warbling vireo	<i>Vireo gilvus</i>				S3B,S3M	MBBA
red-eyed vireo	<i>Vireo olivaceus</i>				S5B,S5M	AC CDC, MBBA
blue jay	<i>Cyanocitta cristata</i>				S5	AC CDC, MBBA
American crow	<i>Corvus brachyrhynchos</i>				S5	AC CDC, MBBA
common raven	<i>Corvus corax</i>				S5	AC CDC, MBBA
purple martin	<i>Progne subis</i>				S1B,S1M	AC CDC
tree swallow	<i>Tachycineta bicolor</i>				S4B,S4M	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>				S1S2B,S1S2M	MBBA
bank swallow	<i>Riparia riparia</i>	Schedule 1, threatened	threatened		S2S3B,S2S3M	AC CDC, MBBA
cliff swallow	<i>Petrochelidon pyrrhonota</i>				S2S3B,S2S3M	AC CDC, MBBA
barn swallow	<i>Hirundo rustica</i>	Schedule 1, threatened	threatened	threatened	S2B,S2M	MBBA
black-capped chickadee	<i>Poecile atricapillus</i>				S5	AC CDC, MBBA
boreal chickadee	<i>Poecile hudsonicus</i>				S4	AC CDC
red-breasted nuthatch	<i>Sitta canadensis</i>				S5	AC CDC, MBBA
white-breasted nuthatch	<i>Sitta carolinensis</i>				S4	AC CDC, MBBA
brown creeper	<i>Certhia americana</i>				S5	AC CDC, MBBA
Carolina wren	<i>Thryothorus ludovicianus</i>				S1B,S1M	MBBA
house wren	<i>Troglodytes aedon</i>				S1S2B,S1S2M	MBBA
golden-crowned kinglet	<i>Regulus satrapa</i>				S5	AC CDC, MBBA
ruby-crowned kinglet	<i>Regulus calendula</i>				S4B,S5M	AC CDC, MBBA
eastern bluebird	<i>Sialia sialis</i>		Not at Risk		S4B,S4M	AC CDC, MBBA
veery	<i>Catharus fuscescens</i>				S4B,S4M	AC CDC, MBBA
Swainson's thrush	<i>Catharus ustulatus</i>				S5B,S5M	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
hermit thrush	<i>Catharus guttatus</i>				S5B,S5M	AC CDC, MBBA
wood thrush	<i>Hylocichla mustelina</i>	Schedule 1, threatened	threatened	threatened	S1S2B,S1S2M	AC CDC
American robin	<i>Turdus migratorius</i>				S5B,S5M	AC CDC, MBBA
gray catbird	<i>Dumetella carolinensis</i>				S4B,S4M	AC CDC, MBBA
northern mockingbird	<i>Mimus polyglottos</i>				S2B,S2M	AC CDC
brown thrasher	<i>Toxostoma rufum</i>				S2B,S2M	AC CDC, MBBA
European starling	<i>Sturnus vulgaris</i>				SNA	AC CDC, MBBA
cedar waxwing	<i>Bombycilla cedrorum</i>				S5B,S5M	AC CDC, MBBA
Tennessee warbler	<i>Oreothlypis peregrina</i>				S4B,S5M	AC CDC
Nashville warbler	<i>Oreothlypis ruficapilla</i>				S5B,S5M	AC CDC, MBBA
northern parula	<i>Setophaga americana</i>				S5B,S5M	AC CDC, MBBA
yellow warbler	<i>Setophaga petechia</i>				S5B,S5M	AC CDC, MBBA
chestnut-sided warbler	<i>Setophaga pensylvanica</i>				S5B,S5M	AC CDC, MBBA
magnolia warbler	<i>Setophaga magnolia</i>				S5B,S5M	AC CDC, MBBA
Cape May warbler	<i>Setophaga tigrina</i>				S3B,S4S5M	MBBA
black-throated blue warbler	<i>Setophaga caerulescens</i>				S5B,S5M	AC CDC, MBBA
yellow-rumped warbler	<i>Setophaga coronata</i>				S5B,S5M	AC CDC, MBBA
black-throated green warbler	<i>Setophaga virens</i>				S5B,S5M	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
Blackburnian warbler	<i>Setophaga fusca</i>				S5B,S5M	AC CDC, MBBA
pine warbler	<i>Setophaga pinus</i>				S5B,S5M	AC CDC, MBBA
bay-breasted warbler	<i>Setophaga castanea</i>				S4B,S4S5M	AC CDC, MBBA
blackpoll warbler	<i>Setophaga striata</i>				S3S4B,S5M	MBBA
black-and-white warbler	<i>Mniotilta varia</i>				S5B,S5M	AC CDC, MBBA
American redstart	<i>Setophaga ruticilla</i>				S5B,S5M	AC CDC, MBBA
ovenbird	<i>Seiurus aurocapilla</i>				S5B,S5M	AC CDC, MBBA
mourning warbler	<i>Geothlypis philadelphia</i>				S4B,S5M	AC CDC, MBBA
common yellowthroat	<i>Geothlypis trichas</i>				S5B,S5M	AC CDC, MBBA
Wilson's warbler	<i>Cardellina pusilla</i>				S4B,S5M	AC CDC, MBBA
Canada warbler	<i>Cardellina canadensis</i>	Schedule 1, threatened	threatened	threatened	S3B,S3M	AC CDC
chipping sparrow	<i>Spizella passerina</i>				S5B,S5M	AC CDC, MBBA
savannah sparrow	<i>Passerculus sandwichensis</i>				S4S5B,S5M	AC CDC, MBBA
song sparrow	<i>Melospiza melodia</i>				S5B,S5M	AC CDC, MBBA
Lincoln's sparrow	<i>Melospiza lincolnii</i>				S4B,S5M	AC CDC, MBBA
swamp sparrow	<i>Melospiza georgiana</i>				S5B,S5M	AC CDC, MBBA
white-throated sparrow	<i>Zonotrichia albicollis</i>				S5B,S5M	AC CDC, MBBA
dark-eyed junco	<i>Junco hyemalis</i>				S5	AC CDC, MBBA



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
northern cardinal	<i>Cardinalis cardinalis</i>				S4	AC CDC, MBBA
rose-breasted grosbeak	<i>Pheucticus ludovicianus</i>				S4B,S4M	AC CDC, MBBA
indigo bunting	<i>Passerina cyanea</i>				S3B,S3M	MBBA
bobolink	<i>Dolichonyx oryzivorus</i>	Schedule 1, threatened	threatened	threatened	S3B,S3M	AC CDC, MBBA
red-winged blackbird	<i>Agelaius phoeniceus</i>				S4B,S4M	AC CDC, MBBA
eastern meadowlark	<i>Sturnella magna</i>	Schedule 1, threatened	threatened	threatened	S1B,S1M	MBBA
rusty blackbird	<i>Euphagus carolinus</i>	Schedule 1, special concern	special concern	special concern	S3B,S3M	AC CDC
common grackle	<i>Quiscalus quiscula</i>				S5B,S5M	AC CDC, MBBA
brown-headed cowbird	<i>Molothrus ater</i>				S3B,S3M	AC CDC, MBBA
Baltimore oriole	<i>Icterus galbula</i>				S3B,S3M	AC CDC, MBBA
red crossbill	<i>Loxia curvirostra</i>				S3	MBBA
white-winged crossbill	<i>Loxia leucoptera</i>				S5	AC CDC, MBBA
pine siskin	<i>Spinus pinus</i>				S3	AC CDC, MBBA
American goldfinch	<i>Spinus tristis</i>				S5	AC CDC, MBBA
evening grosbeak	<i>Coccothraustes vespertinus</i>		special concern		S3B,S3S4N,SUM	AC CDC, MBBA
house sparrow	<i>Passer domesticus</i>				SNA	AC CDC



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Table E.7 All Bird Species Identified in or Near the LAA (MBBA and AC CDC)

Common Name	Scientific Name	SARA	COSEWIC	NB Provincial Ranking	AC CDC S-Rank	Data Sources
scarlet tanager	<i>Piranga olivacea</i>				S3B,S3M	AC CDC, MBBA
gray jay	<i>Perisoreus canadensis</i>				S4	AC CDC, MBBA
osprey	<i>Pandion haliaetus</i>				S4S5B,S5M	AC CDC, MBBA
Nelson's sparrow	<i>Ammodramus nelsoni</i>		Not at Risk		S4B,S4M	AC CDC
clay-colored sparrow	<i>Spizella pallida</i>				SNA	AC CDC, MBBA
winter wren	<i>Troglodytes hiemalis</i>				S5B,S5M	AC CDC, MBBA
purple finch	<i>Haemorhous purpureus</i>				S4S5B,SUN,S5M	AC CDC, MBBA
house finch	<i>Haemorhous mexicanus</i>				SNA	AC CDC, MBBA



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Table E.8 Raw data from June 2019 Breeding Bird Surveys

Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089583	675189	Mature - Overmature Mixedwood
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089603	675202	Mature - Overmature Mixedwood
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	M	A			Yes		5089463	675174	Mature - Overmature Mixedwood
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089488	675119	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089529	675190	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089505	675133	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Dark-eyed Junco	<i>Junco hyemalis</i>	1	U	A			Yes		5089543	675148	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	U	A			Yes		5089574	675134	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	F	A		Yes	Yes		5089529	675166	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes		5089529	675240	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089539	675086	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	U	A			Yes		5089511	675138	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089529	675246	Mixedwood Treed Swamp
	2019-06-03	05:56:14	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Eastern Phoebe	<i>Sayornis phoebe</i>	1	M	A			Yes		5089597	675124	Mixedwood Treed Swamp
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089477	675386	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A			Yes		5089494	675401	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089607	675484	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	M	A			Yes		5089449	675470	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089487	675459	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Flicker	<i>Colaptes auratus</i>	1	U	A			Yes		5089469	675464	Mature - Overmature Mixedwood
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	U	A			Yes		5089542	675536	Young - Immature Mixedwood



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Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	M	A			Yes		5089590	675473	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Swamp Sparrow	<i>Melospiza georgiana</i>	1	M	A			Yes		5089547	675413	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5089542	675478	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089596	675477	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089553	675369	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089606	675413	Freshwater Marsh
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Goldfinch	<i>Spinus tristis</i>	2	U	A			Yes		5089542	675504	Mixedwood Treed Swamp
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	M	A			Yes		5089517	675532	Mixedwood Treed Swamp
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089542	675524	Mixedwood Treed Swamp
	2019-06-03	06:24:24	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A			Yes		5089542	675503	Mixedwood Treed Swamp
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089914	675051	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089849	675147	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089856	675036	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089784	675024	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	F	A		Yes			5089834	675067	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	M	A			Yes		5089794	675097	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	M	A			Yes		5089925	675046	Mature - Overmature Hardwood
	2019-06-03	07:12:12	11	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089897	675111	Mature - Overmature Hardwood
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes		5090045	674649	Young - Immature Hardwood
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	2	M	A			Yes		5090127	674659	Young - Immature Hardwood
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089980	674717	Deciduous Treed Swamp



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Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1	M	A			Yes		5090103	674742	Deciduous Treed Swamp
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5090037	674790	Deciduous Treed Swamp
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5090020	674684	Deciduous Treed Swamp
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5090037	674754	Deciduous Treed Swamp
	2019-06-03	07:42:27	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089965	674721	Deciduous Treed Swamp
	2019-06-03	08:09:08	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes		5089803	674516	Mature - Overmature Hardwood
	2019-06-03	08:09:08	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089750	674578	Mature - Overmature Hardwood
	2019-06-03	08:09:08	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue Jay	<i>Cyanocitta cristata</i>	1	U	A		Yes			5089796	674570	Mature - Overmature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089732	674077	Young - Immature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089677	674111	Young - Immature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089631	674002	Young - Immature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089719	674022	Young - Immature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089639	674053	Young - Immature Hardwood
	2019-06-03	08:57:09	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes	Yes	5089677	674160	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089340	674133	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089396	674096	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089425	674139	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2	U	A		Yes			5089399	674071	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes		5089400	674063	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089449	674092	Young - Immature Hardwood
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes		5089461	674161	Young - Immature Hardwood



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Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-03	09:21:25	12	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089392	674175	Young - Immature Hardwood
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Swamp Sparrow	<i>Melospiza georgiana</i>	1	M	A			Yes		5089458	673551	Anthropogenic: Transmission Line
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089366	673477	Mature - Overmature Hardwood
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5089436	673581	Young - Immature Mixedwood
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	M	A			Yes		5089436	673613	Young - Immature Mixedwood
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes		5089511	673503	Deciduous Treed Swamp
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Swamp Sparrow	<i>Melospiza georgiana</i>	1	M	A			Yes		5089500	673508	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	M	A		Yes			5089488	673570	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5089487	673514	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089507	673583	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes		5089371	673557	Tall Shrub Swamp
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	M	A			Yes		5089378	673555	Tall Shrub Swamp
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	M	A			Yes		5089443	673494	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5089444	673483	Freshwater Marsh
	2019-06-04	05:34:15	5	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes		5089416	673520	Mixedwood Treed Swamp
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5088794	669275	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5088852	669149	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	M	A			Yes		5088854	669148	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes		5088739	669128	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1	M	A			Yes		5088739	669192	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Hermit Thrush	<i>Catharus guttatus</i>	1	M	A			Yes		5088702	669203	Mature - Overmature Softwood



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Table E.8 Raw data from June 2019 Breeding Bird Surveys

Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A		Yes		Yes	5088891	669131	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Canada Warbler	<i>Cardellina canadensis</i>	1	M	A			Yes		5088794	669220	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A			Yes		5088794	669254	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Goldfinch	<i>Spinus tristis</i>	1	U	A		Yes			5088806	669094	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue Jay	<i>Cyanocitta cristata</i>	2	U	A		Yes			5088872	669225	Mature - Overmature Softwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1	M	A			Yes		5088724	669115	Regeneration - Sapling Mixedwood
	2019-06-04	06:30:27	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes	Yes	5088701	669095	Regeneration - Sapling Mixedwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Eastern Wood-Pewee	<i>Contopus virens</i>	1	M	A			Yes	Yes	5088827	668981	Regeneration - Sapling Mixedwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1	M	A			Yes		5088914	668805	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Canada Warbler	<i>Cardellina canadensis</i>	1	M	A			Yes		5088893	668815	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	M	A			Yes	Yes	5088716	668877	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5088884	668881	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1	M	A			Yes		5088840	668757	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Canada Warbler	<i>Cardellina canadensis</i>	1	M	A			Yes		5088763	668864	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Canada Warbler	<i>Cardellina canadensis</i>	1	F	A		Yes	Yes	Yes	5088827	668862	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5088780	668803	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5088835	668792	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5088827	668932	Young - Immature Softwood
	2019-06-04	06:55:36	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes		5088901	668811	Young - Immature Softwood
	2019-06-04	07:40:07	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	M	A			Yes		5090109	668419	Regeneration - Sapling Hardwood
	2019-06-04	07:40:07	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5090039	668346	Regeneration - Sapling Hardwood



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2019-06-04	07:40:07	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A				Yes		5090072	668293	Regeneration - Sapling Hardwood
2019-06-04	07:40:07	3	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Crow	<i>Corvus brachyrhynchos</i>	1	U	A			Yes			5090196	668286	Regeneration - Sapling Hardwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Ruffed Grouse	<i>Bonasa umbellus</i>	1	M	A				Yes		5090567	668516	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A				Yes		5090574	668521	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	U	A			Yes			5090589	668431	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A				Yes		5090475	668554	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	F	A	Yes					5090471	668481	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A				Yes		5090541	668500	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	American Goldfinch	<i>Spinus tristis</i>	1	U	A			Yes			5090464	668442	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Hermit Thrush	<i>Catharus guttatus</i>	1	U	A			Yes			5090498	668530	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	M	A				Yes		5090542	668453	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1	M	A				Yes	Yes	5090615	668419	Young - Immature Mixedwood
2019-06-04	08:06:31	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Northern Flicker	<i>Colaptes auratus</i>	1	U	A			Yes		Yes	5090498	668598	Young - Immature Softwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	American Redstart	<i>Setophaga ruticilla</i>	1	M	A				Yes		5090815	667989	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A				Yes		5090692	668033	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Northern Flicker	<i>Colaptes auratus</i>	1	U	A			Yes			5090706	667956	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A				Yes		5090768	668056	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A				Yes		5090768	668099	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A				Yes		5090759	668013	Young - Immature Hardwood
2019-06-04	08:29:01	5	Light Breeze (6-11 kph)	Light Noise (Temporary, Not Distracting)	Northern Parula	<i>Setophaga americana</i>	1	M	A				Yes		5090833	668052	Young - Immature Hardwood
2019-06-04	09:00:04	5	Gentle Breeze (12-19 kph)	Light Noise (Temporary, Not Distracting)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	9	B	A		Yes				5091617	665068	Industrial



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2019-06-04	09:00:04	5	Gentle Breeze (12-19 kph)	Light Noise (Temporary, Not Distracting)	Common Grackle	<i>Quiscalus quiscula</i>	3	U	A		Yes				5091560	665055	Industrial
2019-06-04	09:00:04	5	Gentle Breeze (12-19 kph)	Light Noise (Temporary, Not Distracting)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	1	B		Yes	Yes				5091617	665070	Industrial
2019-06-04	09:00:04	5	Gentle Breeze (12-19 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A	Yes					5091691	665004	Industrial
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A				Yes		5089531	670141	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A				Yes		5089571	670076	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A				Yes		5089449	670125	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A				Yes		5089431	670131	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Blue Jay	<i>Cyanocitta cristata</i>	1	U	A			Yes			5089462	670121	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A				Yes		5089488	670197	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A				Yes		5089488	670209	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	M	A				Yes		5089475	670102	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1	M	A				Yes		5089570	670166	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	3	U	A	Yes					5089490	670105	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Gray Jay	<i>Perisoreus canadensis</i>	1	U	A	Yes					5089488	670131	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Blue Jay	<i>Cyanocitta cristata</i>	2	U	A			Yes			5089559	670159	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Hermit Thrush	<i>Catharus guttatus</i>	1	M	A				Yes	Yes	5089504	670004	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Mourning Dove	<i>Zenaida macroura</i>	1	M	A				Yes		5089429	670063	Regeneration - Sapling Hardwood
2019-06-05	06:20:04	5	Calm (1 kph)	Quiet	Hermit Thrush	<i>Catharus guttatus</i>	1	M	A				Yes		5089463	670203	Regeneration - Sapling Hardwood
2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	U	A			Yes			5089593	670545	Young - Immature Hardwood
2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Purple Finch	<i>Haemorhous purpureus</i>	1	M	A				Yes		5089620	670597	Young - Immature Hardwood
2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Veery	<i>Catharus fuscescens</i>	1	M	A				Yes		5089720	670495	Young - Immature Hardwood



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	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Ruffed Grouse	<i>Bonasa umbellus</i>	1	M	A			Yes		5089648	670474	Young - Immature Hardwood
	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Hairy Woodpecker	<i>Picoides villosus</i>	1	U	A		Yes			5089676	670555	Young - Immature Hardwood
	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089557	670556	Young - Immature Hardwood
	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089699	670504	Young - Immature Hardwood
	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes		5089604	670501	Young - Immature Hardwood
	2019-06-05	07:02:05	5	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089639	670616	Young - Immature Hardwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes	Yes	5089738	670783	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5089675	670909	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	M	A			Yes		5089809	670855	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Winter Wren	<i>Troglodytes hiemalis</i>	1	M	A			Yes		5089785	670934	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089722	670923	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	M	A			Yes		5089760	670877	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089673	670852	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089732	670828	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089722	670987	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089794	670940	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1	U	A			Yes		5089722	670967	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089660	670913	Mature - Overmature Mixedwood
	2019-06-05	07:24:32	5	Calm (1 kph)	Quiet	American Redstart	<i>Setophaga ruticilla</i>	1	M	A			Yes	Yes	5089792	670939	Mature - Overmature Mixedwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1	M	A			Yes		5089465	670807	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	U	A		Yes			5089413	670806	Mature - Overmature Hardwood



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	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Black-and-white Warbler	<i>Mniotilta varia</i>	1	M	A			Yes		5089523	670887	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Northern Flicker	<i>Colaptes auratus</i>	1	U	A		Yes			5089537	670810	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Black-throated Blue Warbler	<i>Setophaga caeruleascens</i>	1	M	A			Yes		5089504	670874	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089459	670934	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Northern Parula	<i>Setophaga americana</i>	1	M	A			Yes		5089415	670859	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Hairy Woodpecker	<i>Picoides villosus</i>	1	M	A			Yes		5089366	670873	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089514	670821	Mature - Overmature Hardwood
	2019-06-05	08:11:17	8	Calm (1 kph)	Quiet	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes		5089531	670891	Mature - Overmature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Red-eyed Vireo	<i>Vireo olivaceus</i>	1	M	A			Yes		5089090	670901	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Mourning Dove	<i>Zenaida macroura</i>	1	M	A			Yes		5089097	670840	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Black-throated Green Warbler	<i>Setophaga virens</i>	1	M	A			Yes		5089070	670889	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Purple Finch	<i>Haemorhous purpureus</i>	1	M	A			Yes		5089099	670839	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Tennessee Warbler	<i>Oreothlypis peregrina</i>	1	M	A			Yes		5088993	670829	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089037	670958	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Blackburnian Warbler	<i>Setophaga fusca</i>	1	M	A			Yes		5089047	670801	Young - Immature Hardwood
	2019-06-05	08:41:12	8	Calm (1 kph)	Quiet	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes		5088982	670884	Young - Immature Hardwood
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	American Goldfinch	<i>Spinus tristis</i>	3	B	A		Yes			5090709	678043	Anthropogenic: Transmission Line
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Common Grackle	<i>Quiscalus quiscula</i>	1	M	A			Yes		5090709	678045	Anthropogenic: Transmission Line
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1	F	A	Yes				5090709	678025	Anthropogenic: Transmission Line
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5090639	678013	Young - Immature Mixedwood
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5090653	678009	Young - Immature Mixedwood



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Table E.8 Raw data from June 2019 Breeding Bird Surveys

Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	M	A			Yes		5090669	677957	Shallow Water Wetland
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	2	B	A		Yes	Yes		5090702	677995	Shallow Water Wetland
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Great Blue Heron	<i>Ardea herodias</i>	1	U	A					5090713	677967	Freshwater Marsh
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes		5090747	678017	Freshwater Marsh
	2019-06-05	09:35:35	11	Calm (1 kph)	Quiet	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5090746	677976	Shallow Water Wetland
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5090518	667695	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Hermit Thrush	<i>Catharus guttatus</i>	1	M	A			Yes		5090648	667730	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5090569	667778	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	M	A			Yes	Yes	5090586	667566	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5090569	667748	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5090634	667650	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5090545	667687	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1	M	A			Yes		5090577	667628	Agriculture
	2019-06-07	05:23:09	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes	Yes	5090679	667630	Agriculture
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ruffed Grouse	<i>Bonasa umbellus</i>	1	M	A			Yes		5089672	667850	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	F	A	Yes				5089746	667911	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M				Yes		5089734	667963	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes		5089815	667867	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Hairy Woodpecker	<i>Picoides villosus</i>	1	U	A		Yes			5089700	667914	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089734	667990	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1	M	A			Yes		5089734	667987	Coniferous Treed Swamp



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Table E.8 Raw data from June 2019 Breeding Bird Surveys

Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Crow	<i>Corvus brachyrhynchos</i>	1	U	A		Yes		Yes	5089752	667781	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Hermit Thrush	<i>Catharus guttatus</i>	1	M	A			Yes	Yes	5089621	667937	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1	M	A			Yes		5089799	667945	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	American Robin	<i>Turdus migratorius</i>	1	M	A			Yes		5089734	668002	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Ovenbird	<i>Seiurus aurocapilla</i>	1	M	A			Yes		5089792	667877	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes		5089684	667919	Coniferous Treed Swamp
	2019-06-07	06:01:31	7	Light Air (2-5 kph)	Light Noise (Temporary, Not Distracting)	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1	M	A			Yes		5089786	667936	Coniferous Treed Swamp
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5091635	666466	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5091486	666444	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Hairy Woodpecker	<i>Picoides villosus</i>	1	U	A		Yes		Yes	5091424	666541	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	American Crow	<i>Corvus brachyrhynchos</i>	1	U	A		Yes		Yes	5091554	666620	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	2	B	A			Yes		5091611	666539	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A		Yes			5091486	666444	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Herring Gull	<i>Larus argentatus</i>	1	U	A	Yes			Yes	5091520	666620	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5091567	666412	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A		Yes			5091527	666597	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	2	U	A	Yes	Yes			5091461	666530	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5091568	666406	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Nashville Warbler	<i>Oreothlypis ruficapilla</i>	1	M	A			Yes	Yes	5091664	666453	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5091560	666464	Agriculture
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	1	M	A			Yes		5091500	666519	Agriculture



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Common Name	Survey Time	Temp (°C)	Wind	Noise	Common Name	Scientific Name	Count	Sex	Age	Fly By	Seen	Calling	Singing	Incidental	Northing (UTM Zone 19)	Easting (UTM Zone 19)	Habitat
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1	M	A			Yes	Yes	5091572	666383	Native Land
	2019-06-07	06:46:56	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes	Yes	5091572	666377	Native Land
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes	Yes	5091612	666926	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Osprey	<i>Pandion haliaetus</i>	1	U	A	Yes				5091548	666755	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5091625	666719	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5091612	666898	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A	Yes	Yes			5091612	666874	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Yellow Warbler	<i>Setophaga petechia</i>	1	F	A		Yes			5091600	666814	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	M	A		Yes		Yes	5091612	666844	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Yellow Warbler	<i>Setophaga petechia</i>	1	M	A			Yes	Yes	5091576	666821	Agriculture
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	1	M	A			Yes		5091670	666784	Industrial
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5091620	666756	Industrial
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Magnolia Warbler	<i>Setophaga magnolia</i>	1	M	A			Yes		5091675	666782	Industrial
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	American Goldfinch	<i>Spinus tristis</i>	1	U	A			Yes		5091622	666741	Industrial
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	1	U	A		Yes			5091577	666780	Regeneration - Sapling Hardwood
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	European Starling	<i>Sturnus vulgaris</i>	1	U	A		Yes			5091531	666835	Regeneration - Sapling Hardwood
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A	Yes		Yes		5091498	666844	Regeneration - Sapling Hardwood
	2019-06-07	07:31:29	9	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Yellow Warbler	<i>Setophaga petechia</i>	1	F	A		Yes			5091527	666836	Regeneration - Sapling Hardwood
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	M	A			Yes		5091426	667082	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	2	B	A			Yes		5091411	666967	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	1	F	A		Yes	Yes		5091484	667023	Agriculture



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	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	1	M	A			Yes		5091486	667024	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes	Yes	5091464	666901	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5091398	667016	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes		5091530	666963	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Grackle	<i>Quiscalus quiscula</i>	2	U	A	Yes				5091437	667004	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	M	A			Yes		5091361	667027	Agriculture
	2019-06-07	08:03:28	12	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	U	A			Yes		5091462	666910	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	3	U	A	Yes			Yes	5091585	667787	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Blue-headed Vireo	<i>Vireo solitarius</i>	1	M	A			Yes	Yes	5091680	667859	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Grackle	<i>Quiscalus quiscula</i>	1	U	A	Yes				5091711	667827	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Veery	<i>Catharus fuscescens</i>	1	M	A			Yes	Yes	5091711	667873	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Common Yellowthroat	<i>Geothlypis trichas</i>	1	M	A			Yes		5091649	667695	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	1	M	A		Yes	Yes		5091685	667840	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Song Sparrow	<i>Melospiza melodia</i>	1	M	A			Yes		5091769	667786	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1	M	A			Yes		5091777	667720	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Black-capped Chickadee	<i>Poecile atricapillus</i>	1	M	A			Yes	Yes	5091592	667785	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Bobolink	<i>Dolichonyx oryzivorus</i>	1	F	A		Yes			5091674	667761	Agriculture
	2019-06-07	08:32:57	14	Calm (1 kph)	Light Noise (Temporary, Not Distracting)	Alder Flycatcher	<i>Empidonax alnorum</i>	1	U	A			Yes	Yes	5091727	667643	Agriculture



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