

APPENDIX K
OLD GROWTH ASSESSMENT PHOTOGRAPH LOG



Photo 1: Representative photo of plot 1,
stand B020-01515.



Photo 2: Representative photo of plot 2,
stand B020-01515.



Photo 3: Representative photo of plot 3,
stand B020-01515.



Photo 4: Representative photo of plot 1,
stand B020-01629.



Photo 5: Representative photo of plot 2,
stand B020-01629.



Photo 6: Representative photo of plot 3,
stand B020-01629.



Photo 7: Representative photo of plot 4,
stand B020-01629.



Photo 8: Representative photo of plot 5,
stand B020-01629.



Photo 9: Representative photo of plot 1,
stand B020-01635.



Photo 10: Representative photo of plot 2,
stand B020-01635.

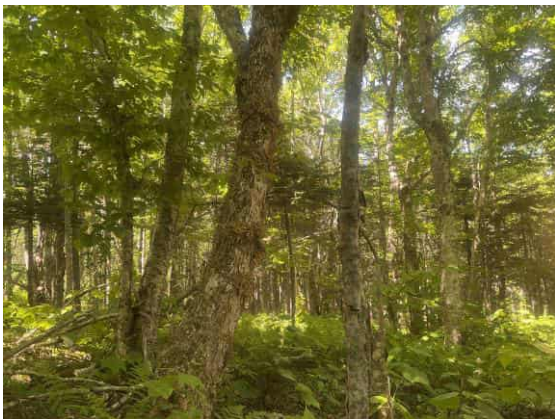


Photo 11: Representative photo of plot 3,
stand B020-01635.



Photo 12: Representative photo of plot 4,
stand B020-01635.



Photo 13: Representative photo of plot 5,
stand B020-01635.



Photo 14: Representative photo of plot 1,
stand C020-02413.



Photo 15: Representative photo of plot 2,
stand C020-02413.



Photo 16: Representative photo of plot 3,
stand C020-02413.



Photo 17: Representative photo of plot 4,
stand C020-02413.



Photo 18: Representative photo of plot 5,
stand C020-02413.



Photo 19: Representative photo of plot 6,
stand C020-02413.



Photo 20: Representative photo of plot 7,
stand C020-02413.



Photo 21: Representative photo of plot 1,
stand C020-02731.



Photo 22: Representative photo of plot 2,
stand C020-02731.



Photo 23: Representative photo of plot 3,
stand C020-02731.



Photo 24: Representative photo of plot 4,
stand C020-02731.



Photo 25: Representative photo of plot 5,
stand C020-02731.



Photo 26: Representative photo of plot 1,
stand C020-02740.



Photo 27: Representative photo of plot 2,
stand C020-02740.



Photo 28: Representative photo of plot 3,
stand C020-02740.



Photo 29: Representative photo of plot 4,
stand C020-02740.



Photo 30: Representative photo of plot 5,
stand C020-02740.



Photo 31: Representative photo of plot 1,
stand C020-02770.



Photo 32: Representative photo of plot 2,
stand C020-02770.



Photo 33: Representative photo of plot 3,
stand C020-02770.



Photo 34: Representative photo of plot 4,
stand C020-02770.



Photo 35: Representative photo of plot 5,
stand C020-02770.



Photo 36: Representative photo of plot 6,
stand C020-02770.



Photo 37: Representative photo of plot 7,
stand C020-02770.



Photo 38: Representative photo of plot 8,
stand C020-02770.



Photo 39: Representative photo of plot 1,
stand C020-02793.



Photo 40: Representative photo of plot 2,
stand C020-02793.



Photo 41: Representative photo of plot 3,
stand C020-02793.



Photo 42: Representative photo of plot 1,
stand C020-03342.



Photo 43: Representative photo of plot 2,
stand C020-03342.



Photo 44: Representative photo of plot 3,
stand C020-03342.



Photo 45: Representative photo of plot 1,
stand C020-03411.



Photo 46: Representative photo of plot 2,
stand C020-03411.



Photo 47: Representative photo of plot 3,
stand C020-03411.



Photo 48: Representative photo of plot 4,
stand C020-03411.



Photo 49: Representative photo of plot 5,
stand C020-03411.



Photo 50: Representative photo of plot 1,
stand C020-03422.



Photo 51: Representative photo of plot 2,
stand C020-03422.



Photo 52: Representative photo of plot 3,
stand C020-03422.



Photo 53: Representative photo of plot 4,
stand C020-03422.



Photo 54: Representative photo of plot 5,
stand C020-03422.



Photo 55: Representative photo of plot 1,
stand C020-03423.



Photo 56: Representative photo of plot 2,
stand C020-03423.



Photo 57: Representative photo of plot 3,
stand C020-03423.



Photo 58: Representative photo of plot 4,
stand C020-03423.



Photo 59: Representative photo of plot 5,
stand C020-03423.

APPENDIX L

COMPLETE PLANT LIST

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
Vascular Plants					
<i>Abies balsamea</i>	Balsam Fir	-	-	-	S5
<i>Acer pensylvanicum</i>	Striped Maple	-	-	-	S5
<i>Acer rubrum</i>	Red Maple	-	-	-	S5
<i>Acer saccharum</i>	Sugar Maple	-	-	-	S4S5
<i>Acer spicatum</i>	Mountain Maple	-	-	-	S5
<i>Achillea millefolium</i>	Common Yarrow	-	-	-	SNA
<i>Actaea rubra</i>	Red Baneberry	-	-	-	S5
<i>Aegopodium podagraria</i>	Bishop's Goutweed	-	-	-	SNA
<i>Agalinis neoscotica</i>	Nova Scotia Agalinis	-	-	-	S4S5
<i>Agrimonia gryposepala</i>	Hooked Agrimony	-	-	-	S4
<i>Agrostis capillaris</i>	Colonial Bent Grass	-	-	-	SNA
<i>Agrostis gigantea</i>	Redtop	-	-	-	SNA
<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>Amauropelta noveboracensis</i>	New York Fern	-	-	-	S5
<i>Ambrosia artemisiifolia</i>	Common Ragweed	-	-	-	S5
<i>Amelanchier arborea</i>	Downy Serviceberry	-	-	-	S4S5
<i>Amelanchier spicata</i>	Running Serviceberry	-	-	-	S3S4
<i>Anaphalis margaritacea</i>	Pearly Everlasting	-	-	-	S5
<i>Antennaria howellii</i> ssp. <i>canadensis</i>	Howell's Pussytoes	-	-	-	S4?
<i>Anthoxanthum odoratum</i>	Large Sweet Vernal Grass	-	-	-	SNA
<i>Apocynum androsaemifolium</i>	Spreading Dogbane	-	-	-	S5
<i>Aralia hispida</i>	Bristly Sarsaparilla	-	-	-	S5
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	-	-	-	S5
<i>Arctium minus</i>	Common Burdock	-	-	-	SNA
<i>Aronia melanocarpa</i>	Black Chokeberry	-	-	-	S5
<i>Asclepias incarnata</i>	Swamp Milkweed	-	-	-	S4
<i>Athyrium filix-femina</i>	Common Lady Fern	-	-	-	S5
<i>Athyrium filix-femina</i> var. <i>angustum</i>	Northeastern Lady Fern	-	-	-	S5
<i>Barbarea vulgaris</i>	Yellow Rocket	-	-	-	SNA
<i>Bellis perennis</i>	English Daisy	-	-	-	SNA
<i>Betula alleghaniensis</i>	Yellow Birch	-	-	-	S5
<i>Betula cordifolia</i>	Heart-Leaved Birch	-	-	-	S5
<i>Betula papyrifera</i>	Paper Birch	-	-	-	S5
<i>Betula populifolia</i>	Gray Birch	-	-	-	S5

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<i>Bidens cernua</i>	Nodding Beggarticks	-	-	-	S5
<i>Bidens frondosa</i>	Devil's Beggarticks	-	-	-	S5
<i>Brachyelytrum aristosum</i>	Northern Shorthusk	-	-	-	S5
<i>Brasenia schreberi</i>	Water-Shield	-	-	-	S5
<i>Bromus ciliatus</i>	Fringed Brome	-	-	-	S5
<i>Calamagrostis canadensis</i> var. <i>canadensis</i>	Bluejoint Reed Grass	-	-	-	S5
<i>Calla palustris</i>	Wild Calla	-	-	-	S4
<i>Callitriche palustris</i>	Marsh Water-Starwort	-	-	-	S5
<i>Calopogon tuberosus</i>	Tuberous Grass Pink	-	-	-	S4S5
<i>Cardamine diphylla</i>	Two-Leaved Toothwort	-	-	-	S4
<i>Cardamine pensylvanica</i>	Pennsylvania Bittercress	-	-	-	S5
<i>Carex arctata</i>	Black Sedge	-	-	-	S5
<i>Carex atlantica</i> ssp. <i>atlantica</i>	Atlantic Sedge	-	-	-	S4
<i>Carex billingsii</i>	Billings' Sedge	-	-	-	S4
<i>Carex brunnescens</i> ssp. <i>sphaerostachya</i>	Brownish Sedge	-	-	-	S5
<i>Carex canescens</i> ssp. <i>disjuncta</i>	Silvery Sedge	-	-	-	S5
<i>Carex communis</i> var. <i>communis</i>	Fibrous-Root Sedge	-	-	-	S5
<i>Carex crinita</i> var. <i>crinita</i>	Fringed Sedge	-	-	-	S5
<i>Carex debilis</i>	White-Edged Sedge	-	-	-	S5
<i>Carex disperma</i>	Two-Seeded Sedge	-	-	-	S5
<i>Carex echinata</i> ssp. <i>echinata</i>	Star Sedge	-	-	-	S5
<i>Carex flava</i>	Yellow Sedge	-	-	-	S5
<i>Carex foenea</i>	Fernald's Hay Sedge	-	-	-	S4
<i>Carex folliculata</i>	Northern Long Sedge	-	-	-	S5
<i>Carex gracillima</i>	Graceful Sedge	-	-	-	S5
<i>Carex gynandra</i>	Nodding Sedge	-	-	-	S5
<i>Carex interior</i>	Inland Sedge	-	-	-	S4S5
<i>Carex intumescens</i>	Bladder Sedge	-	-	-	S5
<i>Carex lacustris</i>	Lake Sedge	-	-	-	S4
<i>Carex lasiocarpa</i>	Slender Sedge	-	-	-	S5
<i>Carex leptalea</i>	Bristly-Stalked Sedge	-	-	-	S5
<i>Carex leptoneura</i>	Finely-Nerved Sedge	-	-	-	S5
<i>Carex lurida</i>	Sallow Sedge	-	-	-	S5
<i>Carex magellanica</i>	Boreal Bog Sedge	-	-	-	S5
<i>Carex nigra</i>	Smooth Black Sedge	-	-	-	S5
<i>Carex novae-angliae</i>	New England Sedge	-	-	-	S5
<i>Carex pallescens</i>	Pale Sedge	-	-	-	S5
<i>Carex pauciflora</i>	Few-Flowered Sedge	-	-	-	S4S5

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<i>Carex projecta</i>	Necklace Sedge	-	-	-	S5
<i>Carex pseudocyperus</i>	Cyperuslike Sedge	-	-	-	S5
<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 stricta</i>	Tussock Sedge	-	-	-	S5
<i>Carex trisperma</i>	Three-Seeded Sedge	-	-	-	S5
<i>Carex viridula</i> ssp. <i>brachyrrhyncha</i>	Greenish Sedge	-	-	-	S1
<i>Carex vulpinoidea</i>	Fox Sedge	-	-	-	S4
<i>Centaurea nigra</i>	Black Knapweed	-	-	-	SNA
<i>Cerastium arvense</i> ssp. <i>arvense</i>	Mouse-Ear Chickweed	-	-	-	SNR
<i>Cerastium fontanum</i>	Common Chickweed	-	-	-	SNA
<i>Chaenorhinum minus</i> ssp. <i>minus</i>	Dwarf Snapdragon	-	-	-	SNA
<i>Chamaedaphne calyculata</i>	Leatherleaf	-	-	-	S5
<i>Chamaenerion angustifolium</i> ssp. <i>angustifolium</i>	Fireweed	-	-	-	SNA
<i>Chelone glabra</i>	White Turtlehead	-	-	-	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> ssp. <i>alpina</i>	Small Enchanter's Nightshade	-	-	-	S5
<i>Circaea canadensis</i>	Broad-Leaved Enchanter's Nightshade	-	-	-	S4S5
<i>Cirsium arvense</i>	Canada Thistle	-	-	-	SNA
<i>Claytosmunda claytoniana</i>	Interrupted Fern	-	-	-	S5
<i>Clematis virginiana</i>	Virginia Clematis	-	-	-	S5
<i>Clinopodium vulgare</i>	Wild Basil	-	-	-	S4S5
<i>Clintonia borealis</i>	Yellow Bluebead Lily	-	-	-	S5
<i>Convolvulus arvensis</i>	Field Bindweed	-	-	-	SNA
<i>Coptis trifolia</i>	Goldthread	-	-	-	S5
<i>Corallorhiza trifida</i>	Early Coralroot	-	-	-	S4
<i>Cornus alternifolia</i>	Alternate-Leaved Dogwood	-	-	-	S5
<i>Cornus canadensis</i>	Bunchberry	-	-	-	S5
<i>Cornus rugosa</i>	Round-Leaved Dogwood	-	-	-	S4

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<i>Cornus sericea</i>	Red Osier Dogwood	-	-	-	S5
<i>Corylus cornuta</i>	Beaked Hazel	-	-	-	S5
<i>Corylus cornuta</i> ssp. <i>cornuta</i>	Beaked Hazelnut	-	-	-	S5
<i>Crataegus macrosperma</i>	Big-Fruit Hawthorn	-	-	-	S4
<i>Cypripedium acaule</i>	Pink Lady's-Slipper	-	-	-	S5
<i>Dactylis glomerata</i>	Orchard Grass	-	-	-	SNA
<i>Danthonia compressa</i>	Flattened Oat Grass	-	-	-	S5
<i>Danthonia spicata</i>	Poverty Oat Grass	-	-	-	S5
<i>Daucus carota</i>	Queen Anne's Lace	-	-	-	SNA
<i>Dendrolycopodium dendroideum</i>	Round-Branched Tree-Clubmoss	-	-	-	S5
<i>Dendrolycopodium hickeyi</i>	Hickey's Tree-Clubmoss	-	-	-	S4
<i>Dennstaedtia punctilobula</i>	Eastern Hay-Scented Fern	-	-	-	S5
<i>Deparia acrostichoides</i>	Silvery Glade Fern	-	-	-	S4
<i>Deschampsia cespitosa</i> ssp. <i>cespitosa</i>	Tufted Hair Grass	-	-	-	S4
<i>Dianthus armeria</i> ssp. <i>armeria</i>	Deptford Pink	-	-	-	SNA
<i>Dichanthelium implicatum</i>	Slender-Stemmed Panicgrass	-	-	-	S5
<i>Diervilla lonicera</i>	Northern Bush Honeysuckle	-	-	-	S5
<i>Digitalis purpurea</i> ssp. <i>purpurea</i>	Purple Foxglove	-	-	-	SNA
<i>Digitaria sanguinalis</i>	Hairy Crab Grass	-	-	-	SNA
<i>Diphasiastrum digitatum</i>	Southern Ground-Cedar	-	-	-	S5
<i>Doellingeria umbellata</i>	Hairy Flat-Top White Aster	-	-	-	S5
<i>Drosera intermedia</i>	Spoon-Leaved Sundew	-	-	-	S5
<i>Drosera rotundifolia</i>	Round-Leaved Sundew	-	-	-	S5
<i>Dryopteris campyloptera</i>	Mountain Wood Fern	-	-	-	S5
<i>Dryopteris campyloptera</i> x <i>intermedia</i>	A Hybrid Wood Fern	-	-	-	SNA
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	-	-	-	S5
<i>Dryopteris cristata</i>	Crested Wood Fern	-	-	-	S5
<i>Dryopteris filix-mas</i>	Male Fern	-	-	-	S4
<i>Dryopteris intermedia</i>	Evergreen Wood Fern	-	-	-	S5
<i>Dryopteris marginalis</i>	Marginal Wood Fern	-	-	-	S5
<i>Dulichium arundinaceum</i>	Three-Way Sedge	-	-	-	S5
<i>Echinochloa crus-galli</i>	Large Barnyard Grass	-	-	-	SNA
<i>Eleocharis acicularis</i>	Needle Spikerush	-	-	-	S5
<i>Eleocharis elliptica</i>	Elliptic Spikerush	-	-	-	S5
<i>Eleocharis obtusa</i>	Blunt Spikerush	-	-	-	S5

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<i>Eleocharis palustris</i>	Common Spikerush	-	-	-	S5
<i>Eleocharis parvula</i>	Dwarf Spikerush	-	-	-	S4
<i>Empetrum nigrum</i>	Black Crowberry	-	-	-	S5
<i>Epigaea repens</i>	Trailing Arbutus	-	-	-	S5
<i>Epilobium ciliatum</i> ssp. <i>glandulosum</i>	Northern Willowherb	-	-	-	S4S5
<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 hieraciifolius</i>	Eastern Burnweed	-	-	-	S5
<i>Erigeron canadensis</i>	Canada Horseweed	-	-	-	S5
<i>Erigeron strigosus</i>	Rough Fleabane	-	-	-	S5
<i>Eriophorum angustifolium</i>	Narrow-Leaved Cottongrass	-	-	-	S5
<i>Eriophorum vaginatum</i>	Tussock Cottongrass	-	-	-	S5
<i>Eriophorum virginicum</i>	Tawny Cottongrass	-	-	-	S5
<i>Eupatorium perfoliatum</i>	Common Boneset	-	-	-	S5
<i>Euphrasia nemorosa</i>	Common Eyebright	-	-	-	SNA
<i>Eurybia macrophylla</i>	Large-Leaved Aster	-	-	-	S5
<i>Eurybia radula</i>	Low Rough Aster	-	-	-	S5
<i>Euthamia graminifolia</i>	Grass-Leaved Goldenrod	-	-	-	S5
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	-	-	-	S5
<i>Fagus grandifolia</i>	American Beech	-	-	-	S3S4
<i>Fallopia cilinodis</i>	Fringed Black Bindweed	-	-	-	S5
<i>Festuca filiformis</i>	Hair Fescue	-	-	-	SNA
<i>Festuca rubra</i> ssp. <i>arenaria</i>	Red Fescue	-	-	-	S5
<i>Fragaria virginiana</i> ssp. <i>glauca</i>	Wild Strawberry	-	-	-	S5
<i>Frangula alnus</i>	Glossy Buckthorn	-	-	-	SNA
<i>Fraxinus americana</i>	White Ash	-	-	-	S4
<i>Fraxinus nigra</i>	Black Ash	Threatened	-	Threatened	S1S2
<i>Galeopsis tetrahit</i>	Common Hemp-Nettle	-	-	-	SNA
<i>Galium asprellum</i>	Rough Bedstraw	-	-	-	S5
<i>Galium palustre</i>	Common Marsh Bedstraw	-	-	-	S5
<i>Gaultheria hispidula</i>	Creeping Snowberry	-	-	-	S5
<i>Gaultheria procumbens</i>	Eastern Teaberry	-	-	-	S5
<i>Gaylussacia baccata</i>	Black Huckleberry	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Geranium robertianum</i>	Herb Robert	-	-	-	S4
<i>Geum aleppicum</i>	Yellow Avens	-	-	-	S5
<i>Geum macrophyllum</i>	Large-Leaved Avens	-	-	-	S5
<i>Geum rivale</i>	Water Avens	-	-	-	S5
<i>Glyceria borealis</i>	Northern Manna Grass	-	-	-	S5
<i>Glyceria canadensis</i>	Canada Manna Grass	-	-	-	S5
<i>Glyceria striata</i>	Fowl Manna Grass	-	-	-	S5
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	-	-	-	SNA
<i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain	-	-	-	S2S3
<i>Gratiola lutea</i>	Golden Hedge-Hyssop	-	-	-	S5
<i>Gymnocarpium dryopteris</i>	Common Oak Fern	-	-	-	S5
<i>Hamamelis virginiana</i>	American Witch-Hazel	-	-	-	S5
<i>Hieracium lachenalii</i>	Common Hawkweed	-	-	-	SNA
<i>Hieracium maculatum</i>	Spotted Hawkweed	-	-	-	SNA
<i>Hieracium scabrum</i>	Rough Hawkweed	-	-	-	S5
<i>Huperzia lucidula</i>	Shining Firmoss	-	-	-	S5
<i>Hydrocotyle americana</i>	American Marsh Pennywort	-	-	-	S5
<i>Hypericum canadense</i>	Canada St John's-Wort	-	-	-	S5
<i>Hypericum ellipticum</i>	Pale St John's-Wort	-	-	-	S5
<i>Hypericum fraseri</i>	Fraser's St. John's-Wort	-	-	-	S5
<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Common St. John's-Wort	-	-	-	SNA
<i>Hypopitys monotropa</i>	Pinesap	-	-	-	S4
<i>Ilex mucronata</i>	Mountain Holly	-	-	-	S5
<i>Ilex verticillata</i>	Common Winterberry	-	-	-	S5
<i>Impatiens capensis</i>	Spotted Jewelweed	-	-	-	S5
<i>Iris versicolor</i>	Harlequin Blue Flag	-	-	-	S5
<i>Jacobaea vulgaris</i>	Tansy Ragwort	-	-	-	SNA
<i>Juncus articulatus</i> ssp. <i>articulatus</i>	Jointed Rush	-	-	-	S5
<i>Juncus brevicaudatus</i>	Narrow-Panicled Rush	-	-	-	S5
<i>Juncus bufonius</i>	Toad Rush	-	-	-	S5
<i>Juncus canadensis</i>	Canada Rush	-	-	-	S5
<i>Juncus conglomeratus</i>	Compact Rush	-	-	-	SNA
<i>Juncus effusus</i> ssp. <i>effusus</i>	Soft Rush	-	-	-	SNR
<i>Juncus filiformis</i>	Thread Rush	-	-	-	S5
<i>Juncus pelocarpus</i>	Brown-Fruited Rush	-	-	-	S5
<i>Juncus tenuis</i>	Slender Rush	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Juniperus communis</i> var. <i>depressa</i>	Common Juniper	-	-	-	S5
<i>Kalmia angustifolia</i> var. <i>angustifolia</i>	Sheep Laurel	-	-	-	S5
<i>Kalmia polifolia</i>	Pale Bog Laurel	-	-	-	S5
<i>Lactuca biennis</i>	Tall Blue Lettuce	-	-	-	S5
<i>Larix laricina</i>	Tamarack	-	-	-	S5
<i>Leersia oryzoides</i>	Rice Cut Grass	-	-	-	S5
<i>Lemna turionifera</i>	Turion Duckweed	-	-	-	S5
<i>Leucanthemum vulgare</i>	Oxeye Daisy	-	-	-	SNA
<i>Linnaea borealis</i> ssp. <i>longiflora</i>	Twinflower	-	-	-	S5
<i>Lobelia inflata</i>	Inflated Lobelia	-	-	-	S5
<i>Lolium multiflorum</i>	Annual Ryegrass	-	-	-	SNA
<i>Lolium perenne</i>	Perennial Rye Grass	-	-	-	SNA
<i>Lonicera canadensis</i>	Canada Fly Honeysuckle	-	-	-	S5
<i>Lonicera villosa</i>	Mountain Fly Honeysuckle	-	-	-	S4S5
<i>Lotus corniculatus</i>	Garden Bird's-Foot Trefoil	-	-	-	SNA
<i>Ludwigia palustris</i>	Marsh Seedbox	-	-	-	S5
<i>Luzula acuminata</i> ssp. <i>acuminata</i>	Hairy Woodrush	-	-	-	S5
<i>Luzula multiflora</i> ssp. <i>frigida</i>	Common Woodrush	-	-	-	S4?
<i>Lycopodiella inundata</i>	Northern Bog Clubmoss	-	-	-	S5
<i>Lycopodium clavatum</i>	Running Clubmoss	-	-	-	S5
<i>Lycopus americanus</i>	American Water Horehound	-	-	-	S5
<i>Lycopus uniflorus</i>	Northern Water Horehound	-	-	-	S5
<i>Lycopus virginicus</i>	Virginia Bugleweed	-	-	-	SNA
<i>Lysimachia borealis</i>	Northern Starflower	-	-	-	S5
<i>Lysimachia ciliata</i>	Fringed Yellow Loosestrife	-	-	-	S4
<i>Lysimachia terrestris</i>	Swamp Yellow Loosestrife	-	-	-	S5
<i>Lythrum salicaria</i>	Purple Loosestrife	-	-	-	SNA
<i>Maianthemum canadense</i> ssp. <i>canadense</i>	Wild Lily-Of-The-Valley	-	-	-	S5
<i>Maianthemum racemosum</i>	Large False Solomon's Seal	-	-	-	S4S5
<i>Maianthemum trifolium</i>	Three-Leaved False Solomon's Seal	-	-	-	S5
<i>Malus domestica</i>	Common Apple	-	-	-	SNA
<i>Matricaria discoidea</i>	Pineapple Weed	-	-	-	SNA
<i>Matteuccia struthiopteris</i> var. <i>pennsylvanica</i>	Ostrich Fern	-	-	-	S5
<i>Medeola virginiana</i>	Cucumber Root	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Melilotus albus</i>	White Sweet-Clover	-	-	-	SNA
<i>Mentha aquatica</i>	Water Mint	-	-	-	SNA
<i>Mentha canadensis</i>	Canadian Mint	-	-	-	S5
<i>Mitchella repens</i>	Partridgeberry	-	-	-	S5
<i>Mitella nuda</i>	Naked Bishop's-Cap	-	-	-	S4S5
<i>Moehringia lateriflora</i>	Blunt-Leaved Sandwort	-	-	-	S5
<i>Mollugo verticillata</i>	Green Carpetweed	-	-	-	SNA
<i>Monotropa uniflora</i>	Convulsion-Root	-	-	-	S5
<i>Morella pensylvanica</i>	Northern Bayberry	-	-	-	S5
<i>Myosotis arvensis</i>	Field Forget-Me-Not	-	-	-	SNA
<i>Myosotis laxa</i>	Small Forget-Me-Not	-	-	-	S5
<i>Myosotis sylvatica</i>	Woodland Forget-Me-Not	-	-	-	SNA
<i>Myrica gale</i>	Sweet Gale	-	-	-	S5
<i>Nabalus altissimus</i>	Tall Rattlesnakeroot	-	-	-	S5
<i>Nabalus trifoliolatus</i>	Three-Leaved Rattlesnakeroot	-	-	-	S5
<i>Neottia bifolia</i>	Southern Twayblade	-	-	-	S3
<i>Nuphar variegata</i>	Variegated Pond-Lily	-	-	-	S5
<i>Nymphaea odorata</i> ssp. <i>odorata</i>	Fragrant Water-Lily	-	-	-	S5
<i>Oclemena acuminata</i>	Whorled Wood Aster	-	-	-	S5
<i>Oclemena nemoralis</i>	Bog Aster	-	-	-	S5
<i>Oclemena x blakei</i>	A Hybrid White Panicked American-Aster	-	-	-	S5
<i>Odontites vulgaris</i>	Red Bartsia	-	-	-	SNA
<i>Oenothera biennis</i>	Common Evening Primrose	-	-	-	S5
<i>Oenothera parviflora</i>	Small-Flowered Evening Primrose	-	-	-	S4S5
<i>Oenothera perennis</i>	Perennial Evening Primrose	-	-	-	S5
<i>Onoclea sensibilis</i>	Sensitive Fern	-	-	-	S5
<i>Orthilia secunda</i>	One-Sided Wintergreen	-	-	-	S5
<i>Osmunda regalis</i>	Royal Fern	-	-	-	S5
<i>Osmundastrum cinnamomeum</i>	Cinnamon Fern	-	-	-	S5
<i>Ostrya virginiana</i>	Ironwood	-	-	-	S4S5
<i>Oxalis montana</i>	Common Wood Sorrel	-	-	-	S5
<i>Oxalis stricta</i>	Common Yellow Woodsorrel	-	-	-	S5
<i>Packera schweinitziana</i>	Schweinitz's Groundsel	-	-	-	S4
<i>Panax trifolius</i>	Dwarf Ginseng	-	-	-	S4
<i>Pastinaca sativa</i>	Wild Parsnip	-	-	-	SNA

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Persicaria arifolia</i>	Halberd-Leaved Tearthumb	-	-	-	S3
<i>Persicaria hydropiperoides</i>	False Waterpepper	-	-	-	S5
<i>Persicaria maculosa</i>	Spotted Lady's-Thumb	-	-	-	SNA
<i>Persicaria sagittata</i>	Arrow-Leaved Smartweed	-	-	-	S5
<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 abies</i>	Norway Spruce	-	-	-	SNA
<i>Picea glauca</i>	White Spruce	-	-	-	S5
<i>Picea mariana</i>	Black Spruce	-	-	-	S5
<i>Picea rubens</i>	Red Spruce	-	-	-	S5
<i>Pilosella aurantiaca</i>	Orange Hawkweed	-	-	-	SNA
<i>Pilosella caespitosa</i>	Meadow Hawkweed	-	-	-	SNA
<i>Pilosella piloselloides</i>	Tall Hawkweed	-	-	-	SNA
<i>Pinus resinosa</i>	Red Pine	-	-	-	S4S5
<i>Pinus strobus</i>	Eastern White Pine	-	-	-	S5
<i>Pinus sylvestris</i>	Scotch Pine	-	-	-	SNA
<i>Plantago lanceolata</i>	English Plantain	-	-	-	SNA
<i>Plantago major</i>	Common Plantain	-	-	-	SNA
<i>Platanthera aquilonis</i>	Tall Northern Green Orchid	-	-	-	S4
<i>Platanthera blephariglottis</i> var. <i>blephariglottis</i>	White Fringed Orchid	-	-	-	S4S5
<i>Platanthera clavellata</i>	Club Spur Orchid	-	-	-	S5
<i>Platanthera dilatata</i> var. <i>dilatata</i>	White Bog Orchid	-	-	-	S4S5
<i>Platanthera lacera</i>	Ragged Fringed Orchid	-	-	-	S4S5
<i>Platanthera orbiculata</i>	Small Round-Leaved Orchid	-	-	-	S3S4
<i>Platanthera psycodes</i>	Small Purple Fringed Orchid	-	-	-	S4
<i>Poa pratensis</i> ssp. <i>alpigena</i>	Kentucky Blue Grass	-	-	-	SNR
<i>Pogonia ophioglossoides</i>	Rose Pogonia	-	-	-	S4S5
<i>Polygonatum pubescens</i>	Hairy Solomon's Seal	-	-	-	S4S5
<i>Polystichum acrostichoides</i>	Christmas Fern	-	-	-	S5
<i>Pontederia cordata</i>	Pickernelweed	-	-	-	S5
<i>Populus grandidentata</i>	Large-Toothed Aspen	-	-	-	S5
<i>Populus tremuloides</i>	Trembling Aspen	-	-	-	S5
<i>Potamogeton epihydrus</i>	Ribbon-Leaved Pondweed	-	-	-	S5
<i>Potentilla norvegica</i>	Rough Cinquefoil	-	-	-	S5
<i>Potentilla simplex</i>	Old Field Cinquefoil	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Prunella vulgaris</i> ssp. <i>lanceolata</i>	Common Self-Heal	-	-	-	S5
<i>Prunus pensylvanica</i>	Pin Cherry	-	-	-	S5
<i>Prunus serotina</i>	Black Cherry	-	-	-	S5
<i>Prunus virginiana</i>	Chokecherry	-	-	-	S5
<i>Pteridium aquilinum</i> var. <i>latiusculum</i>	Bracken Fern	-	-	-	S5
<i>Pyrola americana</i>	Round-Leaved Pyrola	-	-	-	S5
<i>Pyrola elliptica</i>	Shinleaf	-	-	-	S5
<i>Pyrola minor</i>	Lesser Pyrola	-	-	-	S3
<i>Ranunculus abortivus</i>	Kidney-Leaved Buttercup	-	-	-	S4S5
<i>Ranunculus acris</i>	Common Buttercup	-	-	-	SNA
<i>Ranunculus recurvatus</i>	Hooked Buttercup	-	-	-	S4
<i>Ranunculus repens</i>	Creeping Buttercup	-	-	-	SNA
<i>Raphanus raphanistrum</i>	Wild Radish	-	-	-	SNA
<i>Reynoutria japonica</i> var. <i>japonica</i>	Japanese Knotweed	-	-	-	SNA
<i>Rhinanthus minor</i> ssp. <i>groenlandicus</i>	Little Yellow Rattle	-	-	-	S1
<i>Rhododendron canadense</i>	Rhodora	-	-	-	S5
<i>Rhododendron groenlandicum</i>	Common Labrador Tea	-	-	-	S5
<i>Rhynchospora alba</i>	White Beakrush	-	-	-	S5
<i>Ribes glandulosum</i>	Skunk Currant	-	-	-	S5
<i>Ribes hirtellum</i>	Smooth Gooseberry	-	-	-	S5
<i>Ribes lacustre</i>	Bristly Black Currant	-	-	-	S5
<i>Ribes triste</i>	Swamp Red Currant	-	-	-	S4
<i>Robinia pseudoacacia</i>	Black Locust	-	-	-	SNA
<i>Rosa nitida</i>	Shining Rose	-	-	-	S4S5
<i>Rosa virginiana</i>	Virginia Rose	-	-	-	S5
<i>Rubus allegheniensis</i>	Alleghaney Blackberry	-	-	-	S5
<i>Rubus hispidus</i>	Bristly Dewberry	-	-	-	S5
<i>Rubus idaeus</i>	Red Raspberry	-	-	-	S5
<i>Rubus pubescens</i>	Dwarf Red Raspberry	-	-	-	S5
<i>Rubus setosus</i>	Bristly Blackberry	-	-	-	S4
<i>Rumex acetosella</i>	Sheep Sorrel	-	-	-	SNA
<i>Rumex britannica</i>	Greater Water Dock	-	-	-	S5
<i>Rumex crispus</i>	Curled Dock	-	-	-	SNA
<i>Rumex longifolius</i>	Long-Leaved Dock	-	-	-	SNA
<i>Rumex obtusifolius</i>	Bitter Dock	-	-	-	SNA
<i>Sagina procumbens</i>	Procumbent Pearlwort	-	-	-	S5
<i>Salix alba</i>	White Willow	-	-	-	SNA

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Salix bebbiana</i>	Bebb's Willow	-	-	-	S5
<i>Salix cordata</i>	Heart-Leaved Willow	-	-	-	SNA
<i>Salix discolor</i>	Pussy Willow	-	-	-	S5
<i>Salix eriocephala</i>	Cottony Willow	-	-	-	S5
<i>Salix lucida</i>	Shining Willow	-	-	-	S5
<i>Salix pentandra</i>	Laurel Willow	-	-	-	SNA
<i>Sambucus racemosa</i>	Red Elderberry	-	-	-	S5
<i>Sanicula marilandica</i>	Maryland Sanicle	-	-	-	S4
<i>Sarracenia purpurea</i>	Northern Pitcher Plant	-	-	-	S5
<i>Sarracenia purpurea</i> ssp. <i>purpurea</i>	Northern Purple Pitcher-Plant	-	-	-	S5
<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>Scorzoneroidea autumnalis</i>	Autumn Hawkbit	-	-	-	SNA
<i>Scutellaria galericulata</i>	Marsh Skullcap	-	-	-	S5
<i>Scutellaria lateriflora</i>	Mad-Dog Skullcap	-	-	-	S5
<i>Senecio viscosus</i>	Sticky Ragwort	-	-	-	SNA
<i>Senecio vulgaris</i>	Common Ragwort	-	-	-	SNA
<i>Setaria pumila</i>	Yellow Foxtail	-	-	-	SNA
<i>Sibbaldia tridentata</i>	Three-Toothed Cinquefoil	-	-	-	S5
<i>Sisyrinchium angustifolium</i>	Narrow-Leaved Blue-Eyed-Grass	-	-	-	S4
<i>Sisyrinchium montanum</i> var. <i>crebrum</i>	Mountain Blue-Eyed-Grass	-	-	-	S5
<i>Sium suave</i>	Common Water Parsnip	-	-	-	S5
<i>Solanum dulcamara</i>	Bittersweet Nightshade	-	-	-	SNA
<i>Solidago canadensis</i> var. <i>canadensis</i>	Canada Goldenrod	-	-	-	S4S5
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	-	-	-	S5
<i>Solidago juncea</i>	Early Goldenrod	-	-	-	S5
<i>Solidago nemoralis</i>	Gray-Stemmed Goldenrod	-	-	-	S4S5
<i>Solidago puberula</i>	Downy Goldenrod	-	-	-	S5
<i>Solidago rugosa</i>	Rough-Stemmed Goldenrod	-	-	-	S5
<i>Solidago uliginosa</i>	Northern Bog Goldenrod	-	-	-	S5
<i>Sorbus americana</i>	American Mountain Ash	-	-	-	S5
<i>Sorbus aucuparia</i>	European Mountain Ash	-	-	-	SNA
<i>Sparganium americanum</i>	American Burreed	-	-	-	S5

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<i>Sparganium emersum</i>	Green-Fruited Burreed	-	-	-	S5
<i>Spergularia canadensis</i> var. <i>canadensis</i>	Canada Sandspurrey	-	-	-	S4
<i>Spinulum annotinum</i> ssp. <i>annotinum</i>	Stiff Clubmoss	-	-	-	S5
<i>Spiraea alba</i>	White Meadowsweet	-	-	-	S5
<i>Spiraea tomentosa</i>	Steeplebush	-	-	-	S5
<i>Spiranthes romanzoffiana</i>	Hooded Ladies'-Tresses	-	-	-	S4
<i>Streptopus amplexifolius</i>	Clasping-Leaved Twisted-Stalk	-	-	-	S4S5
<i>Streptopus lanceolatus</i>	Rose Twisted-Stalk	-	-	-	S5
<i>Symphoricarpos albus</i>	Thin-Leaved Snowberry	-	-	-	SNA
<i>Symphyotrichum lateriflorum</i>	Calico Aster	-	-	-	S5
<i>Symphyotrichum novi-belgii</i> var. <i>crenifolium</i>	New York Aster	-	-	-	SNR
<i>Symphyotrichum 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	-	-	-	S4S5
<i>Thalictrum pubescens</i>	Tall Meadow-Rue	-	-	-	S5
<i>Thelypteris palustris</i>	Eastern Marsh Fern	-	-	-	S5
<i>Trifolium arvense</i>	Rabbit's-Foot Clover	-	-	-	SNA
<i>Trifolium campestre</i>	Low Hop Clover	-	-	-	SNA
<i>Trifolium hybridum</i>	Alsike Clover	-	-	-	SNA
<i>Trifolium pratense</i>	Red Clover	-	-	-	SNA
<i>Trifolium repens</i>	White Clover	-	-	-	SNA
<i>Trillidium undulatum</i>	Painted Trillium	-	-	-	S5
<i>Trillium cernuum</i>	Nodding Trillium	-	-	-	S4
<i>Tsuga canadensis</i>	Eastern Hemlock	-	-	-	S4
<i>Tussilago farfara</i>	Colt's Foot	-	-	-	SNA
<i>Typha angustifolia</i>	Narrow-Leaved Cattail	-	-	-	SNA
<i>Typha latifolia</i>	Broad-Leaved Cattail	-	-	-	S5
<i>Ulmus americana</i>	White Elm	-	-	-	S3S4
<i>Vaccinium angustifolium</i>	Late Lowbush Blueberry	-	-	-	S5
<i>Vaccinium macrocarpon</i>	Large Cranberry	-	-	-	S5
<i>Vaccinium myrtilloides</i>	Velvet-Leaved Blueberry	-	-	-	S5
<i>Vaccinium oxycoccos</i>	Small Cranberry	-	-	-	S5
<i>Vaccinium vitis-idaea</i>	Mountain Cranberry	-	-	-	S4S5
<i>Verbascum thapsus</i>	Common Mullein	-	-	-	SNA
<i>Veronica americana</i>	American Speedwell	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Veronica officinalis</i>	Common Speedwell	-	-	-	SNA
<i>Veronica scutellata</i>	Marsh Speedwell	-	-	-	S5
<i>Veronica serpyllifolia</i>	Thyme-Leaved Speedwell	-	-	-	SU
<i>Viburnum cassinoides</i>	Northern Wild Raisin	-	-	-	S5
<i>Viburnum lantanoides</i>	Hobblebush	-	-	-	S4
<i>Vicia cracca</i>	Tufted Vetch	-	-	-	SNA
<i>Viola cucullata</i>	Marsh Blue Violet	-	-	-	S5
Bryophytes					
<i>Amphidium lapponicum</i>	A Moss	-	-	-	S4S5
<i>Anomodon rostratus</i>	Common Anomodon Moss	-	-	-	S5
<i>Atrichum undulatum</i>	Common Smoothcap Moss	-	-	-	S5
<i>Bazzania trilobata</i>	Three-Lobed Whipwort	-	-	-	S5
<i>Brachythecium rivulare</i>	River Ragged Moss	-	-	-	S5
<i>Climacium dendroides</i>	Northern Tree Moss	-	-	-	S5
<i>Conocephalum salebrosum</i>	Snake Liverwort	-	-	-	S5
<i>Dicranum polysetum</i>	Wavy-Leaved Broom Moss	-	-	-	S5
<i>Dicranum scoparium</i>	Common Broom Moss	-	-	-	S5
<i>Dicranum viride</i>	Green Broom Moss	-	-	-	S5
<i>Drepanocladus aduncus</i>	Drepanocladus Moss	-	-	-	S5
<i>Fontinalis antipyretica</i>	Greater Water Moss	-	-	-	S5
<i>Frullania eboraensis</i>	York Scalewort	-	-	-	S5
<i>Hylocomium splendens</i>	Stairstep Moss	-	-	-	S5
<i>Hypnum imponens</i>	Pellucid Plait Moss	-	-	-	S5
<i>Leucobryum glaucum</i>	White Pincushion Moss	-	-	-	S5
<i>Mnium hornum</i>	Swan's-Neck Leafy Moss	-	-	-	S5
<i>Neckera pennata</i>	Feathery Neckera Moss	-	-	-	S5
<i>Pellia epiphylla</i>	Common Pellia	-	-	-	S5
<i>Pleurozium schreberi</i>	Red-Stemmed Feather Moss	-	-	-	S5
<i>Polytrichum commune</i>	Common Haircap Moss	-	-	-	S5
<i>Polytrichum juniperinum</i>	Juniper Haircap Moss	-	-	-	S5
<i>Polytrichum piliferum</i>	Bristly Haircap Moss	-	-	-	S5
<i>Polytrichum strictum</i>	Bog Haircap Moss	-	-	-	S5
<i>Porella platyphylla</i>	Wall Scalewort	-	-	-	S5
<i>Ptilidium ciliare</i>	Ciliate Fringewort	-	-	-	S5
<i>Ptilium crista-castrensis</i>	Knight's Plume Moss	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Radula complanata</i>	Flat-Leaved Scalewort	-	-	-	S5
<i>Rhizomnium appalachianum</i>	Appalachian Leafy Moss	-	-	-	S5
<i>Rhizomnium punctatum</i>	Dotted Leafy Moss	-	-	-	S5
<i>Rhytidiadelphus triquetrus</i>	Electrified Cat's-Tail Moss	-	-	-	S5
<i>Sphagnum affine</i>	A Peatmoss	-	-	-	S5
<i>Sphagnum capillifolium</i>	Northern Peatmoss	-	-	-	S5
<i>Sphagnum cuspidatum</i>	Feathery Peat Moss	-	-	-	S5
<i>Sphagnum fallax</i>	Flat-Top Peat Moss	-	-	-	S5
<i>Sphagnum fuscum</i>	Brown Peat Moss	-	-	-	S5
<i>Sphagnum girgensohnii</i>	Green Peat Moss	-	-	-	S5
<i>Sphagnum magellanicum</i>	Magellan's Peat Moss	-	-	-	S5
<i>Sphagnum palustre</i>	Blunt-Leaved Peat Moss	-	-	-	S5
<i>Sphagnum rubellum</i>	Red Peat Moss	-	-	-	S5
<i>Sphagnum squarrosum</i>	Shaggy Peat Moss	-	-	-	S5
<i>Thuidium delicatulum</i>	Delicate Fern Moss	-	-	-	S5
<i>Ulota crispa</i>	Crisped Pincushion Moss	-	-	-	S5
Fungi					
<i>Acanthophysellum lividocoeruleum</i>	A Fungus	-	-	-	SU
<i>Trametes versicolor</i>	Turkey Tail	-	-	-	SU
Lichens					
<i>Acrocordia cavata</i>	A Lichen	-	-	-	SU
<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen	-	-	-	S3S4
<i>Arctoparmelia centrifuga</i>	Ripple Ring Lichen	-	-	-	S5
<i>Bacidia schweinitzii</i>	A Lichen	-	-	-	S5
<i>Baeomyces rufus</i>	Brown Beret Lichen	-	-	-	S4
<i>Bryoria furcellata</i>	Burred Horsehair Lichen	-	-	-	S5
<i>Bryoria nadvornikiana</i>	Blonde Horsehair Lichen	-	-	-	S4S5
<i>Bryoria trichodes</i>	Inelegant Horsehair Lichen	-	-	-	S5
<i>Cetrelia chicitae</i>	Frothing Seastorm Lichen	-	-	-	S5
<i>Chaenotheca brunneola</i>	Brown-Head Stubble Lichen	-	-	-	S5
<i>Chaenotheca chrysocephala</i>	A Lichen	-	-	-	S5
<i>Chaenotheca furfuracea</i>	A Lichen	-	-	-	S5
<i>Chaenotheca trichialis</i>	A Stubble Lichen	-	-	-	S5
<i>Cladonia amaurocraea</i>	Quill Lichen	-	-	-	SU
<i>Cladonia arbuscula</i>	Reindeer Lichen	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Cladonia arbuscula</i> ssp. <i>mitis</i>	Green Reindeer Lichen	-	-	-	S5
<i>Cladonia boryi</i>	Fishnet Lichen	-	-	-	S5
<i>Cladonia caespiticia</i>	Stubby Stalked Lichen	-	-	-	S4S5
<i>Cladonia cenotea</i>	Powdered Funnel Lichen	-	-	-	S5
<i>Cladonia chlorophaea</i>	Mealy Pixie-Cup Lichen	-	-	-	S5
<i>Cladonia coniocraea</i>	Common Pixie Powderhorn	-	-	-	S5
<i>Cladonia cornuta</i>	Bighorn Pixie Lichen	-	-	-	S4?
<i>Cladonia crispata</i>	Organpipe Lichen	-	-	-	S5
<i>Cladonia cristatella</i>	British Soldiers Lichen	-	-	-	S5
<i>Cladonia digitata</i>	Fingered Pixie-Cup Lichen	-	-	-	S4?
<i>Cladonia gracilis</i>	Cup Lichen	-	-	-	S5
<i>Cladonia macilenta</i>	Lipstick Powderhorn Lichen	-	-	-	S4S5
<i>Cladonia maxima</i>	Giant Cladonia Lichen	-	-	-	S5
<i>Cladonia multiformis</i>	Sieve Lichen	-	-	-	S5
<i>Cladonia ochrochlora</i>	Smooth-Footed Powderhorn Lichen	-	-	-	S5
<i>Cladonia pleurota</i>	Red-Fruited Pixie-Cup	-	-	-	S5
<i>Cladonia rangiferina</i>	Gray Reindeer Lichen	-	-	-	S5
<i>Cladonia rei</i>	Wand Lichen	-	-	-	S5
<i>Cladonia squamosa</i>	Dragon Lichen	-	-	-	S5
<i>Cladonia stellaris</i>	Star-Tipped Reindeer Lichen	-	-	-	S5
<i>Cladonia strepsilis</i>	Olive Cladonia Lichen	-	-	-	S5
<i>Cladonia terrae-novae</i>	Newfoundland Reindeer Lichen	-	-	-	S5
<i>Cladonia uncialis</i>	Thorn Lichen	-	-	-	S5
<i>Cladonia verticillata</i>	Ladder Lichen	-	-	-	S5
<i>Clavulinopsis fusiformis</i>	Golden Spindles	-	-	-	S5
<i>Coccocarpia palmicola</i>	Salted Shell Lichen	-	-	-	S3S4
<i>Coenogonium luteum</i>	A Lichen	-	-	-	S4
<i>Coenogonium pineti</i>	A Lichen	-	-	-	SU
<i>Collema furfuraceum</i>	Blistered Tarpaper Lichen	-	-	-	S5
<i>Collema nigrescens</i>	Blistered Tarpaper Lichen	-	-	-	S3
<i>Collema subflaccidum</i>	Tree Tarpaper Lichen	-	-	-	S5
<i>Dermatocarpon luridum</i>	Brookside Stippleback Lichen	-	-	-	S4
<i>Dibaeis baeomyces</i>	Pink Earth Lichen	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Dolichousnea longissima</i>	Methuselah's Beard Lichen	-	-	-	S4
<i>Fuscopannaria ahleri</i>	Roughened Shingle Lichen	-	-	-	S3
<i>Fuscopannaria leucosticta</i>	White-Rimmed Shingle Lichen	Threatened	-	-	S3
<i>Fuscopannaria soledata</i>	A Lichen	-	-	-	S2S3
<i>Graphis scripta</i>	A Lichen	-	-	-	S5
<i>Heterodermia speciosa</i>	Powdered Fringe Lichen	-	-	-	S3S4
<i>Hypogymnia krogiae</i>	Freckled Tube Lichen	-	-	-	S5
<i>Hypogymnia physodes</i>	Monk's Hood Lichen	-	-	-	S5
<i>Hypogymnia tubulosa</i>	Powder-Headed Tube Lichen	-	-	-	S5
<i>Hypogymnia vittata</i>	Slender Monk's Hood Lichen	-	-	-	S4
<i>Icmadophila ericetorum</i>	A Lichen	-	-	-	S5
<i>Imshaugia aleurites</i>	Salted Starburst Lichen	-	-	-	S4S5
<i>Ionaspis lacustris</i>	A Lichen	-	-	-	S4
<i>Lecanora caesiorubella</i>	A Lichen	-	-	-	S5
<i>Lecanora thysanophora</i>	A Lichen	-	-	-	S5
<i>Lepra amara</i>	A Lichen	-	-	-	S5
<i>Lepra multipunctoides</i>	A Lichen	-	-	-	S4
<i>Lepraria neglecta</i>	Zoned Dust Lichen	-	-	-	S5
<i>Leptogium azureum</i>	Blue Jellyskin Lichen	-	-	-	SNA
<i>Leptogium corticola</i>	Blistered Jellyskin Lichen	-	-	-	S3S4
<i>Lobaria pulmonaria</i>	Lungwort Lichen	-	-	-	S5
<i>Lobaria scrobiculata</i>	Textured Lungwort Lichen	-	-	-	S5
<i>Loxospora elatina</i>	A Lichen	-	-	-	S5
<i>Loxospora ochrophaea</i>	A Lichen	-	-	-	S5
<i>Melanelixia subaurifera</i>	Abrading Camouflage Lichen	-	-	-	S5
<i>Melanohalea septentrionalis</i>	Northern Camouflage Lichen	-	-	-	S2S3
<i>Menegazzia subsimilis</i>	Tree Flute Lichen	-	-	-	S4S5
<i>Menegazzia terebrata</i>	Magic Flute Lichen	-	-	-	S4S5
<i>Nephroma bellum</i>	Naked Kidney Lichen	-	-	-	S3
<i>Nephroma helveticum</i>	Fringed Kidney Lichen	-	-	-	S4S5
<i>Nephroma laevigatum</i>	Mustard Kidney Lichen	-	-	-	S5
<i>Nephroma parile</i>	Powdery Kidney Lichen	-	-	-	S4
<i>Normandina pulchella</i>	Rimmed Elf-Ear Lichen	-	-	-	S4
<i>Pannaria conoplea</i>	Mealy-Rimmed Shingle Lichen	-	-	-	S4S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Pannaria lurida</i>	Wrinkled Shingle Lichen	Threatened	Threatened	Threatened	S2S3
<i>Pannaria rubiginosa</i>	Brown-Eyed Shingle Lichen	-	-	-	S4
<i>Parmelia saxatilis</i>	Salted Shield Lichen	-	-	-	S5
<i>Parmelia squarrosa</i>	Bottlebrush Shield Lichen	-	-	-	S5
<i>Parmelia sulcata</i>	Hammered Shield Lichen	-	-	-	S5
<i>Parmeliella triptophylla</i>	Black-Bordered Shingles Lichen	-	-	-	S5
<i>Parmeliopsis capitata</i>	Powder-Tipped Starburst Lichen	-	-	-	S5
<i>Parmotrema crinitum</i>	Salted Ruffle Lichen	-	-	-	S5
<i>Pectenaria plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3
<i>Peltigera aphthosa</i>	Common Freckle Pelt Lichen	-	-	-	S5
<i>Peltigera canina</i>	Dog Lichen	-	-	-	S5
<i>Peltigera collina</i>	Tree Pelt Lichen	-	-	-	S3
<i>Peltigera didactyla</i>	Alternating Pelt Lichen	-	-	-	S4S5
<i>Peltigera evansiana</i>	Peppered Pelt Lichen	-	-	-	S4S5
<i>Peltigera extenuata</i>	Sheepish Pelt Lichen	-	-	-	S4S5
<i>Peltigera horizontalis</i>	Flat-Fruited Pelt Lichen	-	-	-	S5
<i>Peltigera hydrothyria</i>	Eastern Waterfan	Threatened	Threatened	Threatened	S1
<i>Peltigera membranacea</i>	Membranous Pelt Lichen	-	-	-	S5
<i>Peltigera polydactylon</i>	Many-Fruited Pelt Lichen	-	-	-	S5
<i>Peltigera praetextata</i>	Born-Again Pelt Lichen	-	-	-	S4S5
<i>Phaeocalicium betulinum</i>	A Disc Lichen	-	-	-	SU
<i>Phaeocalicium compressulum</i>	Alder Needle Lichen	-	-	-	SU
<i>Phaeophyscia rubropulchra</i>	Orange-Cored Shadow Lichen	-	-	-	S5
<i>Physcia adscendens</i>	Hooded Rosette Lichen	-	-	-	S5
<i>Physconia detersa</i>	Bottlebrush Frost Lichen	-	-	-	S4
<i>Platismatia glauca</i>	Varied Rag Lichen	-	-	-	S5
<i>Platismatia norvegica</i>	Oldgrowth Rag Lichen	-	-	-	S3
<i>Platismatia tuckermanii</i>	Crumpled Rag Lichen	-	-	-	S5
<i>Porpidia albocaerulescens</i>	A Boulder Lichen	-	-	-	S4
<i>Protopannaria pezizoides</i>	Brown-Gray Moss-Shingle Lichen	-	-	-	S5
<i>Pseudocyphellaria hawaiiensis</i>	Gilded Specklebelly Lichen	-	-	-	SNA
<i>Pseudocyphellaria holarctica</i>	Yellow Specklebelly Lichen	-	-	-	S5

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Punctelia appalachensis</i>	Appalachian Speckleback Lichen	-	-	-	S3
<i>Punctelia rudecta</i>	Rough Speckleback Lichen	-	-	-	S5
<i>Pyrenula pseudobufonia</i>	Eastern Pox Lichen	-	-	-	S4
<i>Pyxine soledata</i>	Mustard Lichen	-	-	-	S5
<i>Ramalina americana</i>	Sinewed Ramalina Lichen	-	-	-	S5
<i>Ramalina dilacerata</i>	Punctured Ramalina Lichen	-	-	-	S5
<i>Ramalina farinacea</i>	Hyphenated Ramalina Lichen	-	-	-	S5
<i>Ramalina roesleri</i>	Frayed Ramalina Lichen	-	-	-	S5
<i>Rhizocarpon concentricum</i>	A Lichen	-	-	-	SU
<i>Rhizocarpon geographicum</i>	Yellow Map Lichen	-	-	-	S4
<i>Ricasolia quercizans</i>	Smooth Lung Lichen	-	-	-	S5
<i>Sclerophora peronella</i>	Frosted Glass-Whiskers Lichen	Special Concern	Special Concern	-	S3S4
<i>Scytinium subtile</i>	Appressed Jellyskin Lichen	-	-	-	S3S4
<i>Sphaerophorus globosus</i>	Northern Coral Lichen	-	-	-	S4
<i>Stenocybe major</i>	A Lichen	-	-	-	SU
<i>Stereocaulon condensatum</i>	Granular Soil Foam Lichen	-	-	-	S2S3
<i>Stereocaulon dactylophyllum</i>	Finger Foam Lichen	-	-	-	S5
<i>Stictis urceolatum</i>	A Lichen	-	-	-	S4
<i>Tuckermannopsis americana</i>	Fringed Wrinkle Lichen	-	-	-	S5
<i>Tuckermannopsis orbata</i>	Variable Wrinkle Lichen	-	-	-	S5
<i>Usnea strigosa</i>	Bushy Beard Lichen	-	-	-	S5
Introduced Species					
<i>Achillea millefolium</i>	Common Yarrow	-	-	-	SNA
<i>Aegopodium podagraria</i>	Bishop's Goutweed	-	-	-	SNA
<i>Agrostis capillaris</i>	Colonial Bent Grass	-	-	-	SNA
<i>Agrostis gigantea</i>	Redtop	-	-	-	SNA
<i>Anthoxanthum odoratum</i>	Large Sweet Vernal Grass	-	-	-	SNA
<i>Arctium minus</i>	Common Burdock	-	-	-	SNA
<i>Barbarea vulgaris</i>	Yellow Rocket	-	-	-	SNA
<i>Bellis perennis</i>	English Daisy	-	-	-	SNA
<i>Centaurea nigra</i>	Black Knapweed	-	-	-	SNA
<i>Cerastium fontanum</i>	Common Chickweed	-	-	-	SNA
<i>Chaenorhinum minus</i> ssp. <i>minus</i>	Dwarf Snapdragon	-	-	-	SNA
<i>Cichorium intybus</i>	Wild Chicory	-	-	-	SNA
<i>Cirsium arvense</i>	Canada Thistle	-	-	-	SNA

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Convolvulus arvensis</i>	Field Bindweed	-	-	-	SNA
<i>Dactylis glomerata</i>	Orchard Grass	-	-	-	SNA
<i>Daucus carota</i>	Queen Anne's Lace	-	-	-	SNA
<i>Dianthus armeria</i> ssp. <i>armeria</i>	Deptford Pink	-	-	-	SNA
<i>Digitalis purpurea</i> ssp. <i>purpurea</i>	Purple Foxglove	-	-	-	SNA
<i>Digitaria sanguinalis</i>	Hairy Crab Grass	-	-	-	SNA
<i>Echinochloa crus-galli</i>	Large Barnyard Grass	-	-	-	SNA
<i>Epipactis helleborine</i>	Helleborine	-	-	-	SNA
<i>Euphrasia nemorosa</i>	Common Eyebright	-	-	-	SNA
<i>Festuca filiformis</i>	Hair Fescue	-	-	-	SNA
<i>Frangula alnus</i>	Glossy Buckthorn	-	-	-	SNA
<i>Galeopsis tetrahit</i>	Common Hemp-Nettle	-	-	-	SNA
<i>Gnaphalium uliginosum</i>	Marsh Cudweed	-	-	-	SNA
<i>Hieracium lachenalii</i>	Common Hawkweed	-	-	-	SNA
<i>Hieracium maculatum</i>	Spotted Hawkweed	-	-	-	SNA
<i>Hypericum perforatum</i> ssp. <i>perforatum</i>	Common St. John's-Wort	-	-	-	SNA
<i>Jacobaea vulgaris</i>	Tansy Ragwort	-	-	-	SNA
<i>Juncus conglomeratus</i>	Compact Rush	-	-	-	SNA
<i>Leucanthemum vulgare</i>	Oxeye Daisy	-	-	-	SNA
<i>Lolium multiflorum</i>	Annual Ryegrass	-	-	-	SNA
<i>Lolium perenne</i>	Perennial Rye Grass	-	-	-	SNA
<i>Lotus corniculatus</i>	Garden Bird's-Foot Trefoil	-	-	-	SNA
<i>Lythrum salicaria</i>	Purple Loosestrife	-	-	-	SNA
<i>Malus domestica</i>	Common Apple	-	-	-	SNA
<i>Matricaria discoidea</i>	Pineapple Weed	-	-	-	SNA
<i>Melilotus albus</i>	White Sweet-Clover	-	-	-	SNA
<i>Mentha aquatica</i>	Water Mint	-	-	-	SNA
<i>Mollugo verticillata</i>	Green Carpetweed	-	-	-	SNA
<i>Myosotis arvensis</i>	Field Forget-Me-Not	-	-	-	SNA
<i>Myosotis sylvatica</i>	Woodland Forget-Me-Not	-	-	-	SNA
<i>Odontites vulgaris</i>	Red Bartsia	-	-	-	SNA
<i>Pastinaca sativa</i>	Wild Parsnip	-	-	-	SNA
<i>Persicaria maculosa</i>	Spotted Lady's-Thumb	-	-	-	SNA
<i>Phalaris arundinacea</i>	Reed Canary Grass	-	-	-	S5
<i>Phleum pratense</i>	Common Timothy	-	-	-	SNA
<i>Picea abies</i>	Norway Spruce	-	-	-	SNA
<i>Pilosella aurantiaca</i>	Orange Hawkweed	-	-	-	SNA

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Pilosella caespitosa</i>	Meadow Hawkweed	-	-	-	SNA
<i>Pilosella piloselloides</i>	Tall Hawkweed	-	-	-	SNA
<i>Pinus sylvestris</i>	Scotch Pine	-	-	-	SNA
<i>Plantago lanceolata</i>	English Plantain	-	-	-	SNA
<i>Plantago major</i>	Common Plantain	-	-	-	SNA
<i>Ranunculus acris</i>	Common Buttercup	-	-	-	SNA
<i>Ranunculus repens</i>	Creeping Buttercup	-	-	-	SNA
<i>Raphanus raphanistrum</i>	Wild Radish	-	-	-	SNA
<i>Reynoutria japonica</i> var. <i>japonica</i>	Japanese Knotweed	-	-	-	SNA
<i>Robinia pseudoacacia</i>	Black Locust	-	-	-	SNA
<i>Rumex acetosella</i>	Sheep Sorrel	-	-	-	SNA
<i>Rumex crispus</i>	Curled Dock	-	-	-	SNA
<i>Rumex longifolius</i>	Long-Leaved Dock	-	-	-	SNA
<i>Rumex obtusifolius</i>	Bitter Dock	-	-	-	SNA
<i>Salix alba</i>	White Willow	-	-	-	SNA
<i>Salix pentandra</i>	Laurel Willow	-	-	-	SNA
<i>Scorzoneroidea autumnalis</i>	Autumn Hawkbit	-	-	-	SNA
<i>Senecio viscosus</i>	Sticky Ragwort	-	-	-	SNA
<i>Senecio vulgaris</i>	Common Ragwort	-	-	-	SNA
<i>Setaria pumila</i>	Yellow Foxtail	-	-	-	SNA
<i>Solanum dulcamara</i>	Bittersweet Nightshade	-	-	-	SNA
<i>Sorbus aucuparia</i>	European Mountain Ash	-	-	-	SNA
<i>Symphoricarpos albus</i>	Thin-Leaved Snowberry	-	-	-	SNA
<i>Tanacetum vulgare</i>	Common Tansy	-	-	-	SNA
<i>Taraxacum officinale</i>	Common Dandelion	-	-	-	SNA
<i>Trifolium arvense</i>	Rabbit's-Foot Clover	-	-	-	SNA
<i>Trifolium campestre</i>	Low Hop Clover	-	-	-	SNA
<i>Trifolium hybridum</i>	Alsike Clover	-	-	-	SNA
<i>Trifolium pratense</i>	Red Clover	-	-	-	SNA
<i>Trifolium repens</i>	White Clover	-	-	-	SNA
<i>Tussilago farfara</i>	Colt's Foot	-	-	-	SNA
<i>Typha angustifolia</i>	Narrow-Leaved Cattail	-	-	-	SNA
<i>Verbascum thapsus</i>	Common Mullein	-	-	-	SNA
<i>Veronica officinalis</i>	Common Speedwell	-	-	-	SNA
<i>Vicia cracca</i>	Tufted Vetch	-	-	-	SNA
SAR and SOCI					
<i>Carex viridula</i> ssp. <i>brachyrrhyncha</i>	Greenish Sedge	-	-	-	S1

Scientific Name	Common Name	COSEWIC	SARA	ESA	S-Rank
<i>Rhinanthus minor</i> ssp. <i>groenlandicus</i>	Little Yellow Rattle	-	-	-	S1
<i>Fraxinus nigra</i>	Black Ash	Threatened	-	Threatened	S1S2
<i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain	-	-	-	S2S3
<i>Carex rosea</i>	Rosy Sedge	-	-	-	S3
<i>Neottia bifolia</i>	Southern Twayblade	-	-	-	S3
<i>Persicaria arifolia</i>	Halberd-Leaved Tearthumb	-	-	-	S3
<i>Pyrola minor</i>	Lesser Pyrola	-	-	-	S3
<i>Amelanchier spicata</i>	Running Serviceberry	-	-	-	S3S4
<i>Fagus grandifolia</i>	American Beech	-	-	-	S3S4
<i>Platanthera orbiculata</i>	Small Round-Leaved Orchid	-	-	-	S3S4
<i>Ulmus americana</i>	White Elm	-	-	-	S3S4
<i>Peltigera hydrothyria</i>	Eastern Waterfan	Threatened	Threatened	Threatened	S1
<i>Fuscopannaria soledata</i>	A Lichen	-	-	-	S2S3
<i>Melanohalea septentrionalis</i>	Northern Camouflage Lichen	-	-	-	S2S3
<i>Pannaria lurida</i>	Wrinkled Shingle Lichen	Threatened	Threatened	Threatened	S2S3
<i>Stereocaulon condensatum</i>	Granular Soil Foam Lichen	-	-	-	S2S3
<i>Collema nigrescens</i>	Blistered Tarpaper Lichen	-	-	-	S3
<i>Fuscopannaria ahlneri</i>	Roughened Shingle Lichen	-	-	-	S3
<i>Fuscopannaria leucosticta</i>	White-Rimmed Shingle Lichen	Threatened	-	-	S3
<i>Nephroma bellum</i>	Naked Kidney Lichen	-	-	-	S3
<i>Pectenium plumbea</i>	Blue Felt Lichen	Special Concern	Special Concern	Vulnerable	S3
<i>Peltigera collina</i>	Tree Pelt Lichen	-	-	-	S3
<i>Platismatia norvegica</i>	Oldgrowth Rag Lichen	-	-	-	S3
<i>Punctelia appalachensis</i>	Appalachian Speckleback Lichen	-	-	-	S3
<i>Anaptychia palmulata</i>	Shaggy Fringed Lichen	-	-	-	S3S4
<i>Coccocarpia palmicola</i>	Salted Shell Lichen	-	-	-	S3S4
<i>Heterodermia speciosa</i>	Powdered Fringe Lichen	-	-	-	S3S4
<i>Leptogium corticola</i>	Blistered Jellyskin Lichen	-	-	-	S3S4
<i>Sclerophora peronella</i>	Frosted Glass-Whiskers Lichen	Special Concern	Special Concern	-	S3S4
<i>Scytinium subtile</i>	Appressed Jellyskin Lichen	-	-	-	S3S4

*Note that some flora surveys occurred in areas near the Study Area that are no longer being considered for development, such that not all species presented in the tables above occur in the final Project Study Area.

APPENDIX M
TERRESTRIAL FAUNA PHOTOGRAPH LOG



Photo 1: Snowshoe hare (*Lepus americanus*) tracks observed during winter tracking (February 7, 2023).



Photo 2: Coyote (*Canis latrans*) tracks observed during winter tracking (February 7, 2023).



Photo 3: White-tailed deer (*Odocoileus virginianus*) tracks observed during winter tracking (January 31, 2024).



Photo 4: Possible evidence of mainland moose (*Alces alces americana*) browsing observed during winter tracking surveys (January 31, 2024).

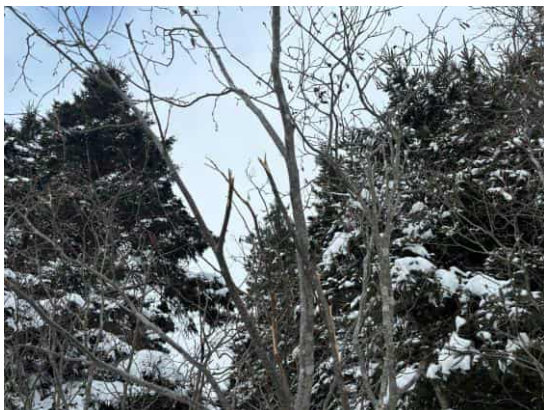


Photo 5: Signs of snowshoe hare browse observed during winter tracking (January 31, 2024).



Photo 6: Adult snapping turtle (*Chelydra serpentina*) observed on a gravel road during non-target field surveys in the Assessment Area (June 16, 2025).



Photo 7: Fisher (*Pekania pennati*) tracks observed in the Assessment Area (January 13, 2026).

APPENDIX N

AVIFAUNA

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	11-Apr-23	Spring Migration	PC12	6:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x	x	x	x							
JL	11-Apr-23	Spring Migration	PC12	6:34	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	11-Apr-23	Spring Migration	PC12	6:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	5	x	x	x			e and w		x	15 to 40 m	e and w	
JL	11-Apr-23	Spring Migration	PC12	6:34	10	HAWO	Hairy Woodpecker	<i>Picoides villosus</i>	1	x		x			e		x	15 m	w	
JL	11-Apr-23	Spring Migration	PC16	6:48	10	AMRO	American Robin	<i>Turdus migratorius</i>	9		x	x	x							
JL	11-Apr-23	Spring Migration	PC16	6:48	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC16	6:48	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC16	6:48	10	AMRO	American Robin	<i>Turdus migratorius</i>	11	x	x	x	x		e and w		x	15 to 30 m	e and w	
JL	11-Apr-23	Spring Migration	PC16	6:48	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	x	x	x			w		x	20 m	e	
JL	11-Apr-23	Spring Migration	PC13	7:04	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	11-Apr-23	Spring Migration	PC13	7:04	10	DOWO	Downy Woodpecker	<i>Picoides pubescens</i>	1				x							
JL	11-Apr-23	Spring Migration	PC13	7:04	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x							
JL	11-Apr-23	Spring Migration	PC13	7:04	10	AMRO	American Robin	<i>Turdus migratorius</i>	3	x	x	x	x		n		x	15 m	w	
JL	11-Apr-23	Spring Migration	PC13	7:04	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4	x	x	x								
JL	11-Apr-23	Spring Migration	PC13	7:04	10	CORA	Common Raven	<i>Corvus corax</i>	1	x	x	x								
JL	11-Apr-23	Spring Migration	PC13	7:04	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	8	x	x	x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	AMRO	American Robin	<i>Turdus migratorius</i>	10	x	x	x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	4			x	x							
JL	11-Apr-23	Spring Migration	PC15	7:17	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			x	x	x						
JL	11-Apr-23	Spring Migration	PC15	7:17	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x		x	x							
JL	11-Apr-23	Spring Migration	PC14	7:34	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1			x		x						
JL	11-Apr-23	Spring Migration	PC14	7:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	6			x	x	x						
JL	11-Apr-23	Spring Migration	PC14	7:34	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			x		x						
JL	11-Apr-23	Spring Migration	PC14	7:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x	x	x	x	x	n and s		x	15 to 35 m	w and se	
JL	11-Apr-23	Spring Migration	PC14	7:34	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x								
JL	11-Apr-23	Spring Migration	PC14	7:34	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3			x	x	x						
JL	11-Apr-23	Spring Migration	PC17	7:54	10	AMRO	American Robin	<i>Turdus migratorius</i>	6	x		x	x	x						
JL	11-Apr-23	Spring Migration	PC17	7:54	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			x								
JL	11-Apr-23	Spring Migration	PC17	7:54	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x								
JL	11-Apr-23	Spring Migration	PC17	7:54	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			x								
JL	11-Apr-23	Spring Migration	PC30	8:15	10	AMRO	American Robin	<i>Turdus migratorius</i>	7	x	x	x	x	x						
JL	11-Apr-23	Spring Migration	PC30	8:15	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3	x	x	x	x	x						
JL	11-Apr-23	Spring Migration	PC30	8:15	10	CORA	Common Raven	<i>Corvus corax</i>	2	x		x		x						
JL	11-Apr-23	Spring Migration	PC30	8:15	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			x	x	x						
JL	11-Apr-23	Spring Migration	PC30	8:15	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			x								
JL	11-Apr-23	Spring Migration	PC19	8:33	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x		x	x							
JL	11-Apr-23	Spring Migration	PC19	8:33	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			x	x							
JL	11-Apr-23	Spring Migration	PC19	8:33	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x								
JL	11-Apr-23	Spring Migration	PC19	8:33	10	CORA	Common Raven	<i>Corvus corax</i>	2			x		x						
JL	11-Apr-23	Spring Migration	PC20	8:52	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	5			x	x	x						
JL	11-Apr-23	Spring Migration	PC20	8:52	10	AMRO	American Robin	<i>Turdus migratorius</i>	6	x		x	x	x						
JL	11-Apr-23	Spring Migration	PC20	8:52	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x		x	x	x						
JL	11-Apr-23	Spring Migration	PC29	9:22	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			x		x						
JL	11-Apr-23	Spring Migration	PC29	9:22	10	AMRO	American Robin	<i>Turdus migratorius</i>	3			x								
JL	11-Apr-23	Spring Migration	PC29	9:22	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			x								
JL	12-Apr-23	Spring Migration	PC3	6:35	10	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1			x		x	sw					~70m away in a sw direction in mixedwood stand with softwood dominant parts. Edge habitat near clearcut and road.
JL	12-Apr-23	Spring Migration	PC3	6:35	10	AMRO	American Robin	<i>Turdus migratorius</i>	8	x	x	x	x	x						
JL	12-Apr-23	Spring Migration	PC3	6:35	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			x		x						
JL	12-Apr-23	Spring Migration	PC3	6:35	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			x								
JL	12-Apr-23	Spring Migration	PC3	6:35	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2			x		x						
JL	12-Apr-23	Spring Migration	PC3	6:35	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x				x	sw		x	30 to 40 m	e	
JL	12-Apr-23	Spring Migration	PC3	6:35	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			x		x						
JL	12-Apr-23	Spring Migration	PC3	6:35	10	HAWO OR DOWO	N/A	#N/A	1	x				x	sw		x	40 m	e	
JL	12-Apr-23	Spring Migration	PC3	6:35	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x		x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	AMRO	American Robin	<i>Turdus migratorius</i>	6			x	x	x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	5			x	x	x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			x		x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	CAGO	Canada Goose	<i>Branta canadensis</i>	2			x								
JL	12-Apr-23	Spring Migration	PC2	7:02	10	MALL OR ABDU	N/A	#N/A	2	x				x	s					
JL	12-Apr-23	Spring Migration	PC2	7:02	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			x		x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			x		x						
JL	12-Apr-23	Spring Migration	PC2	7:02	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			x								
JL	12-Apr-23	Spring Migration	PC1	7:20	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3			x	x	x						
JL	12-Apr-23	Spring Migration	PC1	7:20	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			x								
JL	12-Apr-23	Spring Migration	PC1	7:20	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3			x	x	x						
JL	12-Apr-23	Spring Migration	PC1	7:20	10	AMRO	American Robin	<i>Turdus migratorius</i>	5			x	x	x						
JL	12-Apr-23	Spring Migration	PC1	7:20	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			x								
JL	12-Apr-23	Spring Migration	PC1	7:20	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2			x								
JL	12-Apr-23	Spring Migration	PC1	7:20	10	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1			x								
JL	12-Apr-23	Spring Migration	PC4	7:55	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	4	x		x	x	x						
JL	12-Apr-23	Spring Migration	PC4	7:55	10	AMRO	American Robin	<i>Turdus migratorius</i>	7	x		x	x	x						
JL	12-Apr-23	Spring Migration	PC4	7:55	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			x	x							
JL	12-Apr-23	Spring Migration	PC4	7:55	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			x		x						
JL	12-Apr-23	Spring Migration	PC4	7:55	10	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1			x								Possibly same one as PC1
JL	12-Apr-23	Spring Migration	PC4	7:55	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			x								
JL	12-Apr-23	Spring Migration	PC4	7:55	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4	x		x								
JL	12-Apr-23	Spring Migration	PC4	7:55	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			x	x							
JL	12-Apr-23	Spring Migration	PC4	7:55	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			x	x							
JL	12-Apr-23	Spring Migration	PC5	8:12	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			x	x							
JL	12-Apr-23	Spring Migration	PC5	8:12	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			x								
JL	12-Apr-23	Spring Migration	PC5	8:12	10	AMRO	American Robin	<i>Turdus migratorius</i>	2			x								

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	12-Apr-23	Spring Migration	PC6	8:31	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	12-Apr-23	Spring Migration	PC6	8:31	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x		x							
JL	12-Apr-23	Spring Migration	PC7	8:48	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x		x	x						
JL	12-Apr-23	Spring Migration	PC7	8:48	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x			x						
JL	12-Apr-23	Spring Migration	PC7	8:48	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x		x							
JL	12-Apr-23	Spring Migration	PC7	8:48	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2		x	x	x							
JL	12-Apr-23	Spring Migration	PC7	8:48	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	MERL	Merlin	<i>Falco columbarius</i>	1	x				x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x		x	x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x			x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x		x	x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x		x	x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x	x	x							
JL	12-Apr-23	Spring Migration	PC8	9:27	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	WBNU	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1		x			x						
JL	12-Apr-23	Spring Migration	PC8	9:27	10	DOWO	Downy Woodpecker	<i>Picoides pubescens</i>	1		x		x							
JL	12-Apr-23	Spring Migration	PC9	9:36	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x		x							
JL	12-Apr-23	Spring Migration	PC9	9:36	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x		x							
JL	12-Apr-23	Spring Migration	PC9	9:36	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x		x	x						
JL	12-Apr-23	Spring Migration	PC10	9:52	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	x	x		x							
JL	12-Apr-23	Spring Migration	PC10	9:52	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	12-Apr-23	Spring Migration	PC10	9:52	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC24	6:24	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x							
JL	26-Apr-23	Spring Migration	PC24	6:24	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x	x								
JL	26-Apr-23	Spring Migration	PC24	6:24	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC24	6:24	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC24	6:24	10	HAWO	Hairy Woodpecker	<i>Picoides villosus</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC25	6:37	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC25	6:37	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC25	6:37	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC25	6:37	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC25	6:37	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC25	6:37	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC26	6:52	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC26	6:52	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC26	6:52	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	x	x	x								
JL	26-Apr-23	Spring Migration	PC26	6:52	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC26	6:52	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC26	6:52	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC26	6:52	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC27	7:04	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x							
JL	26-Apr-23	Spring Migration	PC27	7:04	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3		x	x	x							
JL	26-Apr-23	Spring Migration	PC27	7:04	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC27	7:04	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC27	7:04	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC27	7:04	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC28	7:16	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC28	7:16	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2		x		x							
JL	26-Apr-23	Spring Migration	PC28	7:16	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC28	7:16	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC28	7:16	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC29	7:27	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC29	7:27	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x								
JL	26-Apr-23	Spring Migration	PC29	7:27	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC30	7:46	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC30	7:46	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC30	7:46	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC30	7:46	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC30	7:46	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC30	7:46	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC30	7:46	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC30	7:46	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC31	8:00	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC31	8:00	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC31	8:00	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC31	8:00	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC32	8:14	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC32	8:14	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x			x						
JL	26-Apr-23	Spring Migration	PC32	8:14	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC32	8:14	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	2		x			x						
JL	26-Apr-23	Spring Migration	PC32	8:14	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1	x	x	x								
JL	26-Apr-23	Spring Migration	PC33	8:26	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x	x	x	x							
JL	26-Apr-23	Spring Migration	PC33	8:26	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC33	8:26	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4	x	x	x								
JL	26-Apr-23	Spring Migration	PC33	8:26	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC33	8:26	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC34	8:44	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC34	8:44	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC34	8:44	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC34	8:44	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x	x							
JL	26-Apr-23	Spring Migration	PC34	8:44	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x	x		x						
JL	26-Apr-23	Spring Migration	PC34	8:44	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC35	8:57	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC35	8:57	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x	x								
JL	26-Apr-23	Spring Migration	PC35	8:57	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	26-Apr-23	Spring Migration	PC35	8:57	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x			x						

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	26-Apr-23	Spring Migration	PC36	9:32	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC36	9:32	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	26-Apr-23	Spring Migration	PC36	9:32	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC3	6:32	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x	x		x						
JL	27-Apr-23	Spring Migration	PC3	6:32	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x								
JL	27-Apr-23	Spring Migration	PC3	6:32	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3		x	x	x							
JL	27-Apr-23	Spring Migration	PC3	6:32	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	27-Apr-23	Spring Migration	PC3	6:32	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC3	6:32	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC3	6:32	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC3	6:32	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC2	6:46	10	CORA	Common Raven	<i>Corvus corax</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC2	6:46	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2		x		x	x						
JL	27-Apr-23	Spring Migration	PC2	6:46	10	SPGR	Spruce Grouse	<i>Falcipennis canadensis</i>	1	x		x								
JL	27-Apr-23	Spring Migration	PC2	6:46	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3		x		x	x						
JL	27-Apr-23	Spring Migration	PC2	6:46	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC2	6:46	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2		x	x								
JL	27-Apr-23	Spring Migration	PC2	6:46	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x	x						
JL	27-Apr-23	Spring Migration	PC2	6:46	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC2	6:46	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC2	6:46	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC1	6:58	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	27-Apr-23	Spring Migration	PC1	6:58	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC1	6:58	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC1	6:58	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3	x	x	x	x							
JL	27-Apr-23	Spring Migration	PC1	6:58	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC1	6:58	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC1	6:58	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3	x	x	x								
JL	27-Apr-23	Spring Migration	PC1	6:58	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC7	7:35	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC7	7:35	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC7	7:35	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	27-Apr-23	Spring Migration	PC7	7:35	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	3		x	x	x							
JL	27-Apr-23	Spring Migration	PC7	7:35	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC7	7:35	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC6	7:47	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC6	7:47	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2	x	x	x								
JL	27-Apr-23	Spring Migration	PC6	7:47	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	27-Apr-23	Spring Migration	PC6	7:47	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC6	7:47	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC6	7:47	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x		x	x						
JL	27-Apr-23	Spring Migration	PC5	7:58	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x		x							
JL	27-Apr-23	Spring Migration	PC5	7:58	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3		x		x	x						
JL	27-Apr-23	Spring Migration	PC5	7:58	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC5	7:58	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC5	7:58	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC4	8:09	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC4	8:09	10	GRAJ	Gray Jay	<i>Perisoreus canadensis</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC4	8:09	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x	x	x							
JL	27-Apr-23	Spring Migration	PC4	8:09	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC4	8:09	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x	x	x							
JL	27-Apr-23	Spring Migration	PC4	8:09	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC4	8:09	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC4	8:09	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC4	8:09	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC4	8:09	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	x			x		n		x	30 m	ne	
JL	27-Apr-23	Spring Migration	PC8	8:26	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x								
JL	27-Apr-23	Spring Migration	PC8	8:26	10	AMRO	American Robin	<i>Turdus migratorius</i>	2	x	x	x	x							
JL	27-Apr-23	Spring Migration	PC8	8:26	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC8	8:26	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2	x	x	x	x							
JL	27-Apr-23	Spring Migration	PC8	8:26	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2	x	x	x								
JL	27-Apr-23	Spring Migration	PC8	8:26	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC8	8:26	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC8	8:26	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC9	8:39	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	27-Apr-23	Spring Migration	PC9	8:39	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x	x						
JL	27-Apr-23	Spring Migration	PC9	8:39	10	BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1	x		x								
JL	27-Apr-23	Spring Migration	PC9	8:39	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2	x	x	x								1 male and female pair
JL	27-Apr-23	Spring Migration	PC9	8:39	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC9	8:39	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC9	8:39	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC9	8:39	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC9	8:39	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x							
JL	27-Apr-23	Spring Migration	PC9	8:39	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC10	9:00	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC10	9:00	10	CORA	Common Raven	<i>Corvus corax</i>	2	x	x	x	x							
JL	27-Apr-23	Spring Migration	PC10	9:00	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC10	9:00	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC10	9:00	10	GRAJ	Gray Jay	<i>Perisoreus canadensis</i>	2		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC10	9:00	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC10	9:00	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x	x	x	x						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	AMRO	American Robin	<i>Turdus migratorius</i>	3	x	x	x	x	x						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC11	9:16	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2		x		x							
JL	27-Apr-23	Spring Migration	PC11	9:16	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2	x	x	x		x						
JL	27-Apr-23	Spring Migration	PC11	9:16	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	27-Apr-23	Spring Migration	PC11	9:16	10	HAWO	Hairy Woodpecker	<i>Picoides villosus</i>	2	x		x								
JL	27-Apr-23	Spring Migration	PC20	9:56	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	x	x	x								
JL	27-Apr-23	Spring Migration	PC20	9:56	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x	x								
JL	27-Apr-23	Spring Migration	PC20	9:56	10	TUVU	Turkey Vulture	<i>Cathartes aura</i>	1	x				x						
JL	27-Apr-23	Spring Migration	PC20	9:56	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC12	6:40	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC12	6:40	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x	x		x						
JL	10-May-23	Spring Migration	PC12	6:40	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC12	6:40	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		x	x								
JL	10-May-23	Spring Migration	PC12	6:40	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	10-May-23	Spring Migration	PC12	6:40	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC12	6:40	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC12	6:40	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	10-May-23	Spring Migration	PC12	6:40	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	10-May-23	Spring Migration	PC12	6:40	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x	x								
JL	10-May-23	Spring Migration	PC13	6:56	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC13	6:56	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC13	6:56	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x		x							
JL	10-May-23	Spring Migration	PC13	6:56	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x		x						
JL	10-May-23	Spring Migration	PC13	6:56	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x	x	x	x	x						
JL	10-May-23	Spring Migration	PC13	6:56	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	10-May-23	Spring Migration	PC13	6:56	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x	x								
JL	10-May-23	Spring Migration	PC13	6:56	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	3	x	x	x			se		x	15 m	ne	
JL	10-May-23	Spring Migration	PC13	6:56	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	3		x			x						
JL	10-May-23	Spring Migration	PC13	6:56	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC13	6:56	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		x	x								
JL	10-May-23	Spring Migration	PC13	6:56	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC13	6:56	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x		x						
JL	10-May-23	Spring Migration	PC13	6:56	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC13	6:56	10	BEKI	Belted Kingfisher	<i>Megasceryle alcyon</i>	1	x	x	x			n		x	25 m	s	
JL	10-May-23	Spring Migration	PC14	7:14	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC14	7:14	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2	x	x	x	x							
JL	10-May-23	Spring Migration	PC14	7:14	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC14	7:14	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC14	7:14	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC14	7:14	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	10-May-23	Spring Migration	PC14	7:14	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x			x						
JL	10-May-23	Spring Migration	PC14	7:14	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	10-May-23	Spring Migration	PC14	7:14	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC14	7:14	10	CAGO	Canada Goose	<i>Branta canadensis</i>	1		x			x						
JL	10-May-23	Spring Migration	PC14	7:14	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	10-May-23	Spring Migration	PC14	7:14	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1	x	x	x								
JL	10-May-23	Spring Migration	PC15	7:32	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC15	7:32	10	AMRO	American Robin	<i>Turdus migratorius</i>	4		x		x	x						
JL	10-May-23	Spring Migration	PC15	7:32	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x	x								
JL	10-May-23	Spring Migration	PC15	7:32	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	5	x	x	x	x							
JL	10-May-23	Spring Migration	PC15	7:32	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x			x						
JL	10-May-23	Spring Migration	PC15	7:32	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x	x								
JL	10-May-23	Spring Migration	PC15	7:32	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC15	7:32	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	10-May-23	Spring Migration	PC15	7:32	10	HAWO	Hairy Woodpecker	<i>Picoides villosus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x		x							
JL	10-May-23	Spring Migration	PC15	7:32	10	COME	Common Merganser	<i>Mergus merganser</i>	1	x		x			nw		x	20 m	se	
JL	10-May-23	Spring Migration	PC16	7:58	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1		x		x							
JL	10-May-23	Spring Migration	PC16	7:58	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC16	7:58	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC16	7:58	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	10-May-23	Spring Migration	PC16	7:58	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x			x						
JL	10-May-23	Spring Migration	PC16	7:58	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC16	7:58	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	10-May-23	Spring Migration	PC16	7:58	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	10-May-23	Spring Migration	PC17	8:10	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	10-May-23	Spring Migration	PC17	8:10	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x	x								
JL	10-May-23	Spring Migration	PC17	8:10	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	10-May-23	Spring Migration	PC17	8:10	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	10-May-23	Spring Migration	PC17	8:10	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	x	x		x	x						
JL	10-May-23	Spring Migration	PC17	8:10	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	10-May-23	Spring Migration	PC17	8:10	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC17	8:10	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	2		x		x							
JL	10-May-23	Spring Migration	PC17	8:10	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2		x	x								
JL	10-May-23	Spring Migration	PC17	8:10	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	10-May-23	Spring Migration	PC18	8:24	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	x	x	x								
JL	10-May-23	Spring Migration	PC18	8:24	10	SPSA	Spotted Sandpiper	<i>Actitis macularius</i>	1	x		x								
JL	10-May-23	Spring Migration	PC18	8:24	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	3		x	x	x							
JL	10-May-23	Spring Migration	PC18	8:24	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC18	8:24	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x			x						
JL	10-May-23	Spring Migration	PC18	8:24	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2	x	x	x	x							

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	10-May-23	Spring Migration	PC18	8:24	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC18	8:24	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	10-May-23	Spring Migration	PC18	8:24	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC18	8:24	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	10-May-23	Spring Migration	PC19	8:38	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2	x	x		x							
JL	10-May-23	Spring Migration	PC19	8:38	10	SPGR	Spruce Grouse	<i>Falcapennis canadensis</i>	1	x		x								
JL	10-May-23	Spring Migration	PC19	8:38	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x			x						
JL	10-May-23	Spring Migration	PC19	8:38	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x				x					
JL	10-May-23	Spring Migration	PC19	8:38	10	CORA	Common Raven	<i>Corvus corax</i>	1		x				x					
JL	10-May-23	Spring Migration	PC19	8:38	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x		x							
JL	10-May-23	Spring Migration	PC19	8:38	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	10-May-23	Spring Migration	PC19	8:38	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC19	8:38	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2		x	x								
JL	10-May-23	Spring Migration	PC19	8:38	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	x	x	x								
JL	10-May-23	Spring Migration	PC19	8:38	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x				x					
JL	10-May-23	Spring Migration	PC19	8:38	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	10-May-23	Spring Migration	PC20	8:50	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	10-May-23	Spring Migration	PC20	8:50	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	10-May-23	Spring Migration	PC20	8:50	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC20	8:50	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x				x					
JL	10-May-23	Spring Migration	PC20	8:50	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	10-May-23	Spring Migration	PC20	8:50	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x				x					
JL	10-May-23	Spring Migration	PC21	9:04	10	AMRO	American Robin	<i>Turdus migratorius</i>	4	x	x	x	x	x						
JL	10-May-23	Spring Migration	PC21	9:04	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC21	9:04	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x				x					
JL	10-May-23	Spring Migration	PC21	9:04	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x			x						
JL	10-May-23	Spring Migration	PC21	9:04	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	10-May-23	Spring Migration	PC21	9:04	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x				x					
JL	10-May-23	Spring Migration	PC21	9:04	10	CORA	Common Raven	<i>Corvus corax</i>	1	x					x					
JL	10-May-23	Spring Migration	PC22	9:26	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	10-May-23	Spring Migration	PC22	9:26	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x				x					
JL	10-May-23	Spring Migration	PC22	9:26	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x				x					
JL	10-May-23	Spring Migration	PC22	9:26	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2		x				x					
JL	10-May-23	Spring Migration	PC22	9:26	10	RBNJ	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1		x				x					
JL	10-May-23	Spring Migration	PC22	9:26	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x				x					
JL	10-May-23	Spring Migration	PC22	9:26	10	CORA	Common Raven	<i>Corvus corax</i>	1	x					x	n	x	120 m	n	
JL	10-May-23	Spring Migration	PC22	9:26	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x				x					
JL	10-May-23	Spring Migration	PC23	9:44	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	x	x	x	x							
JL	10-May-23	Spring Migration	PC23	9:44	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3	x	x	x	x							
JL	10-May-23	Spring Migration	PC23	9:44	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	6	x	x	x	x	x						2 male and female pairs
JL	10-May-23	Spring Migration	PC23	9:44	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC23	9:44	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3	x	x	x	x	x						
JL	10-May-23	Spring Migration	PC23	9:44	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	10-May-23	Spring Migration	PC23	9:44	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x	x								
JL	10-May-23	Spring Migration	PC23	9:44	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x			x						
JL	10-May-23	Spring Migration	PC23	9:44	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	10-May-23	Spring Migration	PC23	9:44	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x	x								
JL	10-May-23	Spring Migration	PC23	9:44	10	CORA	Common Raven	<i>Corvus corax</i>	1		x				x					
JL	10-May-23	Spring Migration	PC23	9:44	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x				x					
JL	10-May-23	Spring Migration	PC23	9:44	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC24	6:38	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4		x			x						
JL	11-May-23	Spring Migration	PC24	6:38	10	AMRO	American Robin	<i>Turdus migratorius</i>	10	x	x	x	x	x						
JL	11-May-23	Spring Migration	PC24	6:38	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x			x						
JL	11-May-23	Spring Migration	PC24	6:38	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	2		x	x		x						
JL	11-May-23	Spring Migration	PC24	6:38	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC24	6:38	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3		x	x	x							
JL	11-May-23	Spring Migration	PC24	6:38	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC24	6:38	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x	x								
JL	11-May-23	Spring Migration	PC24	6:38	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3	x	x	x	x							
JL	11-May-23	Spring Migration	PC25	6:54	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC25	6:54	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x				x					
JL	11-May-23	Spring Migration	PC25	6:54	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		x			x						
JL	11-May-23	Spring Migration	PC25	6:54	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC25	6:54	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x			x						
JL	11-May-23	Spring Migration	PC25	6:54	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3		x	x	x	x						
JL	11-May-23	Spring Migration	PC25	6:54	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2	x	x	x	x							
JL	11-May-23	Spring Migration	PC25	6:54	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x			x						
JL	11-May-23	Spring Migration	PC25	6:54	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x				x					
JL	11-May-23	Spring Migration	PC26	7:10	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	3	x	x	x	x	x						
JL	11-May-23	Spring Migration	PC26	7:10	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC26	7:10	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x			x						
JL	11-May-23	Spring Migration	PC26	7:10	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x					x				
JL	11-May-23	Spring Migration	PC26	7:10	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x				x					
JL	11-May-23	Spring Migration	PC26	7:10	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	5	x	x	x	x							
JL	11-May-23	Spring Migration	PC26	7:10	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	11-May-23	Spring Migration	PC26	7:10	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC26	7:10	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	11-May-23	Spring Migration	PC26	7:10	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x				x					
JL	11-May-23	Spring Migration	PC26	7:10	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x				x					
JL	11-May-23	Spring Migration	PC26	7:10	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	11-May-23	Spring Migration	PC27	7:25	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x			x						
JL	11-May-23	Spring Migration	PC27	7:25	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x	x	x	x						
JL	11-May-23	Spring Migration	PC27	7:25	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	5		x	x	x		x					
JL	11-May-23	Spring Migration	PC27	7:25	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x	x						
JL	11-May-23	Spring Migration	PC27	7:25	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x				x					
JL	11-May-23	Spring Migration	PC27	7:25	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x	x	x							

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	11-May-23	Spring Migration	PC27	7:25	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x			x						
JL	11-May-23	Spring Migration	PC27	7:25	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC27	7:25	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC27	7:25	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC27	7:25	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	11-May-23	Spring Migration	PC28	7:37	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC28	7:37	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC28	7:37	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	11-May-23	Spring Migration	PC28	7:37	10	AMRO	American Robin	<i>Turdus migratorius</i>	3	x	x	x	x							
JL	11-May-23	Spring Migration	PC28	7:37	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC28	7:37	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	11-May-23	Spring Migration	PC28	7:37	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	11-May-23	Spring Migration	PC28	7:37	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	11-May-23	Spring Migration	PC28	7:37	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	11-May-23	Spring Migration	PC28	7:37	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC29	7:49	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC29	7:49	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3		x	x	x	x						
JL	11-May-23	Spring Migration	PC29	7:49	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x	x								
JL	11-May-23	Spring Migration	PC29	7:49	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	11-May-23	Spring Migration	PC29	7:49	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3	x	x	x	x	x						
JL	11-May-23	Spring Migration	PC29	7:49	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x		x							
JL	11-May-23	Spring Migration	PC29	7:49	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x	x								
JL	11-May-23	Spring Migration	PC29	7:49	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC29	7:49	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	11-May-23	Spring Migration	PC29	7:49	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC29	7:49	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x		x							
JL	11-May-23	Spring Migration	PC30	8:08	10	AMRO	American Robin	<i>Turdus migratorius</i>	2	x	x	x								
JL	11-May-23	Spring Migration	PC30	8:08	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2	x	x	x	x							
JL	11-May-23	Spring Migration	PC30	8:08	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2		x	x	x	x						
JL	11-May-23	Spring Migration	PC30	8:08	10	BEKI	Belted Kingfisher	<i>Megasceryle alcyon</i>	1	x	x				ne		x	30m	nw	
JL	11-May-23	Spring Migration	PC30	8:08	10	CORA	Common Raven	<i>Corvus corax</i>	1		x		x							
JL	11-May-23	Spring Migration	PC31	8:20	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x							
JL	11-May-23	Spring Migration	PC31	8:20	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC31	8:20	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x			x						
JL	11-May-23	Spring Migration	PC31	8:20	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	11-May-23	Spring Migration	PC31	8:20	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	11-May-23	Spring Migration	PC31	8:20	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2	x	x	x			se		x	40m	ne	
JL	11-May-23	Spring Migration	PC31	8:20	10	COLO	Common Loon	<i>Gavia immer</i>	1		x			x						
JL	11-May-23	Spring Migration	PC31	8:20	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x			x						
JL	11-May-23	Spring Migration	PC31	8:20	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC31	8:20	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x	x	x								
JL	11-May-23	Spring Migration	PC31	8:20	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		x	x								
JL	11-May-23	Spring Migration	PC31	8:20	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	3	x	x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	11-May-23	Spring Migration	PC32	8:34	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x	x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3	x	x	x	x							
JL	11-May-23	Spring Migration	PC32	8:34	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC32	8:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	2	x	x	x	x							
JL	11-May-23	Spring Migration	PC32	8:34	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x		x							
JL	11-May-23	Spring Migration	PC32	8:34	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1	x	x	x								
JL	11-May-23	Spring Migration	PC32	8:34	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	11-May-23	Spring Migration	PC32	8:34	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		x			x						
JL	11-May-23	Spring Migration	PC32	8:34	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC33	8:46	10	RBNJ	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	11-May-23	Spring Migration	PC33	8:46	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x	x								
JL	11-May-23	Spring Migration	PC33	8:46	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2		x	x	x							
JL	11-May-23	Spring Migration	PC33	8:46	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	NOWA	Northern Waterthrush	<i>Seiurus noveboracensis</i>	1		x	x								
JL	11-May-23	Spring Migration	PC33	8:46	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		x	x								
JL	11-May-23	Spring Migration	PC33	8:46	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC33	8:46	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	11-May-23	Spring Migration	PC33	8:46	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	11-May-23	Spring Migration	PC33	8:46	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC34	9:08	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	11-May-23	Spring Migration	PC34	9:08	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2		x	x								
JL	11-May-23	Spring Migration	PC34	9:08	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x		x							
JL	11-May-23	Spring Migration	PC34	9:08	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	11-May-23	Spring Migration	PC34	9:08	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x		x							
JL	11-May-23	Spring Migration	PC34	9:08	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x	x								
JL	11-May-23	Spring Migration	PC34	9:08	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x		x							
JL	11-May-23	Spring Migration	PC34	9:08	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	11-May-23	Spring Migration	PC34	9:08	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	11-May-23	Spring Migration	PC35	9:20	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x	x								
JL	11-May-23	Spring Migration	PC35	9:20	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x			x						
JL	11-May-23	Spring Migration	PC35	9:20	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		x	x								
JL	11-May-23	Spring Migration	PC35	9:20	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	11-May-23	Spring Migration	PC35	9:20	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	11-May-23	Spring Migration	PC35	9:20	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	11-May-23	Spring Migration	PC36	9:48	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2		x	x		x						
JL	11-May-23	Spring Migration	PC36	9:48	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	11-May-23	Spring Migration	PC36	9:48	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1	x		x								
JL	11-May-23	Spring Migration	PC36	9:48	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1	x	x		x							
JL	11-May-23	Spring Migration	PC36	9:48	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x		x							
JL	11-May-23	Spring Migration	PC36	9:48	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x			x						
JL	11-May-23	Spring Migration	PC36	9:48	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		x		x							
JL	11-May-23	Spring Migration	PC36	9:48	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC3	6:50	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2	x	x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	12-May-23	Spring Migration	PC3	6:50	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	6		x	x	x	x						
JL	12-May-23	Spring Migration	PC3	6:50	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		x		x							
JL	12-May-23	Spring Migration	PC3	6:50	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC3	6:50	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC3	6:50	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	SPGR	Spruce Grouse	<i>Falcapennis canadensis</i>	1		x	x								
JL	12-May-23	Spring Migration	PC3	6:50	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC2	7:03	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	5		x	x	x	x						
JL	12-May-23	Spring Migration	PC2	7:03	10	AMRO	American Robin	<i>Turdus migratorius</i>	2	x	x	x	x	x						
JL	12-May-23	Spring Migration	PC2	7:03	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	12-May-23	Spring Migration	PC2	7:03	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		x		x							
JL	12-May-23	Spring Migration	PC2	7:03	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC2	7:03	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		x	x								
JL	12-May-23	Spring Migration	PC2	7:03	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC2	7:03	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x	x					
JL	12-May-23	Spring Migration	PC2	7:03	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2		x	x	x							
JL	12-May-23	Spring Migration	PC1	7:14	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC1	7:14	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x							
JL	12-May-23	Spring Migration	PC1	7:14	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x	x						
JL	12-May-23	Spring Migration	PC1	7:14	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3	x	x		x	x						
JL	12-May-23	Spring Migration	PC1	7:14	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC1	7:14	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		x	x								
JL	12-May-23	Spring Migration	PC1	7:14	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x		x							
JL	12-May-23	Spring Migration	PC1	7:14	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1		x	x								
JL	12-May-23	Spring Migration	PC4	7:46	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x	x	x							
JL	12-May-23	Spring Migration	PC4	7:46	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1	x			x							
JL	12-May-23	Spring Migration	PC4	7:46	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		x		x							
JL	12-May-23	Spring Migration	PC4	7:46	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		x	x	x	x						
JL	12-May-23	Spring Migration	PC4	7:46	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x		x							
JL	12-May-23	Spring Migration	PC4	7:46	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x	x								
JL	12-May-23	Spring Migration	PC4	7:46	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1	x		x								
JL	12-May-23	Spring Migration	PC4	7:46	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2	x	x	x								
JL	12-May-23	Spring Migration	PC4	7:46	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x		x							
JL	12-May-23	Spring Migration	PC4	7:46	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC4	7:46	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC4	7:46	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC5	7:58	10	NOWA	Northern Waterthrush	<i>Seiurus noveboracensis</i>	2	x	x	x		x						
JL	12-May-23	Spring Migration	PC5	7:58	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	12-May-23	Spring Migration	PC5	7:58	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	12-May-23	Spring Migration	PC5	7:58	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x	x		x						
JL	12-May-23	Spring Migration	PC5	7:58	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x		x							
JL	12-May-23	Spring Migration	PC5	7:58	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x			x						
JL	12-May-23	Spring Migration	PC5	7:58	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	12-May-23	Spring Migration	PC5	7:58	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC5	7:58	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	12-May-23	Spring Migration	PC5	7:58	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	12-May-23	Spring Migration	PC6	8:14	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		x	x								
JL	12-May-23	Spring Migration	PC6	8:14	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		x	x								
JL	12-May-23	Spring Migration	PC6	8:14	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	3	x	x	x	x						2 males fighting	
JL	12-May-23	Spring Migration	PC6	8:14	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x			x						
JL	12-May-23	Spring Migration	PC6	8:14	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x			x						
JL	12-May-23	Spring Migration	PC6	8:14	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC6	8:14	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x		x							
JL	12-May-23	Spring Migration	PC6	8:14	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	12-May-23	Spring Migration	PC6	8:14	10	CORA	Common Raven	<i>Corvus corax</i>	1		x			x						
JL	12-May-23	Spring Migration	PC6	8:14	10	NOPA	Northern Parula	<i>Parula americana</i>	1		x	x								
JL	12-May-23	Spring Migration	PC7	8:26	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		x	x								
JL	12-May-23	Spring Migration	PC7	8:26	10	COLO	Common Loon	<i>Gavia immer</i>	1		x			x						
JL	12-May-23	Spring Migration	PC7	8:26	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2		x	x		x						
JL	12-May-23	Spring Migration	PC7	8:26	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		x		x							

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	12-May-23	Spring Migration	PC7	8:26	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x			x						
JL	12-May-23	Spring Migration	PC7	8:26	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC7	8:26	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	12-May-23	Spring Migration	PC7	8:26	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	12-May-23	Spring Migration	PC7	8:26	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC10	8:55	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3		x	x								
JL	12-May-23	Spring Migration	PC10	8:55	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		x	x	x							
JL	12-May-23	Spring Migration	PC10	8:55	10	AMRO	American Robin	<i>Turdus migratorius</i>	3	x	x		x							
JL	12-May-23	Spring Migration	PC10	8:55	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2		x	x	x	x						
JL	12-May-23	Spring Migration	PC10	8:55	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	12-May-23	Spring Migration	PC10	8:55	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2		x		x							
JL	12-May-23	Spring Migration	PC10	8:55	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	12-May-23	Spring Migration	PC10	8:55	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1		x	x								
JL	12-May-23	Spring Migration	PC10	8:55	10	CORA	Common Raven	<i>Corvus corax</i>	1		x		x							
JL	12-May-23	Spring Migration	PC10	8:55	10	UNKNOWN HAWK	#N/A	#N/A	1	x				x						
JL	12-May-23	Spring Migration	PC11	9:09	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3		x	x	x	x						
JL	12-May-23	Spring Migration	PC11	9:09	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3	x	x	x	x							
JL	12-May-23	Spring Migration	PC11	9:09	10	AMRO	American Robin	<i>Turdus migratorius</i>	2		x	x	x	x						
JL	12-May-23	Spring Migration	PC11	9:09	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x		x							
JL	12-May-23	Spring Migration	PC11	9:09	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		x	x								
JL	12-May-23	Spring Migration	PC11	9:09	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x			x						
JL	12-May-23	Spring Migration	PC11	9:09	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC9	9:27	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3		x	x	x	x						
JL	12-May-23	Spring Migration	PC9	9:27	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2		x		x	x						
JL	12-May-23	Spring Migration	PC9	9:27	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1		x	x								
JL	12-May-23	Spring Migration	PC9	9:27	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	2		x	x								
JL	12-May-23	Spring Migration	PC9	9:27	10	AMKE	American Kestrel	<i>Falco sparverius</i>	1	x			x							
JL	12-May-23	Spring Migration	PC9	9:27	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3	x	x	x		x						
JL	12-May-23	Spring Migration	PC9	9:27	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x	x								
JL	12-May-23	Spring Migration	PC9	9:27	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		x			x						
JL	12-May-23	Spring Migration	PC8	9:42	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		x	x								
JL	12-May-23	Spring Migration	PC8	9:42	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		x		x							
JL	12-May-23	Spring Migration	PC8	9:42	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2	x	x	x								
JL	12-May-23	Spring Migration	PC8	9:42	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		x	x								
JL	12-May-23	Spring Migration	PC8	9:42	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		x		x							
JL	12-May-23	Spring Migration	PC8	9:42	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	x	x	x								
JL	12-May-23	Spring Migration	PC8	9:42	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2		x	x	x							
JL	12-May-23	Spring Migration	PC8	9:42	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		x			x						
JL	12-May-23	Spring Migration	PC8	9:42	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		x	x								
JL	12-May-23	Spring Migration	PC8	9:42	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		x			x						
JL	12-May-23	Spring Migration	PC8	9:42	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		x			x						
JL	12-May-23	Spring Migration	PC8	9:42	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		x	x								
JL	31-May-23	Spring Migration	PC12	7:00	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2											
JL	31-May-23	Spring Migration	PC12	7:00	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	31-May-23	Spring Migration	PC12	7:00	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2											
JL	31-May-23	Spring Migration	PC12	7:00	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2											
JL	31-May-23	Spring Migration	PC12	7:00	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1											
JL	31-May-23	Spring Migration	PC12	7:00	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3											
JL	31-May-23	Spring Migration	PC16	7:18	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	31-May-23	Spring Migration	PC16	7:18	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	31-May-23	Spring Migration	PC16	7:18	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	31-May-23	Spring Migration	PC16	7:18	10	YWAR	Yellow Warbler	<i>Dendroica petechia</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	CORA	Common Raven	<i>Corvus corax</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2	x	x	x			w		x	20 m	e	
JL	31-May-23	Spring Migration	PC17	7:33	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	EAWP	Eastern Wood-Pewee	<i>Contopus virens</i>	1		x		x		se					Heard in wetland/fenny swamp with watercourse to east of road
JL	31-May-23	Spring Migration	PC17	7:33	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3											
JL	31-May-23	Spring Migration	PC17	7:33	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	31-May-23	Spring Migration	PC17	7:33	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	31-May-23	Spring Migration	PC17	7:33	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC17	7:33	10	PAWA	Palm Warbler	<i>Dendroica palmarum</i>	1											
JL	31-May-23	Spring Migration	PC19	7:50	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	2											
JL	31-May-23	Spring Migration	PC19	7:50	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1											
JL	31-May-23	Spring Migration	PC19	7:50	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	31-May-23	Spring Migration	PC19	7:50	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	31-May-23	Spring Migration	PC19	7:50	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	31-May-23	Spring Migration	PC19	7:50	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2											
JL	31-May-23	Spring Migration	PC19	7:50	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3											
JL	31-May-23	Spring Migration	PC19	7:50	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC19	7:50	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	2											
JL	31-May-23	Spring Migration	PC19	7:50	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	31-May-23	Spring Migration	PC27	8:05	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2	x	x	x								
JL	31-May-23	Spring Migration	PC27	8:05	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3	x	x	x								1 immature male
JL	31-May-23	Spring Migration	PC27	8:05	10	WISN	Wilson's Snipe	<i>Gallinago delicata</i>	1	x	x	x								Doing winnow display right above PC
JL	31-May-23	Spring Migration	PC27	8:05	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3											
JL	31-May-23	Spring Migration	PC27	8:05	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	31-May-23	Spring Migration	PC27	8:05	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1											
JL	31-May-23	Spring Migration	PC27	8:05	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC27	8:05	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1											
JL	31-May-23	Spring Migration	PC27	8:05	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2											
JL	31-May-23	Spring Migration	PC27	8:05	10	NOPA	Northern Parula	<i>Parula americana</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	NOPA	Northern Parula	<i>Parula americana</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	31-May-23	Spring Migration	PC28	8:18	10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1											
JL	31-May-23	Spring Migration	PC28	8:18	10	MOWA	Mourning Warbler	<i>Oporornis philadelphia</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	2											
JL	31-May-23	Spring Migration	PC26	8:32	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	3											
JL	31-May-23	Spring Migration	PC26	8:32	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3											
JL	31-May-23	Spring Migration	PC26	8:32	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	4											
JL	31-May-23	Spring Migration	PC26	8:32	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	2											
JL	31-May-23	Spring Migration	PC26	8:32	10	CAWA	Canada Warbler	<i>Wilsonia canadensis</i>	1		x		x							Heard in swamp/fen with watercourse and wetland to se/east of road
JL	31-May-23	Spring Migration	PC26	8:32	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	NOWA	Northern Waterthrush	<i>Seiurus noveboracensis</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	31-May-23	Spring Migration	PC26	8:32	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	31-May-23	Spring Migration	PC24	8:47	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2											
JL	31-May-23	Spring Migration	PC24	8:47	10	AMRO	American Robin	<i>Turdus migratorius</i>	3											
JL	31-May-23	Spring Migration	PC24	8:47	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2											
JL	31-May-23	Spring Migration	PC24	8:47	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	2											
JL	31-May-23	Spring Migration	PC24	8:47	10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	31-May-23	Spring Migration	PC24	8:47	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	EUST	European Starling	<i>Sturnus vulgaris</i>	1											
JL	31-May-23	Spring Migration	PC24	8:47	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	NOPA	Northern Parula	<i>Parula americana</i>	2											
JL	31-May-23	Spring Migration	PC25	9:05	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	31-May-23	Spring Migration	PC25	9:05	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	31-May-23	Spring Migration	PC25	9:05	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	31-May-23	Spring Migration	PC25	9:05	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	31-May-23	Spring Migration	PC18	9:30	10	NOHA	Northern Harrier	<i>Circus cyaneus</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	BBWA	Bay-breasted Warbler	<i>Dendroica castanea</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	2											
JL	31-May-23	Spring Migration	PC18	9:30	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2											
JL	31-May-23	Spring Migration	PC18	9:30	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	NOPA	Northern Parula	<i>Parula americana</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	NOWA	Northern Waterthrush	<i>Seiurus noveboracensis</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1											
JL	31-May-23	Spring Migration	PC18	9:30	10	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
ND	9-Jun-23	Spring Migration	PC4	6:20	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1							n				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	BLPW	Blackpoll Warbler	<i>Dendroica striata</i>	1		1	1				se				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1			nw				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		1	1				sw				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1	1				e				
ND	9-Jun-23	Spring Migration	PC4	6:20	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1		1			n				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1		1	1				ne				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2	1	1		1			s				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1			n				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1	1				se				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1		1			nw				
ND	9-Jun-23	Spring Migration	PC5	6:33	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		1	1				w				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1			sw				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1			1		e				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1				n				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1			ne				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1			s				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1			1		nw				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1		1			e				
ND	9-Jun-23	Spring Migration	PC6	6:45	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		1		1			n				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1				se				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1	1				nw				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1		1			sw				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1		1			e				
ND	9-Jun-23	Spring Migration	PC7	6:58	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		1	1				w				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1		1			n				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1			1		ne				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1			s				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1	1				n				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1			se				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2		1		1			w				
ND	9-Jun-23	Spring Migration	PC3	7:20	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		1	1				nw				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1			1		w				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1			sw				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		1		1			e				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1		1	1				n				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	CAWA	Canada Warbler	<i>Wilsonia canadensis</i>	1		1	1				ne				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1		1			s				Not in wetland
ND	9-Jun-23	Spring Migration	PC2	7:33	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		1		1			n				
ND	9-Jun-23	Spring Migration	PC2	7:33	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1			se				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1		1	1				w				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	BLBW	Blackburnian Warbler	<i>Dendroica fusca</i>	1		1	1				nw				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1	1	1	1				w				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1			sw				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1			1		e				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1			w				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1			1		n				
ND	9-Jun-23	Spring Migration	PC1	7:45	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1	1				ne				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1			s				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1			nw				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1		1			e				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	1		1	1				w				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	MOWA	Mourning Warbler	<i>Oporornis philadelphia</i>	1		1	1				w				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1	1				nw				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		1			1		w				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	NOPA	Northern Parula	<i>Parula americana</i>	1		1		1			sw				
ND	9-Jun-23	Spring Migration	PC8	8:10	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1				e				

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
ND	9-Jun-23	Spring Migration	PC8	8:10	10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	1		1		1		w					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1	1			n					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1		ne					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1		s					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1		1		nw					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	BLPW	Blackpoll Warbler	<i>Dendroica striata</i>	1		1	1			w					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	YWAR	Yellow Warbler	<i>Dendroica petechia</i>	1		1	1			sw					
ND	9-Jun-23	Spring Migration	PC9	8:23	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1	1			e					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1			1	w					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1		n					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1	1			ne					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1	1			s					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1		n					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1	1	1	1			se					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		1		1		w					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1	1			nw					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1		1		w					
ND	9-Jun-23	Spring Migration	PC10	8:40	10	AMRO	American Robin	<i>Turdus migratorius</i>	1	1	1		1		nw					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1		w					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1		sw					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1			1	e					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1		1		1		w					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	MOWA	Mourning Warbler	<i>Oporornis philadelphia</i>	1		1		1		n					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	NOPA	Northern Parula	<i>Parula americana</i>	1		1		1		ne					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	CAWA	Canada Warbler	<i>Wilsonia canadensis</i>	1		1	1			s				Not in wetland	
ND	9-Jun-23	Spring Migration	PC11	8:58	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1		1		nw					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1		e					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1	1			w					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1			1	n					
ND	9-Jun-23	Spring Migration	PC11	8:58	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1		se					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1			1	w					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		1			1	nw					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1	1	1	1			w					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1		sw					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1		1		1		e					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		1	1			w					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		1	1			n					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	MOWA	Mourning Warbler	<i>Oporornis philadelphia</i>	1		1		1		ne					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		1	1			s					
ND	9-Jun-23	Spring Migration	PC36	9:15	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		1	1			nw					
ND	9-Jun-23	Spring Migration	PC25	5:59	10	AMRO	American Robin	<i>Turdus migratorius</i>	3		X		X							
ND	9-Jun-23	Spring Migration	PC25		10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	AMGO	American Goldfinch	<i>Carduelis tristis</i>	4		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	HAWO	Hairy Woodpecker	<i>Picoides villosus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC25		10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	3		X	X								
ND	9-Jun-23	Spring Migration	PC26	7:28	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	CORA	Common Raven	<i>Corvus corax</i>	2		X			X						
ND	9-Jun-23	Spring Migration	PC26		10	PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		X		X							
ND	9-Jun-23	Spring Migration	PC26		10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC26		10	NOPA	Northern Parula	<i>Parula americana</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27	7:42	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	NOPA	Northern Parula	<i>Parula americana</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2		X		X							
ND	9-Jun-23	Spring Migration	PC27		10	MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		X		X							
ND	9-Jun-23	Spring Migration	PC27		10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	MOWA	Mourning Warbler	<i>Oporornis philadelphia</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC27		10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3		X	X								
ND	9-Jun-23	Spring Migration	PC28	7:54	10	BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	WIWR	Winter Wren	<i>Troglodytes troglodytes</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3		X		X							
ND	9-Jun-23	Spring Migration	PC28		10	AMRO	American Robin	<i>Turdus migratorius</i>	1		X		X							
ND	9-Jun-23	Spring Migration	PC28		10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1		X	X								
ND	9-Jun-23	Spring Migration	PC28		10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X								

Table 1: 2023 Spring Migration Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
ND	9-Jun-23	Spring Migration	PC29	8:12	10	MAWA	Magnolia Warbler	Dendroica magnolia	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	REVI	Red-eyed Vireo	Vireo olivaceus	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	SWTH	Swainson's Thrush	Catharus ustulatus	2		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	YBSA	Yellow-bellied Sapsucker	Sphyrapicus varius	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	YWAR	Yellow Warbler	Dendroica petechia	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	ALFL	Alder Flycatcher	Empidonax alnorum	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	COYE	Common Yellowthroat	Geothlypis trichas	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	AMRO	American Robin	Turdus migratorius	2		X		X							
ND	9-Jun-23	Spring Migration	PC29		10	YRWA	Yellow-rumped Warbler	Dendroica coronata	1		X	X								
ND	9-Jun-23	Spring Migration	PC29		10	AMRO	American Robin	Turdus migratorius	1		X	X								
ND	9-Jun-23	Spring Migration	PC30	8:30	10	AMRE	American Redstart	Setophaga ruticilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	REVI	Red-eyed Vireo	Vireo olivaceus	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	SOSA	Solitary Sandpiper	Tringa solitaria	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	COYE	Common Yellowthroat	Geothlypis trichas	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	NOPA	Northern Parula	Parula americana	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	ALFL	Alder Flycatcher	Empidonax alnorum	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	AMRO	American Robin	Turdus migratorius	1		X	X								
ND	9-Jun-23	Spring Migration	PC30		10	SWTH	Swainson's Thrush	Catharus ustulatus	1		X		X							
ND	9-Jun-23	Spring Migration	PC31	8:43	10	OVEN	Ovenbird	Seiurus aurocapilla	2		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	BTNW	Black-throated Green Warbler	Dendroica virens	1		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	MAWA	Magnolia Warbler	Dendroica magnolia	1		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	BAWW	Black-and-white Warbler	Mniotilta varia	1		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	COYE	Common Yellowthroat	Geothlypis trichas	1		X	X								
ND	9-Jun-23	Spring Migration	PC31		10	CAWA	Canada Warbler	Wilsonia canadensis	1		X	X								
ND	9-Jun-23	Spring Migration	PC32	8:57	10	BHVI	Blue-headed Vireo	Vireo solitarius	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	NOPA	Northern Parula	Parula americana	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	BBWA	Bay-breasted Warbler	Dendroica castanea	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	HETH	Hermit Thrush	Catharus guttatus	2		X		X							
ND	9-Jun-23	Spring Migration	PC32		10	NAWA	Nashville Warbler	Vermivora ruficapilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	RCKI	Ruby-crowned Kinglet	Regulus calendula	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	REVI	Red-eyed Vireo	Vireo olivaceus	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	GCKI	Golden-crowned Kinglet	Regulus satrapa	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	OVEN	Ovenbird	Seiurus aurocapilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1		X	X								
ND	9-Jun-23	Spring Migration	PC32		10	AMRE	American Redstart	Setophaga ruticilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC33	9:11	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	3		X		X							
ND	9-Jun-23	Spring Migration	PC33		10	HETH	Hermit Thrush	Catharus guttatus	1		X	X								
ND	9-Jun-23	Spring Migration	PC33		10	AMRE	American Redstart	Setophaga ruticilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC33		10	CAWA	Canada Warbler	Wilsonia canadensis	1		X	X								
ND	9-Jun-23	Spring Migration	PC33		10	ALFL	Alder Flycatcher	Empidonax alnorum	1		X	X								
ND	9-Jun-23	Spring Migration	PC33		10	MAWA	Magnolia Warbler	Dendroica magnolia	1		X	X								
ND	9-Jun-23	Spring Migration	PC33		10	BTNW	Black-throated Green Warbler	Dendroica virens	1		X		X							
ND	9-Jun-23	Spring Migration	PC33		10	BHVI	Blue-headed Vireo	Vireo solitarius	1		X	X								
ND	9-Jun-23	Spring Migration	PC34	9:31	10	COYE	Common Yellowthroat	Geothlypis trichas	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	ALFL	Alder Flycatcher	Empidonax alnorum	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	SWSP	Swamp Sparrow	Melospiza georgiana	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	BBWA	Bay-breasted Warbler	Dendroica castanea	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	BTNW	Black-throated Green Warbler	Dendroica virens	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	MAWA	Magnolia Warbler	Dendroica magnolia	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	GCKI	Golden-crowned Kinglet	Regulus satrapa	1		X	X								
ND	9-Jun-23	Spring Migration	PC34		10	AMRE	American Redstart	Setophaga ruticilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC35	9:43	10	BAWW	Black-and-white Warbler	Mniotilta varia	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	MAWA	Magnolia Warbler	Dendroica magnolia	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	RTHU	Ruby-throated Hummingbird	Archilochus colubris	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	GCKI	Golden-crowned Kinglet	Regulus satrapa	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	BHVI	Blue-headed Vireo	Vireo solitarius	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	BCCH	Black-capped Chickadee	Poecile atricapilla	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	BTNW	Black-throated Green Warbler	Dendroica virens	1		X	X								
ND	9-Jun-23	Spring Migration	PC35		10	HETH	Hermit Thrush	Catharus guttatus	1		X	X								

Table 2: 2023 Spring Migration Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
Alder Flycatcher	<i>Empidonax alnorum</i>	Not Listed	Not Listed	Not Listed	S5B	13
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	76
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	15
American Kestrel	<i>Falco sparverius</i>	Not Listed	Not Listed	Not Listed	S3B,S4S5M	1
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	18
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	263
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	3
Belted Kingfisher	<i>Megaceryle alcyon</i>	Not Listed	Not Listed	Not Listed	S4S5B	2
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	29
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Black-capped Chickadee	<i>Poecile atricapilla</i>	Not Listed	Not Listed	Not Listed	S5	60
Blackpoll Warbler	<i>Setophaga striata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	2
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5	30
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	80
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	10
Boreal Chickadee	<i>Poecile hudsonica</i>	Not Listed	Not Listed	Not Listed	S3	2
Broad-winged Hawk	<i>Buteo platypterus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Canada Goose	<i>Branta canadensis</i>	Not Listed	Not Listed	Not Listed	SUB,S4N,S5M	3
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	3
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S3B	5
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	4
Chipping Sparrow	<i>Spizella passerina</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	2
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	17
Common Loon	<i>Gavia immer</i>	Not Listed	Not at Risk	Not Listed	S4B	2
Common Merganser	<i>Mergus merganser</i>	Not Listed	Not Listed	Not Listed	S5B,S5M,S5N	1
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	24
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	28
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	63
Downy Woodpecker	<i>Dryobates pubescens</i>	Not Listed	Not Listed	Not Listed	S5	2
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Vulnerable	S3S4B	1
European Starling	<i>Sturnus vulgaris</i>	Not Listed	Not Listed	Not Listed	SNA	1
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	28
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	6
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	51
Least Flycatcher	<i>Empidonax minimus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	3
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	24
Merlin	<i>Falco columbarius</i>	Not Listed	Not at Risk	Not Listed	S5B	1
Mourning Dove	<i>Zenaida macroura</i>	Not Listed	Not Listed	Not Listed	S5	10
Mourning Warbler	<i>Geothlypis philadelphia</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5

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Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	4
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	62
Northern Harrier	<i>Circus hudsonius</i>	Not Listed	Not at Risk	Not Listed	S4B,S4S5M	1
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	12
Northern Waterthrush	<i>Parkesia noveboracensis</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	30
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	12
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	3
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	50
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	3
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	28
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Not Listed	Not at Risk	Not Listed	S5	2
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	75
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Not Listed	Not Listed	Not Listed	S5B	2
Ruffed Grouse	<i>Bonasa umbellus</i>	Not Listed	Not Listed	Not Listed	S5	30
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	1
Solitary Sandpiper	<i>Tringa solitaria</i>	Not Listed	Not Listed	Not Listed	SUB,S3S4M	1
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	39
Spotted Sandpiper	<i>Actitis macularius</i>	Not Listed	Not Listed	Not Listed	S3S4B,S5M	1
Spruce Grouse	<i>Canachites canadensis</i>	Not Listed	Not Listed	Not Listed	S4	3
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	4
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	17
Tree Swallow	<i>Tachycineta bicolor</i>	Not Listed	Not Listed	Not Listed	S4B	1
Turkey Vulture	<i>Cathartes aura</i>	Not Listed	Not Listed	Not Listed	S2S3B,S4S5M	1
Unknown duck species	N/A	N/A	N/A	N/A	N/A	2
Unknown hawk species	N/A	N/A	N/A	N/A	N/A	1
Unknown woodpecker species	N/A	N/A	N/A	N/A	N/A	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Not Listed	Not Listed	Not Listed	S4	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	105
Wilson's Snipe	<i>Gallinago delicata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	1
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	13
Yellow Warbler	<i>Setophaga petechia</i>	Not Listed	Not Listed	Not Listed	S5B	3
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	3
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	60
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	47

Table 3: 2023 Diurnal Watch Count Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	11-Apr-23	Diurnal Watch	DWC 2	9:45:00 AM	30	BCCH	Black-capped Chickadee	Poecile atricapilla	1		x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			DEJU	Dark-eyed Junco	Junco hyemalis	2		x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			BLJA	Blue Jay	Cyanocitta cristata	1		x			x						
JL	11-Apr-23	Diurnal Watch	DWC 2			AMCR	American Crow	Corvus brachyrhynchos	1		x		x							
JL	11-Apr-23	Diurnal Watch	DWC 2			AMRO	American Robin	Turdus migratorius	3	x	x	x	x							
JL	11-Apr-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x			x						
JL	11-Apr-23	Diurnal Watch	DWC 2	10:15:00 AM	30	GCKI	Golden-crowned Kinglet	Regulus satrapa	2		x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			BCCH	Black-capped Chickadee	Poecile atricapilla	5	x	x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1	x	x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			AMRO	American Robin	Turdus migratorius	2		x	x	x							
JL	11-Apr-23	Diurnal Watch	DWC 2			DEJU	Dark-eyed Junco	Junco hyemalis	3	x	x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			AMCR	American Crow	Corvus brachyrhynchos	1	x	x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			PAWA	Palm Warbler	Dendroica palmarum	1		x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2	10:45:00 AM	30	DEJU	Dark-eyed Junco	Junco hyemalis	3	x	x	x								
JL	11-Apr-23	Diurnal Watch	DWC 2			AMCR	American Crow	Corvus brachyrhynchos	1		x		x							
JL	11-Apr-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x			x						
JL	11-Apr-23	Diurnal Watch	DWC 2			AMRO	American Robin	Turdus migratorius	2		x	x	x							
JL	11-Apr-23	Diurnal Watch	DWC 2			GCKI	Golden-crowned Kinglet	Regulus satrapa	3	x	x	x	x							
JL	11-Apr-23	Diurnal Watch	DWC 2			BCCH	Black-capped Chickadee	Poecile atricapilla	2	x	x	x	x							
JL	11-Apr-23	Diurnal Watch	DWC 2			BOCH	Boreal Chickadee	Poecile hudsonica	1	x	x	x								
JL	26-Apr-23	Diurnal Watch	DWC 2	10:15:00 AM	30	SWSP	Swamp Sparrow	Melospiza georgiana	1		x	x								
JL	26-Apr-23	Diurnal Watch	DWC 2			RCKI	Ruby-crowned Kinglet	Regulus calendula	2		x	x	x							
JL	26-Apr-23	Diurnal Watch	DWC 2			BEKI	Belted Kingfisher	Megasceryle alcyon	2	x	x	x								2 males fighting
JL	26-Apr-23	Diurnal Watch	DWC 2			BAEA	Bald Eagle	Haliaeetus leucocephalus	1	x				x						
JL	26-Apr-23	Diurnal Watch	DWC 2			NOGO	Northern Goshawk	Accipiter gentilis	1	x		x								
JL	26-Apr-23	Diurnal Watch	DWC 2	10:45:00 AM	30	BLJA	Blue Jay	Cyanocitta cristata	1		x		x							
JL	26-Apr-23	Diurnal Watch	DWC 2			NOFL	Northern Flicker	Colaptes auratus	1		x			x						
JL	26-Apr-23	Diurnal Watch	DWC 2			GHOW	Great Horned Owl	Bubo virginianus	1		x			x						
JL	26-Apr-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x				x					
JL	26-Apr-23	Diurnal Watch	DWC 2			COME	Common Merganser	Mergus merganser	2	x	x	x								1 male and female pair
JL	26-Apr-23	Diurnal Watch	DWC 2			COLO	Common Loon	Gavia immer	1	x				x						
JL	26-Apr-23	Diurnal Watch	DWC 2			GCKI	Golden-crowned Kinglet	Regulus satrapa	2	x	x	x								
JL	26-Apr-23	Diurnal Watch	DWC 2			SOSP	Song Sparrow	Melospiza melodia	1		x		x							
JL	26-Apr-23	Diurnal Watch	DWC 2	11:15:00 AM	30	AMRO	American Robin	Turdus migratorius	1		x	x								
JL	26-Apr-23	Diurnal Watch	DWC 2			AMCR	American Crow	Corvus brachyrhynchos	1		x		x							
JL	26-Apr-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x	x								
JL	26-Apr-23	Diurnal Watch	DWC 2			NOFL	Northern Flicker	Colaptes auratus	1		x									
JL	26-Apr-23	Diurnal Watch	DWC 2			RUGR	Ruffed Grouse	Bonasa umbellus	1		x			x						
JL	26-Apr-23	Diurnal Watch	DWC 2			BLJA	Blue Jay	Cyanocitta cristata	1		x	x								
JL	10-May-23	Diurnal Watch	DWC 1	10:30:00 AM	30	SOSP	Song Sparrow	Melospiza melodia	2	x	x	x		x						
JL	10-May-23	Diurnal Watch	DWC 1			AMCR	American Crow	Corvus brachyrhynchos	2		x			x	x					
JL	10-May-23	Diurnal Watch	DWC 1			WTSP	White-throated Sparrow	Zonotrichia albicollis	2	x	x	x	x							
JL	10-May-23	Diurnal Watch	DWC 1			YBSA	Yellow-bellied Sapsucker	Sphyrapicus varius	2	x	x	x	x							
JL	10-May-23	Diurnal Watch	DWC 1			CORA	Common Raven	Corvus corax	1	x	x				s		x	50 m	e	
JL	10-May-23	Diurnal Watch	DWC 1			AMRO	American Robin	Turdus migratorius	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			BLJA	Blue Jay	Cyanocitta cristata	3		x			x						
JL	10-May-23	Diurnal Watch	DWC 1	11:00:00 AM	30	NOFL	Northern Flicker	Colaptes auratus	1		x									
JL	10-May-23	Diurnal Watch	DWC 1			AMRO	American Robin	Turdus migratorius	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			RIPH	Ring-necked Pheasant	Phasianus colchicus	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			CORA	Common Raven	Corvus corax	1	x					e		x	30 m	w	
JL	10-May-23	Diurnal Watch	DWC 1			YRWA	Yellow-rumped Warbler	Dendroica coronata	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1	11:30:00 AM	30	NOHA	Northern Harrier	Circus cyaneus	1	x										
JL	10-May-23	Diurnal Watch	DWC 1			WTSP	White-throated Sparrow	Zonotrichia albicollis	1		x									
JL	10-May-23	Diurnal Watch	DWC 1			DEJU	Dark-eyed Junco	Junco hyemalis	2		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			PUFI	Purple Finch	Carpodacus purpureus	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			AMRO	American Robin	Turdus migratorius	1	x				x			x	25 m	e	
JL	10-May-23	Diurnal Watch	DWC 1			AMCR	American Crow	Corvus brachyrhynchos	1		x									
JL	10-May-23	Diurnal Watch	DWC 1			BCCH	Black-capped Chickadee	Poecile atricapilla	1		x			x						
JL	10-May-23	Diurnal Watch	DWC 1			BOCH	Boreal Chickadee	Poecile hudsonica	1		x			x						
JL	11-May-23	Diurnal Watch	DWC 2	10:50:00 AM	30	RCKI	Ruby-crowned Kinglet	Regulus calendula	2		x	x								
JL	11-May-23	Diurnal Watch	DWC 2			YRWA	Yellow-rumped Warbler	Dendroica coronata	6	x	x	x	x							1 male and female pair
JL	11-May-23	Diurnal Watch	DWC 2			YBSA	Yellow-bellied Sapsucker	Sphyrapicus varius	1		x			x						
JL	11-May-23	Diurnal Watch	DWC 2			SWSP	Swamp Sparrow	Melospiza georgiana	2	x	x	x								
JL	11-May-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x									
JL	11-May-23	Diurnal Watch	DWC 2			NOHA	Northern Harrier	Circus cyaneus	1	x			x							
JL	11-May-23	Diurnal Watch	DWC 2			BCCH	Black-capped Chickadee	Poecile atricapilla	1		x	x	x							
JL	11-May-23	Diurnal Watch	DWC 2	11:20:00 AM	30	CORA	Common Raven	Corvus corax	1	x	x	x			se		x	50 m	se	
JL	11-May-23	Diurnal Watch	DWC 2			DEJU	Dark-eyed Junco	Junco hyemalis	1		x	x	x							
JL	11-May-23	Diurnal Watch	DWC 2			AMCR	American Crow	Corvus brachyrhynchos	1		x									
JL	11-May-23	Diurnal Watch	DWC 2			AMRO	American Robin	Turdus migratorius	2		x	x	x							
JL	11-May-23	Diurnal Watch	DWC 2			WTSP	White-throated Sparrow	Zonotrichia albicollis	1		x	x								
JL	11-May-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1		x	x								
JL	11-May-23	Diurnal Watch	DWC 2			GCKI	Golden-crowned Kinglet	Regulus satrapa	1		x	x								
JL	11-May-23	Diurnal Watch	DWC 2			HETH	Hermit Thrush	Catharus guttatus	1		x			x						
JL	11-May-23	Diurnal Watch	DWC 2	11:50:00 AM	30	BCCH	Black-capped Chickadee	Poecile atricapilla	1		x	x								
JL	11-May-23	Diurnal Watch	DWC 2			BLJA	Blue Jay	Cyanocitta cristata	1		x			x						
JL	11-May-23	Diurnal Watch	DWC 2			CORA	Common Raven	Corvus corax	1	x										
JL	11-May-23	Diurnal Watch	DWC 2			BOCH	Boreal Chickadee	Poecile hudsonica	1		x	x								
JL	31-May-23	Diurnal Watch	DWC 2	11:00:00 AM	30	BBWA	Bay-breasted Warbler	Dendroica castanea	1											
JL	31-May-23	Diurnal Watch	DWC 2			RCKI	Ruby-crowned Kinglet	Regulus calendula	1											
JL	31-May-23	Diurnal Watch	DWC 2			COYE	Common Yellowthroat	Geothlypis trichas	1											
JL	31-May-23	Diurnal Watch	DWC 2			AMRO	American Robin	Turdus migratorius	2											
JL	31-May-23	Diurnal Watch	DWC 2			NOWA	Northern Waterthrush	Seiurus noveboracensis	1											
JL	31-May-23	Diurnal Watch	DWC 2			MAWA	Magnolia Warbler	Dendroica magnolia	2											
JL	31-May-23	Diurnal Watch	DWC 2			BCCH	Black-capped Chickadee	Poecile atricapilla	1											
JL	31-May-23	Diurnal Watch	DWC 2			WTSP	White-throated Sparrow	Zonotrichia albicollis	1											
JL	31-May-23	Diurnal Watch	DWC 2			SOSP	Song Sparrow	Melospiza melodia	1											

Table 3: 2023 Diurnal Watch Count Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	31-May-23	Diurnal Watch	DWC 2			BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	31-May-23	Diurnal Watch	DWC 2			REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			NOPA	Northern Parula	<i>Parula americana</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2	11:30:00 AM	30	YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			COGR	Common Grackle	<i>Quiscalus quiscula</i>	2											
JL	31-May-23	Diurnal Watch	DWC 2			AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2	12:00:00 PM	30	COGR	Common Grackle	<i>Quiscalus quiscula</i>	3											
JL	31-May-23	Diurnal Watch	DWC 2			CORA	Common Raven	<i>Corvus corax</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			DOWO	Downy Woodpecker	<i>Picoides pubescens</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1											
JL	31-May-23	Diurnal Watch	DWC 2			TUVU	Turkey Vulture	<i>Cathartes aura</i>	1											
MMD	9-Jun-23	Diurnal Watch	DWC2	10:45	30	AMRO	American Robin	<i>Turdus migratorius</i>	1	X			X		E					
MMD	9-Jun-23	Diurnal Watch	DWC2			GBHE	Great Blue Heron	<i>Ardea herodias</i>	1	X			X		N					
MMD	9-Jun-23	Diurnal Watch	DWC2			RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			NOFL	Northern Flicker	<i>Colaptes auratus</i>	1	X		X			W					
MMD	9-Jun-23	Diurnal Watch	DWC2			BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1	X			X		E					
MMD	9-Jun-23	Diurnal Watch	DWC2			NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X	X							
MMD	9-Jun-23	Diurnal Watch	DWC2			WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		X	X	X							
MMD	9-Jun-23	Diurnal Watch	DWC2			BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1	X				X	N					
MMD	9-Jun-23	Diurnal Watch	DWC2	11:15	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4	X			X		N					
MMD	9-Jun-23	Diurnal Watch	DWC2			BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1	X		X			N					
MMD	9-Jun-23	Diurnal Watch	DWC2			COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X	X							
MMD	9-Jun-23	Diurnal Watch	DWC2			NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			PUFI	Purple Finch	<i>Carpodacus purpureus</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1	X			X		W					
MMD	9-Jun-23	Diurnal Watch	DWC2	11:45	30	GRCA	Gray Catbird	<i>Dumetella carolinensis</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			YWAR	Yellow Warbler	<i>Dendroica petechia</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			BTNW	Black-throated Green Warbler	<i>Dendroica virens</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2	12:15	30	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>	1		X	X								
MMD	9-Jun-23	Diurnal Watch	DWC2			NOPA	Northern Parula	<i>Parula americana</i>	1		X	X								

Table 4: 2023 Diurnal Watch Count Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	9
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	1
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	16
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not Listed	Not at Risk	Not Listed	S5	3
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	1
Belted Kingfisher	<i>Megaceryle alcyon</i>	Not Listed	Not Listed	Not Listed	S4S5B	2
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	2
Black-capped Chickadee	<i>Poecile atricapilla</i>	Not Listed	Not Listed	Not Listed	S5	12
Black-throated Green Warbler	<i>Dendroica virens</i>	Not Listed	Not Listed	Not Listed	S5	2
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	15
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	3
Boreal Chickadee	<i>Poecile hudsonica</i>	Not Listed	Not Listed	Not Listed	S3	3
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	5
Common Loon	<i>Gavia immer</i>	Not Listed	Not at Risk	Not Listed	S4B	1
Common Merganser	<i>Mergus merganser</i>	Not Listed	Not Listed	Not Listed	S5B,S5M,S5N	2
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	12
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	5
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	11
Downy Woodpecker	<i>Dryobates pubescens</i>	Not Listed	Not Listed	Not Listed	S5	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	8
Great Blue Heron	<i>Ardea herodias</i>	Not Listed	Not Listed	Not Listed	S4B	1
Great Horned Owl	<i>Bubo virginianus</i>	Not Listed	Not Listed	Not Listed	S4	1
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	2
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	4
American Goshawk	<i>Accipiter atricapillus</i>	Not Listed	Not at Risk	Not Listed	S3S4	1
Northern Harrier	<i>Circus hudsonius</i>	Not Listed	Not at Risk	Not Listed	S4B,S4S5M	2

Table 4: 2023 Diurnal Watch Count Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	1
Northern Waterthrush	<i>Parkesia noveboracensis</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	2
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	1
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	3
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Not Listed	Not Listed	Not Listed	SNA	1
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	10
Ruffed Grouse	<i>Bonasa umbellus</i>	Not Listed	Not Listed	Not Listed	S5	1
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	4
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	3
Turkey Vulture	<i>Cathartes aura</i>	Not Listed	Not Listed	Not Listed	S2S3B,S4S5M	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	6
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	3
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	9

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1		1		w					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1			1	s					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	AMRO	American Robin	<i>Turdus migratorius</i>	1	1	1		1		ne					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1		1	1			sw					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1		s					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1	1			n					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1		nw					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC12	5:45	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1		se					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1	1			sw					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1		1	1			n					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1		1	1			n					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1		nw					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	CORA	Common Raven	<i>Corvus corax</i>	1		1			1	e					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1			1	sw					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1		1	1			sw					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1		1		w					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1		1		1		s					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1		ne					
ND	13-Jun-23	Breeding Bird	PC13	6:02	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1		sw					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1		s					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1		1	1			e					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1		n					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1		nw					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1		1	1			se					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1		1		1		sw					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1		n					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1		1	1			n					
ND	13-Jun-23	Breeding Bird	PC14	6:18	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1	1			nw					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1	1	1	1			e					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1	1	1	1			sw					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1		sw					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1		1		1		se					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1		1			1	sw					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1		1	1			n					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1		1		n					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1		1		1		nw					
ND	13-Jun-23	Breeding Bird	PC15	6:34	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1	1			sw					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1		1	1			w					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1		sw					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1		1	1			ne					Maybe in wetland
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1	1			e					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1		1	1			ne					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1		w					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	EAWP	Eastern Wood-Pewee	<i>Contopus virens</i>	1		1		1		s					Unsure of wetland area
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2		1	1			w					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1	1			s					
ND	13-Jun-23	Breeding Bird	PC16	6:50	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1		ne					
ND	13-Jun-23	Breeding Bird	PC17	7:05	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1			1	sw					
ND	13-Jun-23	Breeding Bird	PC17	7:05	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1		s					
ND	13-Jun-23	Breeding Bird	PC17	7:05	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1		1		e					
ND	13-Jun-23	Breeding Bird	PC17	7:05	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1		n</					

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1	1	1	1		n						In wetland
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1	1		w						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1		1	1		s						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1	ne						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1			s						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1		nw						
ND	13-Jun-23	Breeding Bird	PC20	7:55	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	CORA	Common Raven	<i>Corvus corax</i>	1		1			se						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	RBGR	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	1		1	1		n						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1			1	nw					
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1		1			1	sw					
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1	1		sw						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1	1		n						
ND	13-Jun-23	Breeding Bird	PC21	8:12	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1		1		1	nw						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	CORA	Common Raven	<i>Corvus corax</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1		1	1		sw						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1	1		sw						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1	s						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1	1		n						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1		1		1	w						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1		1			1	s					
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1	ne						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC22	8:28	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1		s						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1		1			1	e					
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1		1	1		nw						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1		1	1		se						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1			1	sw					
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	AMRO	American Robin	<i>Turdus migratorius</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	RBNÜ	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1		1	1		nw						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1		1	e						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	CORA	Common Raven	<i>Corvus corax</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1			1	e					
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1		1	1		sw						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1		1	1		sw						
ND	13-Jun-23	Breeding Bird	PC23	8:45	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1		1		1	n						
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	COLO	Common Loon	<i>Gavia immer</i>	1		1			1	n					
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1		1		1	nw						
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1		1	1		e						
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1		1	1		e						
ND	13-Jun-23	Breeding Bird	PC39	9:00	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1		1		1	sw						
ND	13-Jun-23	Breeding Bird	Area Search	9:20	45	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1		1		1	s						adgitated
ND	13-Jun-23	Breeding Bird	Area Search	9:20	45	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1		1	1		n						calling
ND	13-Jun-23	Breeding Bird	Area Search	9:20	45	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1		1	1		w						
ND	13-Jun-																			

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	13-Jun-23	Breeding Bird	PC24	6:10	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1											
JL	13-Jun-23	Breeding Bird	PC24	6:10	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2											
JL	13-Jun-23	Breeding Bird	PC24	6:10	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	CORA	Common Raven	<i>Corvus corax</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	RIPH	Ring-necked Pheasant	<i>Phasianus colchicus</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC25	6:26	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	TUVU	Turkey Vulture	<i>Cathartes aura</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1											
JL	13-Jun-23	Breeding Bird	new PC40	6:40	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	3											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1		x	x			w					In wetland and watercourse system on tall tree.
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	2		x	x			s and nw					In wetland/watercourse system, singing back and forth
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	2											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC26	6:53	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	CORA	Common Raven	<i>Corvus corax</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	NOPA	Northern Parula	<i>Setophaga americana</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1		x			x	s					Likely in edge habitat of clearcut to south. Hard to pinpoint.
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1											

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2											
JL	13-Jun-23	Breeding Bird	new PC41	7:06	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	CORA	Common Raven	<i>Corvus corax</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1		x			x		w				In wetland system to west
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1											
JL	13-Jun-23	Breeding Bird	PC27	7:20	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	WISN	Wilson's Snipe	<i>Gallinago delicata</i>	1	x	x	x								Doing winnowing display above PC
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	CORA	Common Raven	<i>Corvus corax</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1											
JL	13-Jun-23	Breeding Bird	PC28	7:32	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC29	7:45	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	AMRO	American Robin	<i>Turdus migratorius</i>	3											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2											Male and female pair
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1											
JL	13-Jun-23	Breeding Bird	PC30	8:10	10	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	4											

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2											
JL	13-Jun-23	Breeding Bird	PC31	8:23	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	4											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	2											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	AMRO	American Robin	<i>Turdus migratorius</i>	2											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	13-Jun-23	Breeding Bird	PC32	8:36	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1											
JL	13-Jun-23	Breeding Bird	PC33	8:40	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1		x		x		ne					In wetland/watercourse system
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	13-Jun-23	Breeding Bird	PC34	8:55	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	3											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	AMRO	American Robin	<i>Turdus migratorius</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1											
JL	13-Jun-23	Breeding Bird	PC35	9:12	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1		x			x	e					In wetland (shubby treed swamp) with watercourse. See video in project folder.
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	NOWA	Northern Waterthrush	<i>Parquesia noveboracensis</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	NOPA	Northern Parula	<i>Setophaga americana</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1											
JL	13-Jun-23	Breeding Bird	PC36	9:45	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	MERL	Merlin	<i>Falco columbarius</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	AMKE	American Kestrel	<i>Falco sparverius</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	2											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1											
JL	13-Jun-23	Breeding Bird	, breeding behaviour	10:10	100	TUVU	Turkey Vulture	<i>Cathartes aura</i>	1											

Table 5: 2023 Breeding Bird Survey Results - Upper Afton Wind Project

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1											
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1											
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1											
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	WBNU	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1											
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3											
JL	13-Jun-23	Breeding Bird	breeding behaviour	10:10	100	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1		x	x								Heard in shrubby wetland by road with watercourse. 601044 5045968. East of road.

Table 6: 2023 Breeding Bird Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common nName	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Alder Flycatcher	<i>Empidonax alnorum</i>	Not Listed	Not Listed	Not Listed	S5B	26
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	9
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	16
American Kestrel	<i>Falco sparverius</i>	Not Listed	Not Listed	Not Listed	S3B,S4S5M	1
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	29
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	23
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	2
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	19
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	2
Black-capped Chickadee	<i>Poecile atricapilla</i>	Not Listed	Not Listed	Not Listed	S5	6
Black-throated Blue Warbler	<i>Setophaga caeruleascens</i>	Not Listed	Not Listed	Not Listed	S5	1
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5	26
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	12
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	4
Brown Creeper	<i>Certhia americana</i>	Not Listed	Not Listed	Not Listed	S5	1
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	1
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S3B	6
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	3
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	Not Listed	Not Listed	Not Listed	S5B	1
Chipping Sparrow	<i>Spizella passerina</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	3
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	1
Common Loon	<i>Gavia immer</i>	Not Listed	Not at Risk	Not Listed	S4B	1
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	11
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	24
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	12
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Vulnerable	S3S4B	1
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	6
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	2

Table 6: 2023 Breeding Bird Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common nName	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	23
Least Flycatcher	<i>Empidonax minimus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	6
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	20
Merlin	<i>Falco columbarius</i>	Not Listed	Not at Risk	Not Listed	S5B	1
Mourning Dove	<i>Zenaida macroura</i>	Not Listed	Not Listed	Not Listed	S5	6
Mourning Warbler	<i>Geothlypis philadelphia</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	8
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	4
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	11
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	9
Northern Waterthrush	<i>Parkesia noveboracensis</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	3
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Threatened	S3B	4
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	28
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	4
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	1
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	1
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	17
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	4
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	25
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Not Listed	Not Listed	Not Listed	SNA	1
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Not Listed	Not Listed	Not Listed	S3B	1
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	21
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Not Listed	Not Listed	Not Listed	S5B	1
Ruffed Grouse	<i>Bonasa umbellus</i>	Not Listed	Not Listed	Not Listed	S5	2
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	4
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	10
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	5
Tree Swallow	<i>Tachycineta bicolor</i>	Not Listed	Not Listed	Not Listed	S4B	3
Turkey Vulture	<i>Cathartes aura</i>	Not Listed	Not Listed	Not Listed	S2S3B,S4S5M	2

Table 6: 2023 Breeding Bird Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common nName	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Not Listed	Not Listed	Not Listed	S4	2
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	25
Wilson's Snipe	<i>Gallinago delicata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	1
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	8
Yellow Warbler	<i>Setophaga petechia</i>	Not Listed	Not Listed	Not Listed	S5B	4
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	7
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	6
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	22

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
MMD	June 27, 2024	Breeding	PC39	6:15:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC39	6:15:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC39	6:15:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
MMD	June 27, 2024	Breeding	PC13	6:24:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
MMD	June 27, 2024	Breeding	PC14	7:50:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1			1								Confirmed	AE	
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	WODU	Wood Duck	<i>Aix sponsa</i>	4			4										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	RNDU	Ring-necked Duck	<i>Aythya collaris</i>	6			6										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			1										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	BEKI	Belted Kingfisher	<i>Megaceryle alcyon</i>	1			1										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC15	7:09:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			1										
MMD	June 27, 2024	Breeding	PC12	7:22:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			1										
MMD	June 27, 2024	Breeding	PC16	7:38:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
MMD	June 27, 2024	Breeding	PC17	7:53:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC17	7:53:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
MMD	June 27, 2024	Breeding	PC17	7:53:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
MMD	June 27, 2024	Breeding	PC17	7:53:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC18	9:24:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
MMD	June 27, 2024	Breeding	PC19	9:34:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC19	9:34:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
MMD	June 27, 2024	Breeding	PC19	9:34:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
MMD	June 27, 2024	Breeding	PC20	9:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1				1									
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	3				2	1								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				1	1								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	11			3	3	5								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4				2	2								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4				2	2								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1					1								
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
JL	June 27, 2024	Breeding	PC24	6:15:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1				1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2			2										
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	6				2				4					
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	EUST	European Starling	<i>Sturnus vulgaris</i>	4								4					
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1				1									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			1	1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			1	1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1				1									
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			1										
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	4			1	2				1					
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
JL	June 27, 2024	Breeding	PC40	6:42:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1				1									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	6			4	2									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3			2	1									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	7			1	4	2								
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			1	1									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	4				4									
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				0	1								
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	WIWA	Wilson's Warbler	<i>Cardellina pusilla</i>	1			1										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			2										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										
JL	June 27, 2024	Breeding	PC26	6:55:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2					2								
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			1		1								
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			2										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	4			1	2	1								
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	UNK-WP	Unknown Woodpecker	<i>N/A</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2				1	1								
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1				1									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 27, 2024	Breeding	PC41	7:08:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	4			2	2									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2			1		1								
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	2			2										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			1	1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	RECR	Red Crossbill	<i>Loxia curvirostra</i>	1				1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			2	1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			2										
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1					1								
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
JL	June 27, 2024	Breeding	PC27	7:23:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			1	2									
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2			1	1									
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2			1		1								
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	1			1										
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1				1									
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	COGR	Common Grackle	Quiscalus quiscula	2								2					
JL	June 27, 2024	Breeding	PC28	7:35:00 AM	10	LEFL	Least Flycatcher	Empidonax minimus	2			2										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	3			1	2									
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	MAWA	Magnolia Warbler	Setophaga magnolia	2			1	1									
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	2				1	1								
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	3			1	1	1								
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	AMRO	American Robin	Turdus migratorius	8			2	2	3			1					
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	3			1	1	1								
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	AMRE	American Redstart	Setophaga ruticilla	5			3	2									
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	NAWA	Nashville Warbler	Leiothlypis ruficapilla	1				1									
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	ALFL	Alder Flycatcher	Empidonax alnorum	2			2										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	BAWVW	Black-and-white Warbler	Mniotilta varia	1			1										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	COGR	Common Grackle	Quiscalus quiscula	3								3					
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	2					2								
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1					1								
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2				2									
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2								2					
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	1			1										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1			1										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	PAWA	Palm Warbler	Setophaga palmarum	1			1										
JL	June 27, 2024	Breeding	PC29	7:48:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	2				2									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	2				1	1								
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1				1									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	2			1	1									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	AMRO	American Robin	Turdus migratorius	5			2	2	1								
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	AMRE	American Redstart	Setophaga ruticilla	1			1										
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	2			1	1									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2				2									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2				2									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	LEFL	Least Flycatcher	Empidonax minimus	1			1										
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	1			1										
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	1				1									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	ALFL	Alder Flycatcher	Empidonax alnorum	1			1										
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2				2									
JL	June 27, 2024	Breeding	PC30	9:18:00 AM	10	UNK-RAP	Unknown Raptor	N/A	1				1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	OVEN	Ovenbird	Seiurus aurocapilla	2				1	1								
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1			1										
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	2			1	1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2			1	1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	2			1	1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	AMRO	American Robin	Turdus migratorius	3			1	2									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1				1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	2			1	1									
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1			1										
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	2					2								
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	SWTH	Swainson's Thrush	Catharus ustulatus	1			1										
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2			2										
JL	June 27, 2024	Breeding	PC31	9:30:00 AM	10	AMRE	American Redstart	Setophaga ruticilla	1			1										
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	RCKI	Ruby-crowned Kinglet	Corthylio calendula	1					1								
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	3			2	1									
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	OVEN	Ovenbird	Seiurus aurocapilla	1					1								
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	AMRE	American Redstart	Setophaga ruticilla	3			2	1									
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2				1	1								
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1			1										
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	AMRO	American Robin	Turdus migratorius	5			1	2	2								
JL	June 27, 2024	Breeding	PC32	9:45:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	1			1										
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	MAWA	Magnolia Warbler	Setophaga magnolia	1			1										
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	AMRE	American Redstart	Setophaga ruticilla	2			1	1									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	AMRO	American Robin	Turdus migratorius	3			1	2									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1				1									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1					1								
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	1				1									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	RCKI	Ruby-crowned Kinglet	Corthylio calendula	1					1								
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	1			1										
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1			1										
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	MOWA	Mourning Warbler	Geothlypis philadelphia	1				1									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2				2									
JL	June 27, 2024	Breeding	PC33	9:57:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2				2									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	2			1		1								

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1					1								
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2				1	1								
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
JL	June 27, 2024	Breeding	PC34	10:10:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1			1										
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3				1	2								
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				0	1								
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2			1		1								
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3			1	2									
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
JL	June 27, 2024	Breeding	PC35	10:23:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1					1								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	6			4	2									
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	9			6	2	1								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	2			1	1									
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	10			10										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	14			2	2	10								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	GRCA	Grey Catbird	<i>Dumetella carolinensis</i>	1			1										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			1		1								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			1	1									
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	2			1	1									
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			2										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1					1								
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 28, 2024	Breeding	PC38	6:00:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	8			4		4								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	10			4	2	4								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	6			2	3	1								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	7			3		4								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			1	1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	3			2	1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1				1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	8			4	2	2								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2				2									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	4			2	2									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2				2									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2				1	1								
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	3			2	1									
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
JL	June 28, 2024	Breeding	PC10	6:14:00 AM	10	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1			1										
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			1	2									
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2				1	1								
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2							2						
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	9			3	2	2			2					
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1				1									
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1				1									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 28, 2024	Breeding	PC8	6:34:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1				1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1				1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3			2	1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2			2										
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			2	1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	8			4	2	2								
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	3			1	2									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			2	0									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	4			2	2									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2			1	1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1				1									
JL	June 28, 2024	Breeding	PC9	6:46:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				2									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2			2										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	RWBL	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	2			1	1									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	EUST	European Starling	<i>Sturnus vulgaris</i>	4				4									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	6			2	2	2								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1			1										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	4			2	1	1								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	19			4	3	12								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	KILL	Killdeer	<i>Charadrius vociferus</i>	1			0	1									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1			1										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	4			4										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1				1									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			0	2									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2				2									
JL	June 28, 2024	Breeding	PC37	7:05:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			2	1									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	2				1	1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2				1	1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1			1	0									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3			1	1	1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				1	1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1					1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2			1	1									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			1										
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			1	1									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2			1	1									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2				1	1								
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1				1									
JL	June 27, 2024	Breeding	PC36	10:54:00 AM	10	CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1					1								
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	7			2	2	3								
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1			1										
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1				1									
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1							1						
JL	June 27, 2024	Breeding	PC25	6:28:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			2	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1				1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	2			1	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4			3	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	5			3	2									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	2			1	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			1	0	1								
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2					2								
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			1	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			1	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			0	1									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2			2										
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1			1										
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2			2										
JL	June 28, 2024	Breeding	PC11	7:18:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			1	1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3			1	2									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3			2	1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2			1	1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	4			3	1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				1	1								
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	WIWA	Wilson's Warbler	<i>Cardellina pusilla</i>	1			1										
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1				1									
JL	June 28, 2024	Breeding	PC4	7:34:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	4			2	2									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2			1	1									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3			2	1									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3			1	2									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1				1									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	UNK-WP	Unknown Woodpecker	N/A	1				1									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
JL	June 28, 2024	Breeding	PC5	7:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2					2								
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	2					2								
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			1	1									
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1				1									
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
JL	June 28, 2024	Breeding	PC6	7:56:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			1	2									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	RBNV	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1				1									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3			2	1									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1			1										
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 28, 2024	Breeding	PC7	8:08:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3			1	2									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	2			1	1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2				1	1								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	3			2	1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1					1								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				2									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			1	0	1								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	12			4	2	6								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2				1	1								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2			1	1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1					1								
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1				1									
JL	June 28, 2024	Breeding	PC3	8:45:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3			1	2									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	4			2	2									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	9			2	4	3								
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2					2								
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2				1	1								
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	4			2	2									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2			1	1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	NOWA	Northern Waterthrush	<i>Parkesia noveboracensis</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			3										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1			1										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	2			1	1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			1	1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1				1									
JL	June 28, 2024	Breeding	PC2	9:06:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2			2										
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	4			2	1	1								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	NOHA	Northern Harrier	<i>Circus hudsonius</i>	1				1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	9			3	4	2								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	5			3	2									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2				1	1								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3			1	1	1								
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1				1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				2									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			1	1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			1	1									
JL	June 28, 2024	Breeding	PC1	9:32:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	3			3										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3			0	3									
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1													
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1													
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	0													
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC9	5:44:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	2			1	1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1					1								
KM	June 14, 2024	Breeding	PC10	6:12:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1				1									
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC37	6:37:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1													
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1				1									
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1													
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1					1								
KM	June 14, 2024	Breeding	PC11	7:11:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1					1								
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	4			4										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	RHWO	Red-headed Woodpecker	<i>Meianerpes erythrocephalus</i>	1													Red-headed woodpecker was observed clearly by both surveyors. Flyover SW to SE, 75M
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	RBNV	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										
KM	June 14, 2024	Breeding	PC4	7:32:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	TEWA	Tennessee Warbler	<i>Leiothlypis peregrina</i>	1			1										
KM	June 14, 2024	Breeding	PC5	7:54:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			0	1									
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1					1								
KM	June 14, 2024	Breeding	PC6	8:09:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			0		1								
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC7	8:25:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1													
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	3			3										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	3			3										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1					1								
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	EAWP	Eastern Wood-Pewee	<i>Contopus virens</i>	1				1									
KM	June 14, 2024	Breeding	PC2	9:13:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1					1								
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			2										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1				1									
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC1	9:32:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC3	10:03:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 14, 2024	Breeding	PC3	10:03:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC3	10:03:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1				1									
KM	June 14, 2024	Breeding	PC3	10:03:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				2									
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 14, 2024	Breeding	PC8	5:29:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1			1										
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 12, 2024	Breeding	PC12	5:44:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1				1									
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
KM	June 12, 2024	Breeding	PC16	6:04:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			1										
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1			1										
KM	June 12, 2024	Breeding	PC13	6:30:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1				1									
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
KM	June 12, 2024	Breeding	PC14	6:52:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1			1										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	RNDU	Ring-necked Duck	<i>Aythya collaris</i>	2			2										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1			1										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1													
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	BEKI	Belted Kingfisher	<i>Megaceryle alcyon</i>	1			1										
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1				1									
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1				1									
KM	June 12, 2024	Breeding	PC15	7:16:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC17	8:07:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1			1										
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1				1									
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1				1									
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC19	8:29:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1													
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2			2										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
KM	June 12, 2024	Breeding	PC20	8:50:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	2			2										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1													
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2					2								
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1					1								
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1				1									
KM	June 12, 2024	Breeding	PC21	9:20:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1			1										
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	EAWP	Eastern Wood-Pewee	<i>Contopus virens</i>	1				1									
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1			1										
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 12, 2024	Breeding	PC22	9:49:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	7			7										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	2			2										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	CAGO	Canada Goose	<i>Branta canadensis</i>	1													
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1					1								
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	BTBW	Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	1					1								
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1					1								
KM	June 12, 2024	Breeding	PC23	10:23:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1					1								
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	3			3										
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			2										
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	BEKI	Belted Kingfisher	<i>Megasceryle alcyon</i>	1				1									
KM	June 12, 2024	Breeding	PC18	11:22:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
KM	June 12, 2024	Breeding	Area Search			OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1			1										Broken overcast. OSFL observed singing in treed swamp atop a softwood near Donnelly Lake.
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			1	1									
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC39	5:10:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1				1									
KM	June 13, 2024	Breeding	PC30	5:31:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC30	5:31:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC30	5:31:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	WIWR	Winter Wren	<i>Troglodytes hiemalis</i>	1													
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
KM	June 13, 2024	Breeding	PC31	5:45:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1													
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1													
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1													
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	2				2									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1					1								
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 13, 2024	Breeding	PC32	6:01:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1					1								
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	COGR	Common Grackle	<i>Quiscalus quiscula</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1				1									
KM	June 13, 2024	Breeding	PC33	6:19:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	MALL	Mallard	<i>Anas platyrhynchos</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			0		1								
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC34	6:51:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 13, 2024	Breeding	PC35	7:09:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1				1									
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				0									
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1													
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1					1								
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			0										
KM	June 13, 2024	Breeding	PC27	8:03:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
KM	June 13, 2024	Breeding	PC28	8:18:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonicus</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1													
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1													
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1													
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	0													
KM	June 13, 2024	Breeding	PC29	8:41:00 AM	10	YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	1					1								
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	LEFL	Least Flycatcher	<i>Empidonax minimus</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1			1										
KM	June 13, 2024	Breeding	PC41	9:07:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			0	1									
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			0	1									
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1				1									
KM	June 13, 2024	Breeding	PC26	9:25:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1				1									
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								

Table 7: 2024 Breeding Bird Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1					1								
KM	June 13, 2024	Breeding	PC 40	9:44:00 AM	10	YBFL	Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapillus</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1					1								
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	AMRE	American Redstart	<i>Setophaga ruticilla</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
KM	June 13, 2024	Breeding	PC25	10:06:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1				1									
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
KM	June 13, 2024	Breeding	PC24	10:24:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1				1									
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	TRES	Tree Swallow	<i>Tachycineta bicolor</i>	1													
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
KM	June 14, 2024	Breeding	PC38	5:12:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
JL	June 28, 2024	Breeding	Area Search			CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	4													
JL	June 28, 2024	Breeding	Area Search			MOWA	Mourning Warbler	<i>Geothlypis philadelphia</i>	1													
JL	June 28, 2024	Breeding	Area Search			YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1													
JL	June 28, 2024	Breeding	Area Search			CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	3													
JL	June 28, 2024	Breeding	Area Search			BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1													
JL	June 28, 2024	Breeding	Area Search			YWAR	Yellow Warbler	<i>Setophaga petechia</i>	1													
JL	June 28, 2024	Breeding	Area Search			CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1													
JL	June 28, 2024	Breeding	Area Search			MERL	Merlin	<i>Falco columbarius</i>	1													
JL	June 28, 2024	Breeding	Area Search			CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1													
JL	June 28, 2024	Breeding	Area Search			CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1													In wetland by road.
JL	June 28, 2024	Breeding	Area Search			PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2													

Table 8: 2024 Breeding Bird Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Alder Flycatcher	<i>Empidonax alnorum</i>	Not Listed	Not Listed	Not Listed	S5B	46
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	44
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	53
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	53
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	203
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not Listed	Not at Risk	Not Listed	S5	1
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	9
Belted Kingfisher	<i>Megasceryle alcyon</i>	Not Listed	Not Listed	Not Listed	S4S5B	3
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	37
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	2
Black-capped Chickadee	<i>Poecile atricapillus</i>	Not Listed	Not Listed	Not Listed	S5	38
Blackpoll Warbler	<i>Setophaga striata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	2
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	Not Listed	Not Listed	Not Listed	S5B	1
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5B	70
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	51
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	45
Boreal Chickadee	<i>Poecile hudsonicus</i>	Not Listed	Not Listed	Not Listed	S3	6
Broad-winged hawk	<i>Buteo platypterus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Brown Creeper	<i>Certhia americana</i>	Not Listed	Not Listed	Not Listed	S5	6
Canada Goose	<i>Branta canadensis</i>	Not Listed	Not Listed	Not Listed	SUB,S4N,S5M	1
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	4
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S3B	9
Cape May Warbler	<i>Setophaga tigrina</i>	Not Listed	Not Listed	Not Listed	S3B,SUM	3
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	26
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	Not Listed	Not Listed	Not Listed	S5B	5
Chipping Sparrow	<i>Spizella passerina</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	19
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	7
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	59
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	35
Downy Woodpecker	<i>Dryobates pubescens</i>	Not Listed	Not Listed	Not Listed	S5	1
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern	Special Concern	Vulnerable	S3S4B	2
European Starling	<i>Sturnus vulgaris</i>	Not Listed	Not Listed	Not Listed	SNA	8
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	28
Grey Catbird	<i>Dumetella carolinensis</i>	Not Listed	Not Listed	Not Listed	S4B	1
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	1
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	59
Killdeer	<i>Charadrius vociferus</i>	Not Listed	Not Listed	Not Listed	S3B	1
Least Flycatcher	<i>Empidonax minimus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	11
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	49
Mallard	<i>Anas platyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5B,S5N	1

Table 8: 2024 Breeding Bird Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Merlin	<i>Falco columbarius</i>	Not Listed	Not Listed	Not Listed	S5B	1
Mourning Dove	<i>Zenaida macroura</i>	Not Listed	Not Listed	Not Listed	S5	3
Mourning Warbler	<i>Geothlypis philadelphia</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	12
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	23
Northern Harrier	<i>Circus hudsonius</i>	Not Listed	Not at Risk	Not Listed	S4B,S4S5M	1
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	22
Northern Waterthrush	<i>Parkesia noveboracensis</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	3
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Threatened	S3B	7
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	54
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	8
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	1
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	2
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	13
Red Crossbill	<i>Loxia curvirostra</i>	Not Listed	Not Listed	Not Listed	S3S4	1
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	4
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	98
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Threatened	Endangered	Not Listed	SNA	1
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Not Listed	Not at Risk	Not Listed	S5	1
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Not Listed	Not Listed	Not Listed	S4B	2
Ring-necked Duck	<i>Aythya collaris</i>	Not Listed	Not Listed	Not Listed	S5B	8
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	15
Ruffed Grouse	<i>Bonasa umbellus</i>	Not Listed	Not Listed	Not Listed	S5	3
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	14
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	50
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	24
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	12
Tennessee Warbler	<i>Leiothlypis peregrina</i>	Not Listed	Not Listed	Not Listed	S3S4B,S5M	1
Tree Swallow	<i>Tachycineta bicolor</i>	Not Listed	Not Listed	Not Listed	S4B	4
Unknown Raptor	N/A	Not Listed	Not Listed	Not Listed	#N/A	1
Unknown Woodpecker	N/A	Not Listed	Not Listed	Not Listed	#N/A	2
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	79
Wilson's Warbler	<i>Cardellina pusilla</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	2
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	9
Wood Duck	<i>Aix sponsa</i>	Not Listed	Not Listed	Not Listed	S5B	4
Yellow Warbler	<i>Setophaga petechia</i>	Not Listed	Not Listed	Not Listed	S5B	4
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	9
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	12

Table 9: 2024 Nightjar Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	CommonName	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Notes
												<50 m	50 - 100 m	100 m +						
Karlie Maki	Jun 11 2024	Nightjar	CONI5	20:23	30	NO BIRDS	NO BIRDS	N/A	0											
Karlie Maki	Jun 11 2024	Nightjar	CONI4	20:54	30	NO BIRDS	NO BIRDS	N/A	0											
Karlie Maki	Jun 11 2024	Nightjar	CONI6	21:14	30	NO BIRDS	NO BIRDS	N/A	0											
Karlie Maki	Jun 12 2024	Nightjar	CONI7	21:41	30	NO BIRDS	NO BIRDS	N/A	0											
Karlie Maki	Jun 12 2024	Nightjar	CONI1	20:35	30	SAVS	Savannah Sparrow	Passerculus sandwichensis	1				1							
Karlie Maki	Jun 12 2024	Nightjar	CONI2	20:45	30	NO BIRDS	NO BIRDS	N/A	0											
Karlie Maki	Jun 12 2024	Nightjar	CONI3	21:08	30	NO BIRDS	NO BIRDS	N/A	0											
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	SAVS	Savannah Sparrow	Passerculus sandwichensis	3			2		1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	DEJU	Dark-eyed Junco	Junco hyemalis	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	NOFL	Northern Flicker	Colaptes auratus	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	RBME	Red-breasted Merganser	Mergus serrator	2								2			
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	NOFL	Northern Flicker	Colaptes auratus	2			1	1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	AMRO	American Robin	Turdus migratorius	7			4	2	1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	BLJA	Blue Jay	Cyanocitta cristata	2				1	1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	MODO	Mourning Dove	Zenaida macroura	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	HETH	Hermit Thrush	Catharus guttatus	1				1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	SOSP	Song Sparrow	Melospiza melodia	1				1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	PUFI	Purple Finch	Haemorhous purpureus	1								1			
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	WTSP	White-throated Sparrow	Zonotrichia albicollis	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	SOSP	Song Sparrow	Melospiza melodia	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	PISI	Pine Siskin	Spinus pinus	2				2							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	CAGO	Canada Goose	Branta canadensis	3					3						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI1	20:30	30	COGR	Common Grackle	Quiscalus quiscula	2					2						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	SWTH	Swainson's Thrush	Catharus ustulatus	2			1	1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	HETH	Hermit Thrush	Catharus guttatus	2			1	1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	MAWA	Magnolia Warbler	Setophaga magnolia	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	AMRO	American Robin	Turdus migratorius	12			4	2	6						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	BAWW	Black-and-white Warbler	Mniotilta varia	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	BBWA	Bay-breasted Warbler	Setophaga castanea	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	WTSP	White-throated Sparrow	Zonotrichia albicollis	2				1	1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	COYE	Common Yellowthroat	Geothlypis trichas	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	YWAR	Yellow Warbler	Setophaga petechia	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI2	20:45	30	DEJU	Dark-eyed Junco	Junco hyemalis	2				2							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	AMRE	American Redstart	Setophaga ruticilla	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	AMRO	American Robin	Turdus migratorius	10			2	3	5						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	HETH	Hermit Thrush	Catharus guttatus	1				1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	SWTH	Swainson's Thrush	Catharus ustulatus	1			1								
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	REVI	Red-eyed Vireo	Vireo olivaceus	1				1							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	DEJU	Dark-eyed Junco	Junco hyemalis	2				2							
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	AMGO	American Goldfinch	Spinus tristis	2					2						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	OVEN	Ovenbird	Seiurus aurocapilla	1					1						
Jessica Lohnes	Jun 26 2024	Nightjar	CONI3	21:10	30	AMCR	American Crow	Corvus brachyrhynchos	2					2						

Table 10: 2024 Nightjar Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	2
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	2
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	1
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	29
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	1
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	1
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	2
Canada Goose	<i>Branta canadensis</i>	Not Listed	Not Listed	Not Listed	SUB,S4N,S5M	3
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	2
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	1
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	5
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	4
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	1
Mourning Dove	<i>Zenaida macroura</i>	Not Listed	Not Listed	Not Listed	S5	1
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	1
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	2
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	1
Red-breasted Merganser	<i>Mergus serrator</i>	Not Listed	Not Listed	Not Listed	S3S4B,S5M,S5N	2
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	4
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	2
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	3
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	3
Yellow Warbler	<i>Setophaga petechia</i>	Not Listed	Not Listed	Not Listed	S5B	1

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
RM	14-Aug-24	Fall Migration	PC39	5:50:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			2	1									
RM	14-Aug-24	Fall Migration	PC39	5:50:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	14-Aug-24	Fall Migration	PC39	5:50:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
RM	14-Aug-24	Fall Migration	PC39	5:50:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	14-Aug-24	Fall Migration	PC39	5:50:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2			1					1					
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2			1					1					
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				2									
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	6			6										
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
RM	14-Aug-24	Fall Migration	PC12	6:13:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1								Confirmed	FY	
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	5			3					2					
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2			1					1					
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	18			9					9					
RM	14-Aug-24	Fall Migration	PC13	6:42:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				2									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	2			1	1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	2			2								Confirmed	FY	CAWA adult male and juvenile observed.
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2			1					1					
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	WODU	Wood Duck	<i>Aix sponsa</i>	3			3								Confirmed	FY	WODU two immature males and a one adult female
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1				1									
RM	14-Aug-24	Fall Migration	PC14	7:11:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	3			3								Probable	P	
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2				2									
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	7			5					2					
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1			1										
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	6			4					2					
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2			2										
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
RM	14-Aug-24	Fall Migration	PC15	7:47:00 AM	10	BBCU	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	1					1								
RM	14-Aug-24	Fall Migration	PC16	8:25:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3			3										
RM	14-Aug-24	Fall Migration	PC16	8:25:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>														

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	UNK-WF	Unknown Waterfowl	N/A	1				1									
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2				1			1						
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	8			4				4						
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
RM	14-Aug-24	Fall Migration	PC22	10:19:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			3	1									
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1							Confirmed	FY		
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	8				4			4						
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1				1									
RM	15-Aug-24	Fall Migration	PC41	5:57:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3				2									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			3								Confirmed	FY	
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			1		1								
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			1				1						
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			1										CAWA singing in wetland on south side of road
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	HERG	Herring Gull	<i>Larus argentatus</i>	4				2			2						
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1			1										
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2			2										
RM	15-Aug-24	Fall Migration	PC26	6:20:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				2									
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1		1								
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			1										
RM	15-Aug-24	Fall Migration	PC40	6:38:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2				2									
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			2								Confirmed	FY	
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	6			6										
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			3								Confirmed	FY	
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1				1									
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1		1								
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	4			4										
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			2										
RM	15-Aug-24	Fall Migration	PC25	6:58:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
RM	15-Aug-24	Fall Migration	PC24	7:19:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
RM	15-Aug-24	Fall Migration	PC24	7:19:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC24	7:19:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC24	7:19:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC24	7:19:00 AM	10	DOWO	Downy Woodpecker															

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
RM	15-Aug-24	Fall Migration	PC30	8:42:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	4			2					2					
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	BBCU	Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	1					1								
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2			1					1					
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	6			3					3					
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	15-Aug-24	Fall Migration	PC31	8:55:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			1					1					
RM	15-Aug-24	Fall Migration	PC32	9:09:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3			3							Confirmed	FY		
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2			1					1					
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	MODO	Mourning Dove	<i>Zenaida macroura</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1			1										
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1			1										
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
RM	15-Aug-24	Fall Migration	PC33	9:20:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			2							Confirmed	FY		
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>	1				1									
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	RTHU	Ruby-throated Hummingbird	<i>Archilochus colubris</i>	1			1										
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2									
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
RM	15-Aug-24	Fall Migration	PC34	9:39:00 AM	10	RUBL	Rusty Blackbird	<i>Euphagus carolinus</i>	1			1										RUBL male calling from treetop, photo attached
RM	15-Aug-24	Fall Migration	PC35	10:07:00 AM	10	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1			1										
RM	15-Aug-24	Fall Migration	PC35	10:07:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
RM	15-Aug-24	Fall Migration	PC35	10:07:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC35	10:07:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
RM	15-Aug-24	Fall Migration	PC35	10:07:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			2										
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	OSFL	Olive-sided Flycatcher	<i>Contopus cooperi</i>	1				1									
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3				3									
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
RM	15-Aug-24	Fall Migration	PC36	10:36:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
RM	16-Aug-24	Fall Migration	PC23	10:28:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	2			1	1									
RM	16-Aug-24	Fall Migration	PC23	10:28:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2			1					1					
RM	16-Aug-24	Fall Migration	PC23	10:28:00 AM	10	UNK-WF	Unknown Waterfowl	N/A	5													

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
BF	6-Sep-24	Fall Migration	PC13	7:54:00 AM	10	BOCH	Boreal Chickadee	Poecile hudsonica	1			1										
BF	6-Sep-24	Fall Migration	PC13	7:54:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	5			5										
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	3			1	2									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2				2									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	4			2	2									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	2			1	1									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	UNK-WF	Unknown Waterfowl	N/A	2				2									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	2					2								
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	4			3	1									
BF	6-Sep-24	Fall Migration	PC15	8:10:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	3			3										
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	3			3										
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	2			0	2									
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2				2									
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	UNK-SB	Unknown Songbird	N/A	3			3										
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	CORA	Common Raven	Corvus corax	1			0	1	0								
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2				2									
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	AMRO	American Robin	Turdus migratorius	2			1		1								
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2					2								
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2					2								
BF	6-Sep-24	Fall Migration	PC14	8:40:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1				1									
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	7			7										
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2			2										
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	MAWA	Magnolia Warbler	Setophaga magnolia	2			2										
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	BWHA	Broad-winged Hawk	Buteo platypterus	1			1										
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	HAWO	Hairy Woodpecker	Dryobates villosus	1			1										
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	UNK-SB	Unknown Songbird	N/A	1			1	0									
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
BF	6-Sep-24	Fall Migration	PC19	9:09:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2			2										
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2					2								
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	2			2										
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	1					1								
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	DOWO	Downy Woodpecker	Dryobates pubescens	1					1								
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1			1										
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	1					1								
BF	6-Sep-24	Fall Migration	PC18	9:26:00 AM	10	AMRO	American Robin	Turdus migratorius	1					1								
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	1			1										
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1			1										
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	2			2										
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	1			1										
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
BF	6-Sep-24	Fall Migration	PC20	9:50:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
BF	6-Sep-24	Fall Migration	PC21	10:13:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1			1										
BF	6-Sep-24	Fall Migration	PC21	10:13:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	2			2										
BF	6-Sep-24	Fall Migration	PC21	10:13:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
BF	6-Sep-24	Fall Migration	PC21	10:13:00 AM	10	AMGO	American Goldfinch	Spinus tristis	1					1								
BF	6-Sep-24	Fall Migration	PC22	10:31:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	3			3										
BF	6-Sep-24	Fall Migration	PC22	10:31:00 AM	10	NOPA	Northern Parula	Setophaga americana	2			2										
BF	6-Sep-24	Fall Migration	PC22	10:31:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	2			2										
BF	6-Sep-24	Fall Migration	PC22	10:31:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
BF	6-Sep-24	Fall Migration	PC23	10:48:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	1			1										
BF	6-Sep-24	Fall Migration	PC23	10:48:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
BF	6-Sep-24	Fall Migration	PC23	10:48:00 AM	10	BRCR	Brown Creeper	Certhia americana	1			1										

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2			2										
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	4			2	2									
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1				1									
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	PIWO	Pileated Woodpecker	Dryocopus pileatus	2					0		2						
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1			1										
JL	10-Sep-24	Fall Migration	PC 40	7:10:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	3			3										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	RUGR	Ruffed Grouse	Bonasa umbellus	1			1										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	RTHA	Red-tailed Hawk	Buteo jamaicensis	1					1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	2			1		1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	3			1	1	1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2			1		1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	AMRO	American Robin	Turdus migratorius	4			2	2									
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2				2									
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	4			3	1									
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	1			1										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	SWTH	Swainson's Thrush	Catharus ustulatus	1					1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	PIWO	Pileated Woodpecker	Dryocopus pileatus	1					1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1			1										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	SPGR	Spruce Grouse	Canachites canadensis	1					1								
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2			2										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	CAWA	Canada Warbler	Cardellina canadensis	1			1										
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	2				2									
JL	10-Sep-24	Fall Migration	PC 26	7:25:00 AM	10	AMGO	American Goldfinch	Spinus tristis	4			4										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	4			2	1	1								
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	MODO	Mourning Dove	Zenaida macroura	2				1	1								
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	AMRO	American Robin	Turdus migratorius	2			2										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	1			1										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1				1									
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1			1										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	3			1	2									
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	HAWO	Hairy Woodpecker	Dryobates villosus	1				1									
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	1			1										
JL	10-Sep-24	Fall Migration	PC 41	7:38:00 AM	10	CAJA	Canada Jay	Perisoreus canadensis	4			4										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	7			5	2									
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	6			4	2									
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	2			1	1									
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	RTHU	Ruby-throated Hummingbird	Archilochus colubris	1			1										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	AMRO	American Robin	Turdus migratorius	3			1	2									
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	NOPA	Northern Parula	Setophaga americana	1			1										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	4							4						
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2					2								
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	PHVI	Philadelphia Vireo	Vireo philadelphicus	1			1										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	2			2										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	NAWA	Nashville Warbler	Leiothlypis ruficapilla	1			1										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	MAWA	Magnolia Warbler	Setophaga magnolia	1			1										
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	CMWA	Cape May Warbler	Setophaga tigrina	1				1									
JL	10-Sep-24	Fall Migration	PC 27	7:52:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
JL	10-Sep-24	Fall Migration	PC 28	8:06:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2			1	1									
JL	10-Sep-24	Fall Migration	PC 28	8:06:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	4			3	1									
JL	10-Sep-24	Fall Migration	PC 28	8:06:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2				2</									

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code		Notes
												<50 m	50 - 100 m	100 m +									
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3				3										
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 31	8:58:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	7				5	2									
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	6				2	4									
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2					1	1								
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				1	1									
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3				3										
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	6					6									
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1						1								
JL	10-Sep-24	Fall Migration	PC 32	9:12:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3				3										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3				2	1									
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				1		1								
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2					2									
JL	10-Sep-24	Fall Migration	PC 33	9:25:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5				1	3	1								
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3				1	1	1								
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	NOHA	Northern Harrier	<i>Circus hudsonius</i>	1					0	1								
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2					2									
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1						1								
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	3				2	1									
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4				4										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3				2	1									
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 34	9:42:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	5				2	2	1								
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2				2										
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1					1									
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1						1								
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	2				1		1								
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2				1	1									
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2				1	1									
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1										
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2				1	1									
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1						1								
JL	10-Sep-24	Fall Migration	PC 35	9:57:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2					2									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2				2										
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	14				1	3	10								
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	6					2	4								
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	4				2	2									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	10				2	2	6								
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4				3	1									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	10				8	2									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4				2	2									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2				2										
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	14				6	6	2								
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4				2	2									
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1						1								
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	UNK-SB	Unknown Songbird	N/A	2														
JL	11-Sep-24	Fall Migration	PC 38	6:40:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1				1										
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1										
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5				1	3	1								
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	6					2	4								
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1									
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1						1								
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1										
JL	11-Sep-24	Fall Migration	PC 25	6:56:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2				2										

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	4			2	2									
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1					1								
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	4				1	2			1					
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	PAWA	Palm Warbler	Setophaga palmarum	2			2										
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	3				1	2								
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	WIWR	Winter Wren	Troglodytes hiemalis	1					1								
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	3								3					
JL	11-Sep-24	Fall Migration	PC 36	10:26:00 AM	10	SWTH	Swainson's Thrush	Catharus ustulatus	1				1									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	MERL	Merlin	Falco columbarius	2			1		1								
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	SAVS	Savannah Sparrow	Passerculus sandwichensis	3			1	2									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	9			4	3	2								
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	2					2								
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	AMRO	American Robin	Turdus migratorius	8			4	4									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	CORA	Common Raven	Corvus corax	2			1		1								
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	4				2	2								
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2				2									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	4			2	2									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	1			1										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	AMKE	American Kestrel	Falco sparverius	1			1										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	CAJA	Canada Jay	Perisoreus canadensis	1				1									
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	4			4										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	1			1										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	2			2										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1			1										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	2			2										
JL	11-Sep-24	Fall Migration	PC 37	6:53:00 AM	10	PHVI	Philadelphia Vireo	Vireo philadelphicus	1			1										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	2			1		1								
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	MODO	Mourning Dove	Zenaida macroura	1			1										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2			1		1								
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	4			3	1									
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2			2										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	1			1										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	AMRO	American Robin	Turdus migratorius	2			2										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	BRCR	Brown Creeper	Certhia americana	1			1										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	CAGO	Canada Goose	Branta canadensis	2					2								
JL	11-Sep-24	Fall Migration	PC 8	7:11:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	2			2										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	7			5	2									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	3			1		2								
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	NAWA	Nashville Warbler	Leiothlypis rufigapilla	1			1										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	BAWW	Black-and-white Warbler	Mniotilta varia	1			1										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	3			2	1									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	4			1	2	1								
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	4			3	1									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	4			2	2									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	AMRO	American Robin	Turdus migratorius	6			1	2	3								
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	3			1	2									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2				2									
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2			2										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	LISP	Lincoln's Sparrow	Melospiza lincolni	2			2										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	4			4										
JL	11-Sep-24	Fall Migration	PC 9	7:24:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1			1										
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	4				4									
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	5			2	2	1								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	9			4	3	2								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	8			2	4	2								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	AMRO	American Robin	Turdus migratorius	5				2	3								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2				2									
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	7			5	2									
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	2				1	1								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2				1	1								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	RCKI	Ruby-crowned Kinglet	Corthyllo calendula	1					1								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	2				2									
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	10								10					
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	HAWO	Hairy Woodpecker	Dryobates villosus	1					1								
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	DOWO	Downy Woodpecker	Dryobates pubescens	1				1									
JL	11-Sep-24	Fall Migration	PC 10	7:48:00 AM	10	MERL	Merlin	Falco columbarius	1					1								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	3			2	1									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	AMRO	American Robin	Turdus migratorius	3				2	1								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	MERL	Merlin	Falco columbarius	1					1								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	9			2	4	3								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	5			2	3									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	12			2	4	6								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	2				2									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	2				2									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	BHVI	Blue-headed Vireo	Vireo solitarius	3			2	1									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	3			2	1									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	CEDW	Cedar Waxwing	Bombycilla cedrorum	3				3									
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2					2								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
JL	11-Sep-24	Fall Migration	PC 11	8:11:00 AM	10	HETH	Hermil Thrush	Catharus guttatus	1					1								
JL	11-Sep-24	Fall Migration	PC 4																			

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
JL	11-Sep-24	Fall Migration	PC 4	8:32:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 4	8:32:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 4	8:32:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 4	8:32:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	3					3								
JL	11-Sep-24	Fall Migration	PC 4	8:32:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2					2								
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2					2								
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 5	8:45:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4			1	2	1								
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 6	8:57:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 7	9:08:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2				1	1								
JL	11-Sep-24	Fall Migration	PC 7	9:08:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 7	9:08:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2				1	1								
JL	11-Sep-24	Fall Migration	PC 7	9:08:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4				2	2	2							
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	4			2		2								
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3					3								
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 3	9:45:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4			2	0	2								
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	7			4	3									
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	3			3										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2				2									
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	3			2		1								
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 2	10:05:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1				1									
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	7			4	3									
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			3										
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4			2	1	1								
JL	11-Sep-24	Fall Migration	PC 1	10:08:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	3			3</										

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	17-Sep-24	Fall Migration	PC39	7:14:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2			2										
LL	17-Sep-24	Fall Migration	PC39	7:14:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			0					1					
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2			0					2					
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2			2										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3			3										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	3			1					2					
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2			2										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			2										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2			2										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			4										
LL	17-Sep-24	Fall Migration	PC12	7:26:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2			2										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2			2										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				0									
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1								1					
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1					1								
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1													
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3													
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1								1					
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
LL	17-Sep-24	Fall Migration	PC16	7:38:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	5			5										
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	WIWA	Wilson's Warbler	<i>Cardellina pusilla</i>	1			1										
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	3			3										
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1									1				
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	3			3										
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1										1			
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1											1		
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1				1									
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1													
LL	17-Sep-24	Fall Migration	PC17	7:50:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2				2									
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2			2										
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1													
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1													
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2				2									
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1													
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1				1									
LL	17-Sep-24	Fall Migration	PC19	8:03:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1													
LL	17-Sep-24	Fall Migration	PC28	8:16:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2				2									
LL	17-Sep-24	Fall Migration	PC28	8:16:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2				2									
LL	17-Sep-24	Fall Migration	PC28	8:16:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2													
LL	17-Sep-24	Fall Migration	PC28	8:16:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3				2									

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	17-Sep-24	Fall Migration	PC24	9:15:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2			2										
LL	17-Sep-24	Fall Migration	PC24	9:15:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			1										
LL	17-Sep-24	Fall Migration	PC24	9:15:00 AM	10	NOPA	Northern Parula	<i>Setophaga americana</i>	1				1									
LL	17-Sep-24	Fall Migration	PC24	9:15:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1					1								
LL	17-Sep-24	Fall Migration	PC24	9:15:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1					1								
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	NAWA	Nashville Warbler	<i>Leiothlypis ruficapilla</i>	1			1										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	4			4										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	12			12										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	3			3										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3			3										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	6			6										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	8			8										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4			4										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	WBNJ	White-breasted Nuthatch	<i>Sitta carolinensis</i>	1				1									
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	4			0					4					
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1					1								
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	2								2					
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	3			2		1	0							
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2			2										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			3										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			1										
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1					1								
LL	17-Sep-24	Fall Migration	PC25	9:36:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1			1										
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1						1							
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1						1							
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	7			3		2	2							
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			1			1							
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			3										
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			1		1			2					
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2								2					
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
LL	17-Sep-24	Fall Migration	PC26	10:01:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	0													
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			2										
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3			3										
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1							1						
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
LL	17-Sep-24	Fall Migration	PC41	10:14:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2			2										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	12			12										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	23			20		3								
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	5			3				2						
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2							2						
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2			2										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	2			2										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	7			7										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			4										
LL	17-Sep-24	Fall Migration	PC18	10:35:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta</i>														

Project # 24-11145

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1				1									
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5					5								
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1								1					
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1								1					
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1					1								
LL	18-Sep-24	Fall Migration	PC37	6:57:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1													
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1					1								
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	8				4	4								
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1													
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	7				2	5								
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2				2									
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1				1									
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1					1								
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1													
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	4				2									
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2								2					
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	3								3					
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5													
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	RBGR	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	1					1								
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1													
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	1								1					
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3				3									
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2				2									
LL	18-Sep-24	Fall Migration	PC4	7:10:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1								1					
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3								3					
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1					1								
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	3									3				
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1								1					
LL	18-Sep-24	Fall Migration	PC6	7:22:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1				1									
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	5				2				3					
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4								4					
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1									1				
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	1									1				
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1													
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2								2					
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	2				2									
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	5				5									
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1								1					
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	2													
LL	18-Sep-24	Fall Migration	PC7	7:33:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1								1					
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	10				10									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	OVEN	Ovenbird	<i>Seiurus aurocapilla</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2								2					
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1								1					
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2				1					1				
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1				1									
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1								1					
LL	18-Sep-24	Fall Migration	PC5	7:45:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2				2									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1				1									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1				1									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	6				6									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1					1								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	9				6	3								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	5				3	2								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	1				1									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2				1				1					
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	2					2								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1													
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	7				5				2					
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2													
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	2					2								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1								1					
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	2								2					
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	3					3								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1								1					
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1				1									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2									2				
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1									1				
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1									1				
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1									1				
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1					1								
LL	18-Sep-24	Fall Migration	PC11	8:09:00 AM	10	BLBW	Blackburnian Warbler	<i>Setophaga fusca</i>	1										1			
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	8				6	2								
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	13													
LL																						

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	CSWA	Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	1			0	1									
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			2										
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4				4									
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			2	2									
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	7			7										
LL	18-Sep-24	Fall Migration	PC9	8:34:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1			1										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1				1									
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			4										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	5			3				2						
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
LL	18-Sep-24	Fall Migration	PC8	8:47:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2							2						
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	5							5						
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	8			4	3	1								
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	12			8				4						
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	11			8	3									
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	10			8	2									
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	4			4										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	5			5										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	CAWA	Canada Warbler	<i>Cardellina canadensis</i>	1							1						
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	4			4										
LL	18-Sep-24	Fall Migration	PC10	9:12:00 AM	10	CONI	Common Nighthawk	<i>Chordeiles minor</i>	5					5								
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	5			5										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3			2					1					
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	2								2					
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	7			2					5					
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	5			1					4					
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	3			3										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	3			3										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	5			5										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5			0	5									
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	2			1		1								
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	5			5	0	0								
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1					1								
LL	18-Sep-24	Fall Migration	PC20	9:54:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	2			1		1								
LL	18-Sep-24	Fall Migration	PC31	10:22:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			2	2									
LL	18-Sep-24	Fall Migration	PC31	10:22:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
LL	18-Sep-24	Fall Migration	PC31	10:22:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	18-Sep-24	Fall Migration	PC31	10:22:00 AM	10	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1			1										
LL	18-Sep-24	Fall Migration	PC31	10:22:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1													

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	18-Sep-24	Fall Migration	PC34	11:14:00 AM	10	BOCH	Boreal Chickadee	Poecile hudsonica	1				1									
LL	18-Sep-24	Fall Migration	PC34	11:14:00 AM	10	SSHA	Sharp-shinned Hawk	Accipiter striatus	1			1										
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	AMRO	American Robin	Turdus migratorius	1				1									
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	BRCR	Brown Creeper	Certhia americana	2			2										
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	3			3										
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	BLPW	Blackpoll Warbler	Setophaga striata	1			1										
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	1			1										
LL	18-Sep-24	Fall Migration	PC31	11:28:00 AM	10	CAJA	Canada Jay	Perisoreus canadensis	1			1										
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2			2										
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	3			0		3								
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	2			0	2									
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	BHVI	Blue-headed Vireo	Vireo solitarius	1			0		1								
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	BLPW	Blackpoll Warbler	Setophaga striata	1							1						
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	AMRO	American Robin	Turdus migratorius	1				1									
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	CORA	Common Raven	Corvus corax	1					1	0							
LL	18-Sep-24	Fall Migration	PC36	12:55:00 PM	10	NOFL	Northern Flicker	Colaptes auratus	1					1								
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	REVI	Red-eyed Vireo	Vireo olivaceus	2			2										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	2			1				1						
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	8			8										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	4			4										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	2			2										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	AMRO	American Robin	Turdus migratorius	1			1										
LL	18-Sep-24	Fall Migration	PC32	11:12:00 AM	10	DOWO	Downy Woodpecker	Dryobates pubescens	1			1										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	CHSP	Chipping Sparrow	Spizella passerina	1			1										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	3			3										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	CAJA	Canada Jay	Perisoreus canadensis	2			2										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	PIWO	Pileated Woodpecker	Dryocopus pileatus	1			1										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	AMRO	American Robin	Turdus migratorius	1			1										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	12			5	2	5								
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	BLPW	Blackpoll Warbler	Setophaga striata	8			1					7					
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	BTNW	Black-throated Green Warbler	Setophaga virens	1								1					
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	4			4										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	2			2										
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1			0		1								
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1					1								
LL	19-Sep-24	Fall Migration	PC2	7:10:00 AM	10	NAWA	Nashville Warbler	Leiothlypis rufigapilla	1			1										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	CAJA	Canada Jay	Perisoreus canadensis	1				1									
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	PIWO	Pileated Woodpecker	Dryocopus pileatus	1					1								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	RUBL	Rusty Blackbird	Euphagus carolinus	2			2										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	5			1	4									
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	SWTH	Swainson's Thrush	Catharus ustulatus	1			1										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	3			1		2								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	HAWO	Hairy Woodpecker	Dryobates villosus	1					1								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	NOFL	Northern Flicker	Colaptes auratus	1					1								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	AMRO	American Robin	Turdus migratorius	3			3										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	LISP	Lincoln's Sparrow	Melospiza lincolni	1			1										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	COYE	Common Yellowthroat	Geothlypis trichas	10			3	3	4								
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	16			9	7									
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	13								13					
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	BLPW	Blackpoll Warbler	Setophaga striata	10			1	1				8					
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	3			3										
LL	19-Sep-24	Fall Migration	PC1	7:25:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
LL	19-Sep-24	Fall Migration																				

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Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1			0		1								
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2					2								
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3					3								
LL	19-Sep-24	Fall Migration	PC21	11:55:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2									
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	6							6						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1			1										
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	4							4						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	CHSP	Chipping Sparrow	<i>Spizella passerina</i>	1			1										
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	4			4										
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			2										
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	RECR	Red Crossbill	<i>Loxia curvirostra</i>	1							1						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	6				0			6						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3				3									
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	1							1						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1							1						
LL	2-Oct-24	Fall Migration	PC38	7:07:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1							1						
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1							1						
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3							3						
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	5			4				1						
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1							0						
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC39	7:20:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	2							2						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1							1						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	2							2						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	3			3										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			4										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	2			2										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3							3						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	5			5										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	WIWA	Wilson's Warbler	<i>Cardellina pusilla</i>	1			1										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	3							3						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	6			6										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	4			4										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4							4						
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	2-Oct-24	Fall Migration	PC12	7:32:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1					1								
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	4			4										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3							3						
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	EUST	European Starling	<i>Sturnus vulgaris</i>	18							18						
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2							2						
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			4										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	6							6						
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	2-Oct-24	Fall Migration	PC16	7:45:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5			2	1	2								
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	5			3	2									
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	4			4										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4			4										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	5							5						
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
LL	2-Oct-24	Fall Migration	PC17	7:55:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2							2						
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	LISP	Lincoln's Sparrow	<i>Melospiza lincolni</i>	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	8			8										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	7			3				4						
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2			2										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	5			5										
LL	2-Oct-24	Fall Migration	PC27</																			

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1			1										
LL	2-Oct-24	Fall Migration	PC27	8:14:00 AM	10	AMRO	American Robin	Turdus migratorius	2								2					
LL	2-Oct-24	Fall Migration	PC38	8:30:00 AM	10	PIWO	Pileated Woodpecker	Dryocopus pileatus	1				1									
LL	2-Oct-24	Fall Migration	PC38	8:30:00 AM	10	AMRO	American Robin	Turdus migratorius	1				1									
LL	2-Oct-24	Fall Migration	PC38	8:30:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	1								1					
LL	2-Oct-24	Fall Migration	PC38	8:30:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1				1									
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	MALL	Mallard	Anas platyrhynchos	1								1					
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	3			3										
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	DEJU	Dark-eyed Junco	Junco hyemalis	2			2										
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	3				3									
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2								2					
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	PUFI	Purple Finch	Haemorhous purpureus	2								2					
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	AMRO	American Robin	Turdus migratorius	2								2					
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	CORA	Common Raven	Corvus corax	1				1									
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1				1									
LL	2-Oct-24	Fall Migration	PC29	8:42:00 AM	10	AMRO	American Robin	Turdus migratorius	2								2					
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	BLPW	Blackpoll Warbler	Setophaga striata	1			1										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	1			1										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	PUFI	Purple Finch	Haemorhous purpureus	4								4					
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	BOCH	Boreal Chickadee	Poecile hudsonica	1			1										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1			1										
LL	2-Oct-24	Fall Migration	PC41	8:58:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
LL	2-Oct-24	Fall Migration	PC26	9:10:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	1			1										
LL	2-Oct-24	Fall Migration	PC26	9:10:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
LL	2-Oct-24	Fall Migration	PC26	9:10:00 AM	10	PUFI	Purple Finch	Haemorhous purpureus	2								2					
LL	2-Oct-24	Fall Migration	PC26	9:10:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	1				1									
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	AMRO	American Robin	Turdus migratorius	4								4					
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2								2					
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	YRWA	Yellow-rumped Warbler	Setophaga coronata	2								2					
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	PAWA	Palm Warbler	Setophaga palmarum	1								1					
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	1				1									
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	COGR	Common Grackle	Quiscalus quiscula	1								1					
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2				2									
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	1				1									
LL	2-Oct-24	Fall Migration	PC25	9:22:00 AM	10	PUFI	Purple Finch	Haemorhous purpureus	2								2					
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	WTSP	White-throated Sparrow	Zonotrichia albicollis	6			6										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	BLPW	Blackpoll Warbler	Setophaga striata	3			3										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	2			2										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	AMGO	American Goldfinch	Spinus tristis	2				2									
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	AMRO	American Robin	Turdus migratorius	2				2									
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	2				2									
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1			1										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	1			1										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	SWSP	Swamp Sparrow	Melospiza georgiana	1			1										
LL	2-Oct-24	Fall Migration	PC24	9:35:00 AM	10	CHSP	Chipping Sparrow	Spizella passerina	1			1										
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	BLJA	Blue Jay	Cyanocitta cristata	0													
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	BCCH	Black-capped Chickadee	Poecile atricapilla	4			4										
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	GCKI	Golden-crowned Kinglet	Regulus satrapa	1			1										
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	SOSP	Song Sparrow	Melospiza melodia	1			1										
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	AMCR	American Crow	Corvus brachyrhynchos	2				2									
LL	2-Oct-24	Fall Migration	PC25	10:02:00 AM	10	CORA	Common Raven	Corvus corax	1					1								
LL	2-Oct-24	Fall Migration	PC18	10:25:00 AM	10	HETH	Hermit Thrush	Catharus guttatus	2			2										
LL																						

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	2-Oct-24	Fall Migration	PC30	11:45:00 AM	10	RUGR	Ruffed Grouse	<i>Bonasa umbellus</i>	1			1										
LL	2-Oct-24	Fall Migration	PC30	11:45:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
LL	2-Oct-24	Fall Migration	PC30	11:45:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	CEDW	Cedar Waxwing	<i>Bombicilla cedrorum</i>	1							1						
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2							2						
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4			4										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			1										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	8				8									
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	4			4										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	2							2						
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	3			3										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	AMKE	American Kestrel	<i>Falco sparverius</i>	1			1										
LL	3-Oct-24	Fall Migration	PC37	7:08:00 AM	10	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	5							5						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	6			5				1						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	CMWA	Cape May Warbler	<i>Setophaga tigrina</i>	1			1										
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			4										
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3			0				3						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1			1										
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	5			2				3						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	2			0				2						
LL	3-Oct-24	Fall Migration	PC8	7:23:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	2							2						
LL	3-Oct-24	Fall Migration	PC9	7:36:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2													
LL	3-Oct-24	Fall Migration	PC9	7:36:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1				1									
LL	3-Oct-24	Fall Migration	PC9	7:36:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC9	7:36:00 AM	10	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	3-Oct-24	Fall Migration	PC5	8:00:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2			2										
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2							2						
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	PUFI	Purple Finch	<i>Haemorrhous purpureus</i>	1							1						
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1													
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1													
LL	3-Oct-24	Fall Migration	PC7	8:15:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			1										
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1					1								
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3							3						
LL	3-Oct-24	Fall Migration	PC6	8:27:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	2							2						
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1							1						
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4				4									
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1					1								
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2							2						
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1							1						
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	2			2										
LL	3-Oct-24	Fall Migration	PC4	8:43:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			0				1						

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1					1								
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1			1										
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1					1								
LL	3-Oct-24	Fall Migration	PC14	10:24:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1							1						
LL	3-Oct-24	Fall Migration	PC13	10:49:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC13	10:49:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1							1						
LL	3-Oct-24	Fall Migration	PC13	10:49:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1							1						
LL	3-Oct-24	Fall Migration	PC13	10:49:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	3-Oct-24	Fall Migration	PC13	10:49:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1			1										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	2					2								
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1					1								
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	9							9						
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	AMGO	American Goldfinch	<i>Spinus tristis</i>	1							1						
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	7			2					5					
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	4								4					
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			3										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1					1								
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1							1						
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	9			3		6								
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	7			0				7						
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	3			3										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	4			4										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	4			4										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3							3						
LL	3-Oct-24	Fall Migration	DW2	11:00:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1							1						
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1			1										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1													
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3				3									
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2					2								
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2				2									
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	4				4									
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1				1									
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			2										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2			2										
LL	4-Oct-24	Fall Migration	PC2	7:14:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1							1						
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	7			5	2									
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	6			2				4						
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	SAVS	Savannah Sparrow	<i>Passerculus sandwichensis</i>	5			5										
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	6			6										
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	SOSP	Song Sparrow	<i>Melospiza melodia</i>	8			8										
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	4			4										
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	UNK-SB	Unknown Songbird	N/A	1			1										
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	9			2	4	3								
LL	4-Oct-24	Fall Migration	PC1	7:31:00 AM	10	BCCH	Black-capped Chickadee															

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	4-Oct-24	Fall Migration	PC36	10:59:00 AM	10	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	1								1					
LL	4-Oct-24	Fall Migration	PC36	10:59:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	4-Oct-24	Fall Migration	PC36	10:59:00 AM	10	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
LL	4-Oct-24	Fall Migration	PC21	12:54:00 PM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1			1										
LL	4-Oct-24	Fall Migration	PC21	12:54:00 PM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1			1										
LL	4-Oct-24	Fall Migration	PC21	12:54:00 PM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
LL	4-Oct-24	Fall Migration	PC21	12:54:00 PM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	4-Oct-24	Fall Migration	PC22	1:20:00 PM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	4-Oct-24	Fall Migration	PC22	1:20:00 PM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
LL	4-Oct-24	Fall Migration	PC23	1:42:00 PM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1			0										
LL	4-Oct-24	Fall Migration	PC23	1:42:00 PM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1				1									
LL	4-Oct-24	Fall Migration	PC23	1:42:00 PM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			1										
LL	4-Oct-24	Fall Migration	PC23	1:42:00 PM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
LL	4-Oct-24	Fall Migration	PC23	1:42:00 PM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1				1									
LL	23-Oct-24	Fall Migration	PC39	7:43:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1			1										
LL	23-Oct-24	Fall Migration	PC39	7:43:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
LL	23-Oct-24	Fall Migration	PC39	7:43:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	23-Oct-24	Fall Migration	PC12	7:58:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	23-Oct-24	Fall Migration	PC12	7:58:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1			1										
LL	23-Oct-24	Fall Migration	PC12	7:58:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			0	1									
LL	23-Oct-24	Fall Migration	PC12	7:58:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	23-Oct-24	Fall Migration	PC12	7:58:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	23-Oct-24	Fall Migration	PC16	8:10:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	4			4										
LL	23-Oct-24	Fall Migration	PC16	8:10:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
LL	23-Oct-24	Fall Migration	PC16	8:10:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	23-Oct-24	Fall Migration	PC16	8:10:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
LL	23-Oct-24	Fall Migration	PC16	8:10:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			2										
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1					1								
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			2		1								
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	5			5										
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	2			2										
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	1				1									
LL	23-Oct-24	Fall Migration	PC17	8:23:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
LL	23-Oct-24	Fall Migration	PC19	8:35:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
LL	23-Oct-24	Fall Migration	PC19	8:35:00 AM	10	EVGR	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	1			0	1									
LL	23-Oct-24	Fall Migration	PC19	8:35:00 AM	10	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1				1									
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4			3		1								
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	1			1										
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			4										
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	2				2									
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2					2								
LL	23-Oct-24	Fall Migration	PC27	8:50:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1			1										
LL	23-Oct-24	Fall Migration	PC28	9:04:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	1								1					
LL	23-Oct-24	Fall Migration	PC29	9:17:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	23-Oct-24	Fall Migration	PC29	9:17:00 AM	10	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			0	1									
LL	23-Oct-24	Fall Migration	PC29	9:17:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	23-Oct-24	Fall Migration	PC29	9:17:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1					1								
LL	23-Oct-24	Fall Migration	PC26	9:31:00 AM	10	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	2			2										
LL	23-Oct-24	Fall Migration	PC26	9:31:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2			2										
LL	23-Oct-24	Fall Migration	PC26	9:31:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2				2									

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Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	24-Oct-24	Fall Migration	PC14	8:07:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2			2										
LL	24-Oct-24	Fall Migration	PC14	8:07:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	1			1										
LL	24-Oct-24	Fall Migration	PC37	8:30:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	5			5										
LL	24-Oct-24	Fall Migration	PC37	8:30:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	4			4										
LL	24-Oct-24	Fall Migration	PC37	8:30:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	1			1										
LL	24-Oct-24	Fall Migration	PC37	8:30:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	2				2									
LL	24-Oct-24	Fall Migration	PC11	8:48:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
LL	24-Oct-24	Fall Migration	PC11	8:48:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			2										
LL	24-Oct-24	Fall Migration	PC11	8:48:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5				5									
LL	24-Oct-24	Fall Migration	PC11	8:48:00 AM	10	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	2			2										
LL	24-Oct-24	Fall Migration	PC11	8:48:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	6			6										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	5			5										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1					1								
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	2			2										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	2			2										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	2			2										
LL	24-Oct-24	Fall Migration	PC7	9:06:00 AM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	3			3										
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1					1								
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	6			6										
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	5			5										
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
LL	24-Oct-24	Fall Migration	PC6	9:18:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1				1									
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	2			1	1									
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	DOWO	Downy Woodpecker	<i>Dryobates pubescens</i>	1			1										
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	2			2										
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	7			7										
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	9			9										
LL	24-Oct-24	Fall Migration	PC5	9:32:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1			1										
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			4										
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			4										
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	3				3									
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	4				4									
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	1								1					
LL	24-Oct-24	Fall Migration	PC4	9:45:00 AM	10	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1				1									
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4			4										
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	5			5										
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			4										
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1									
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	5					2	3							
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	10			10										
LL	24-Oct-24	Fall Migration	PC9	10:05:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	24-Oct-24	Fall Migration	PC8	10:20:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			4										
LL	24-Oct-24	Fall Migration	PC8	10:20:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2			2										
LL	24-Oct-24	Fall Migration	PC8	10:20:00 AM	10	CORA	Common Raven	<i>Corvus corax</i>	1			1										
LL	24-Oct-24	Fall Migration	PC8	10:20:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
LL	24-Oct-24	Fall Migration	PC10	10:46:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	13			13										
LL	24-Oct-24	Fall Migration	PC10	10:46:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1				1									
LL	24-Oct-24	Fall Migration	PC10	10:46:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4				4									
LL	24-Oct-24	Fall Migration	PC10	10:46:00 AM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	2				2									
LL	24-Oct-24	Fall Migration	PC10	10:46:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1				1									
LL	24-Oct-24	Fall Migration	PC10																			

Table 11: 2024 Fall Migration Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Evidence	Breeding Code	Notes
												<50 m	50 - 100 m	100 m +								
LL	25-Oct-24	Fall Migration	PC33N	9:40:00 AM	10	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	1			1										
LL	25-Oct-24	Fall Migration	PC33N	9:40:00 AM	10	PUFI	Purple Finch	<i>Haemorhous purpureus</i>	1			1										
LL	25-Oct-24	Fall Migration	PC33	9:51:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1					1								
LL	25-Oct-24	Fall Migration	PC32	10:03:00 AM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	1			1										
LL	25-Oct-24	Fall Migration	PC34	10:21:00 AM	10	BOCH	Boreal Chickadee	<i>Poecile hudsonica</i>	1			1										
LL	25-Oct-24	Fall Migration	PC35	10:35:00 AM	10	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	1				1	0								
LL	25-Oct-24	Fall Migration	PC21	11:33:00 AM	10	AMRO	American Robin	<i>Turdus migratorius</i>	3								3					
LL	25-Oct-24	Fall Migration	PC21	11:33:00 AM	10	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
LL	25-Oct-24	Fall Migration	DW2	12:14:00 PM	10	PISI	Pine Siskin	<i>Spinus pinus</i>	5								5					
LL	25-Oct-24	Fall Migration	DW2	12:14:00 PM	10	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	6			6										
LL	25-Oct-24	Fall Migration	DW2	12:14:00 PM	10	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
LL	25-Oct-24	Fall Migration	DW2	12:14:00 PM	10	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	6			6										
LL	25-Oct-24	Fall Migration	DW2	12:14:00 PM	10	HOME	Hooded Merganser	<i>Lophodytes cucullatus</i>	3				3									

Table 12: 2024 Fall Migration Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Alder Flycatcher	<i>Empidonax alnorum</i>	Not Listed	Not Listed	Not Listed	S5B	4
American Black Duck	<i>Anas rubripes</i>	Not Listed	Not Listed	Not Listed	S5B,S5N	2
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	161
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	137
American Kestrel	<i>Falco sparverius</i>	Not Listed	Not Listed	Not Listed	S3B,S4S5M	4
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	2
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	272
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not Listed	Not at Risk	Not Listed	S5	4
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	30
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Not Listed	Not Listed	Not Listed	S3B	3
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Black-capped Chickadee	<i>Poecile atricapilla</i>	Not Listed	Not Listed	Not Listed	S5	333
Blackpoll Warbler	<i>Setophaga striata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	178
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5	97
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	283
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	65
Boreal Chickadee	<i>Poecile hudsonica</i>	Not Listed	Not Listed	Not Listed	S3	25
Broad-winged Hawk	<i>Buteo platypterus</i>	Not Listed	Not Listed	Not Listed	S5B	5
Brown Creeper	<i>Certhia americana</i>	Not Listed	Not Listed	Not Listed	S5	17
Canada Goose	<i>Branta canadensis</i>	Not Listed	Not Listed	Not Listed	SUB,S4N,S5M	4
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	53
Canada Warbler	<i>Cardellina canadensis</i>	Threatened	Special Concern	Endangered	S3B	7
Cape May Warbler	<i>Setophaga tigrina</i>	Not Listed	Not Listed	Not Listed	S3B,SUM	5
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	200
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	Not Listed	Not Listed	Not Listed	S5B	2
Chipping Sparrow	<i>Spizella passerina</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	30
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Special Concern	Threatened	S3B	5
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	113

Table 12: 2024 Fall Migration Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	149
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	143
Downy Woodpecker	<i>Dryobates pubescens</i>	Not Listed	Not Listed	Not Listed	S5	22
European Starling	<i>Sturnus vulgaris</i>	Not Listed	Not Listed	Not Listed	SNA	18
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	Vulnerable	S3B,S3N,S3M	9
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	239
Great Blue Heron	<i>Ardea herodias</i>	Not Listed	Not Listed	Not Listed	S4B,S4S5M	1
Grey Catbird	<i>Dumetella carolinensis</i>	Not Listed	Not Listed	Not Listed	S4B	2
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	32
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	69
Herring Gull	<i>Larus argentatus</i>	Not Listed	Not Listed	Not Listed	S5	8
Hooded Merganser	<i>Lophodytes cucullatus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Least Flycatcher	<i>Empidonax minimus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	1
Lincoln's Sparrow	<i>Melospiza lincolni</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	5
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	40
Mallard	<i>Anas platyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5B,S5N	2
Merlin	<i>Falco columbarius</i>	Not Listed	Not at Risk	Not Listed	S5B	6
Mourning Dove	<i>Zenaida macroura</i>	Not Listed	Not Listed	Not Listed	S5	15
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	8
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	113
Northern Harrier	<i>Circus hudsonius</i>	Not Listed	Not at Risk	Not Listed	S4B,S4S5M	1
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	8
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	Threatened	S3B	1
Osprey	<i>Pandion haliaetus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	1
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	5
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	53
Philadelphia Vireo	<i>Vireo philadelphicus</i>	Not Listed	Not Listed	Not Listed	S2?B,SUM	2
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	27
Pine Grosbeak	<i>Pinicola enucleator</i>	Not Listed	Not Listed	Not Listed	S3B,S5N,S5M	1

Table 12: 2024 Fall Migration Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	32
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	84
Red Crossbill	<i>Loxia curvirostra</i>	Not Listed	Not Listed	Not Listed	S3S4	1
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	12
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	165
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Not Listed	Not at Risk	Not Listed	S5	3
Ring-necked Duck	<i>Aythya collaris</i>	Not Listed	Not Listed	Not Listed	S5B	1
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Not Listed	Not Listed	Not Listed	SNA	1
Rock Pigeon	<i>Columba livia</i>	Not Listed	Not Listed	Not Listed	SNA	2
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Not Listed	Not Listed	Not Listed	S3B	1
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	15
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Not Listed	Not Listed	Not Listed	S5B	4
Ruffed Grouse	<i>Bonasa umbellus</i>	Not Listed	Not Listed	Not Listed	S5	12
Rusty Blackbird	<i>Euphagus carolinus</i>	Special Concern	Special Concern	Endangered	S2B	4
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	35
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Not Listed	Not at Risk	Not Listed	S5	3
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	93
Spruce Grouse	<i>Canachites canadensis</i>	Not Listed	Not Listed	Not Listed	S4	1
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	19
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	129
Unknown Raptor	N/A	N/A	N/A	N/A	N/A	1
Unknown Shorebird	N/A	N/A	N/A	N/A	N/A	1
Unknown Songbird	N/A	N/A	N/A	N/A	N/A	13
Unknown Waterfowl	N/A	N/A	N/A	N/A	N/A	9
Unknown Woodpecker	N/A	N/A	N/A	N/A	N/A	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Not Listed	Not Listed	Not Listed	S4	2
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	212
White-winged Crossbill	<i>Loxia leucoptera</i>	Not Listed	Not Listed	Not Listed	S4S5	4
Wilson's Warbler	<i>Cardellina pusilla</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	2

Table 12: 2024 Fall Migration Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS Srank	Number Observed
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	1
Wood Duck	<i>Aix sponsa</i>	Not Listed	Not Listed	Not Listed	S5B	3
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	1
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	208

Table 13: 2024 Diurnal Watch Count Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	CORA	Common Raven	<i>Corvus corax</i>	2			1					1					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	2				1				1					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	30			5	15				10					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	8				4				4					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	AMGO	American Goldfinch	<i>Spinus tristis</i>	4			2					2					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	2					1			1					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	4			2					2					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2				1				1					
RM	2024-08-14	Diurnal Raptor	DWC1	11:30:00 AM	30	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1							Confirmed	FY		
RM	2024-08-15	Diurnal Raptor	DWC2	1:30:00 PM	30	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1				1									
RM	2024-08-15	Diurnal Raptor	DWC2	1:30:00 PM	30	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			2							Confirmed	FY		
RM	2024-08-15	Diurnal Raptor	DWC2	1:30:00 PM	30	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	1			1										
RM	2024-08-15	Diurnal Raptor	DWC2	1:30:00 PM	30	CEDW	Cedar Waxwing	<i>Bombycilla cedrorum</i>	2				2									
BF	2024-09-06	Diurnal Raptor	DWC1	11:15:00 AM	30	NOHA	Northern Harrier	<i>Circus hudsonius</i>	1			0					1					
BF	2024-09-06	Diurnal Raptor	DWC1	11:15:00 AM	30	UNK-RAP	Unknown Raptor	N/A	2					2								
BF	2024-09-06	Diurnal Raptor	DWC1	11:15:00 AM	30	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1					1								
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	3			3										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	6			2	2	2								
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>	2			1	1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BWHA	Broad-winged Hawk	<i>Buteo platypterus</i>	1								1					
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	4			2	2									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	CORA	Common Raven	<i>Corvus corax</i>	2			1		1								
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4			2	2									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	AMGO	American Goldfinch	<i>Spinus tristis</i>	9			5	4									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			1	1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	2			1	1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	NOFL	Northern Flicker	<i>Colaptes auratus</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	1								1					
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	3			1	2									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	HETH	Hermit Thrush	<i>Catharus guttatus</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	8			8										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	2			2										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	SOSP	Song Sparrow	<i>Melospiza melodia</i>	1			1										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	CORA	Common Raven	<i>Corvus corax</i>	1				1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>	1			1										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	RBNU	Red-breasted Nuthatch	<i>Sitta canadensis</i>	1			0	1									
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			2										
JL	2024-09-10	Diurnal Raptor	DWC2	11:15:00 AM	30	NOPA	Northern Parula	<i>Setophaga americana</i>	1			1										
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	BBWA	Bay-breasted Warbler	<i>Setophaga castanea</i>	1			1										
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	3			1					2					
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	8			1					7					
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	BTNW	Black-throated Green Warbler	<i>Setophaga virens</i>	8			5					3					
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	BAWW	Black-and-white Warbler	<i>Mniotilta varia</i>	1			1										
LL	2024-09-19	Diurnal Raptor	DWC2	12:34:00 PM	30	MAWA	Magnolia Warbler	<i>Setophaga magnolia</i>	4			4										

Table 13: 2024 Diurnal Watch Count Survey Results - Upper Afton Wind Project

Observer	Date	Survey Type	Survey Location	Survey Start Time	Total Survey Time (mins)	Species Code	Common Name	Scientific Name	#	Seen	Heard	Distance			Bearing	Inc.	Fly-by	Pass. Height	Pass. Direction	Breeding Potential	Breeding Evidence	Notes
												<50 m	50 - 100 m	100 m +								
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	2			0		2								
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1					1								
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	7					4			3					
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	CAJA	Canada Jay	<i>Perisoreus canadensis</i>	1				1									
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	BHVI	Blue-headed Vireo	<i>Vireo solitarius</i>	4			2					2					
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	NOFL	Northern Flicker	<i>Colaptes auratus</i>	2				2									
LL	2024-09-19	Diurnal Raptor	DW1	8:54:00 AM	30	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1								1					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1					1								
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	4			2		2								
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	CAGO	Canada Goose	<i>Branta canadensis</i>	15					0			15					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1								1					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	AMGO	American Goldfinch	<i>Spinus tristis</i>	6			6										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	PAWA	Palm Warbler	<i>Setophaga palmarum</i>	1			0					1					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	YRWA	Yellow-rumped Warbler	<i>Setophaga coronata</i>	6								6					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	BLPW	Blackpoll Warbler	<i>Setophaga striata</i>	4								4					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	COYE	Common Yellowthroat	<i>Geothlypis trichas</i>	1			1										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>	4			4										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>	4			4										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	9			2	2	5								
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	WTSP	White-throated Sparrow	<i>Zonotrichia albicollis</i>	2			2										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	SOSP	Song Sparrow	<i>Melospiza melodia</i>	2			2										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	PUF1	Purple Finch	<i>Haemorhous purpureus</i>	4								4					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	HAWO	Hairy Woodpecker	<i>Dryobates villosus</i>	1				1									
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>	1				1									
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	AMRO	American Robin	<i>Turdus migratorius</i>	15								15					
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	7				7									
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	CORA	Common Raven	<i>Corvus corax</i>	4					4								
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			3										
LL	2024-10-04	Diurnal Raptor	DW1	11:30:00 AM	30	RCKI	Ruby-crowned Kinglet	<i>Corthylio calendula</i>	1			1										
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	BAEA	Bald Eagle	<i>Haliaeetus leucocephalus</i>	3								3					
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	CORA	Common Raven	<i>Corvus corax</i>	4				1	3								
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	AMCR	American Crow	<i>Corvus brachyrhynchos</i>	5				5									
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	AMRO	American Robin	<i>Turdus migratorius</i>	34								34					
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	PISI	Pine Siskin	<i>Spinus pinus</i>	14								14					
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	WCSP	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	1			1										
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	BRCR	Brown Creeper	<i>Certhia americana</i>	1			1										
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	BCCH	Black-capped Chickadee	<i>Poecile atricapilla</i>	3			3										
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	SSHA	Sharp-shinned Hawk	<i>Accipiter striatus</i>	1			1										
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	BLJA	Blue Jay	<i>Cyanocitta cristata</i>	1				1									
LL	2024-10-23	Diurnal Raptor	DW1	11:35:00 AM	30	EUST	European Starling	<i>Sturnus vulgaris</i>	40								40					

Table 14: 2024 Diurnal Watch Count Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	17
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	25
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	53
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Not Listed	Not at Risk	Not Listed	S5	11
Bay-breasted Warbler	<i>Setophaga castanea</i>	Not Listed	Not Listed	Not Listed	S3S4B,S4S5M	1
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	2
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	2
Black-capped Chickadee	<i>Poecile atricapilla</i>	Not Listed	Not Listed	Not Listed	S5	26
Blackpoll Warbler	<i>Setophaga striata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	20
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5	29
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	38
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	6
Broad-winged Hawk	<i>Buteo platypterus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Brown Creeper	<i>Certhia americana</i>	Not Listed	Not Listed	Not Listed	S5	2
Canada Goose	<i>Branta canadensis</i>	Not Listed	Not Listed	Not Listed	SUB,S4N,S5M	15
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	3
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	32
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	14
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	8
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	17
Double-crested Cormorant	<i>Nannopterum auritum</i>	Not Listed	Not at Risk	Not Listed	S5B	1
European Starling	<i>Sturnus vulgaris</i>	Not Listed	Not Listed	Not Listed	SNA	40
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	18
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	2
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	8
Nashville Warbler	<i>Leiothlypis ruficapilla</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	6

Table 14: 2024 Diurnal Watch Count Survey Results Summary - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name	SARA	COSEWIC	ESA	NS S-rank	Number Observed
Northern Harrier	<i>Circus hudsonius</i>	Not Listed	Not at Risk	Not Listed	S4B,S4S5M	1
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	1
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	21
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Not Listed	Not Listed	Not Listed	S4B	1
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	1
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	19
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	7
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	4
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Not Listed	Not at Risk	Not Listed	S5	2
Ruby-crowned Kinglet	<i>Corthylio calendula</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	6
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	1
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Not Listed	Not at Risk	Not Listed	S5	6
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	5
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	10
Tennessee Warbler	<i>Leiothlypis peregrina</i>	Not Listed	Not Listed	Not Listed	S3S4B,S5M	1
Unknown Raptor	N/A	N/A	N/A	N/A	N/A	2
Unknown Songbird	N/A	N/A	N/A	N/A	N/A	1
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	Not Listed	Not Listed	Not Listed	SUM	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	18
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	41

Table 15: Incidental Observations- Upper Afton Wind Project**Project # 24-11145**

Season	Year	Common Name	#
Spring	2022	Bald Eagle	17
Spring	2022	Barred Owl	2
Spring	2022	blackbird species	1
Spring	2022	Black-capped Chickadee	21
Spring	2022	Blue Jay	5
Spring	2022	Boreal Chickadee	14
Spring	2022	Broad-winged Hawk	7
Spring	2022	Brown Creeper	6
Spring	2022	Common Grackle	12
Spring	2022	Common Merganser	4
Spring	2022	Common Raven	16
Spring	2022	Dark-eyed Junco	21
Spring	2022	Double-crested Cormorant	1
Spring	2022	Downy Woodpecker	2
Spring	2022	Evening Grosbeak	5
Spring	2022	Golden-crowned Kinglet	11
Spring	2022	Green-winged Teal	1
Spring	2022	Hairy Woodpecker	11
Spring	2022	Hermit Thrush	30
Spring	2022	Merlin	1
Spring	2022	Northern Flicker	36
Spring	2022	Northern Harrier	2
Spring	2022	Palm Warbler	8
Spring	2022	passerine species	2
Spring	2022	Pileated Woodpecker	7
Spring	2022	Pine Siskin	19
Spring	2022	Purple Finch	38
Spring	2022	Red-breasted Nuthatch	8
Spring	2022	Red-tailed Hawk	7
Spring	2022	Red-winged Blackbird	1
Spring	2022	Ring-necked Duck	1
Spring	2022	Ruby-crowned Kinglet	30
Spring	2022	Ruffed Grouse	26
Spring	2022	Song Sparrow	4
Spring	2022	Spruce Grouse	6
Spring	2022	Swamp Sparrow	22
Spring	2022	White-throated Sparrow	36
Spring	2022	White-winged Crossbill	9
Spring	2022	Winter Wren	12

Table 15: Incidental Observations- Upper Afton Wind Project

Project # 24-11145

Season	Year	Common Name	#
Spring	2022	woodpecker species	4
Spring	2022	Yellow-bellied Sapsucker	28
Spring	2022	Yellow-rumped Warbler	6
Spring	2023	Broad-winged Hawk	2
Spring	2023	Downy Woodpecker	1
Spring	2023	Palm Warbler	1
Spring	2023	Red-eyed Vireo	2
Spring	2023	Ruby-crowned Kinglet	2
Spring	2023	Ruffed Grouse	4
Spring	2023	Swamp Sparrow	1
Spring	2023	White-throated Sparrow	1
Spring	2023	Winter wren	1
Spring	2023	Yellow-bellied Sapsucker	1
Fall	2024	Canada Jay	1
Fall	2024	Canada Jay	1
Summer	2024	Northern Waterthrush	1
Summer	2024	Palm Warbler	1
Summer	2024	Dark-eyed Junco	2
Summer	2024	Hermit Thrush	1
Summer	2024	Black-capped Chickadee	2
Summer	2024	Black-and-white Warbler	1
Summer	2024	American Crow	4
Summer	2024	Eastern Phoebe	1
Summer	2024	Dark-eyed Junco	2
Summer	2024	Northern Parula	1
Summer	2024	European Starling	6
Summer	2024	Alder Flycatcher	2
Summer	2024	Tree Swallow	2
Summer	2024	Red-winged Blackbird	1
Summer	2024	European Starling	30
Summer	2024	American Goldfinch	5
Summer	2024	Cedar Waxwing	4
Summer	2024	Barn Swallow	8
Summer	2024	Tree Swallow	5
Summer	2024	Cedar Waxwing	4
Summer	2024	Mourning Warbler	1
Summer	2024	Yellow Warbler	1
Summer	2024	Cedar Waxwing	3
Summer	2024	Broad-winged Hawk	1

Table 15: Incidental Observations- Upper Afton Wind Project**Project # 24-11145**

Season	Year	Common Name	#
Summer	2024	Yellow Warbler	1
Summer	2024	Chestnut-sided Warbler	1
Summer	2024	Merlin	1
Summer	2024	Cape May Warbler	1
Summer	2024	Canada Warbler	1
Summer	2024	Purple Finch	2
Fall	2024	Spruce Grouse	1
Fall	2024	Red-tailed Hawk	1
Fall	2024	American Kestrel	1
Fall	2024	Olive-sided Flycatcher	2
Fall	2024	American Kestrel	2
Fall	2024	Ring-necked Duck	2
Fall	2024	Great Blue Heron	1
Fall	2024	Ring-necked Duck	1
Fall	2024	Herring Gull	2
Fall	2024	Northern Harrier	1
Fall	2024	Red-breasted Nuthatch	1
Fall	2024	Merlin	4
Fall	2024	Northern Harrier	1
Fall	2024	Black-throated Green Warbler	2
Fall	2024	Boreal Chickadee	1
Fall	2024	Black-capped Chickadee	4
Fall	2024	Red-eyed Vireo	3
Fall	2024	White-throated Sparrow	2
Fall	2024	Ruby-throated Hummingbird	1
Fall	2024	Rusty Blackbird	1
Fall	2024	Northern Goshawk	1
Summer	2024	American Redstart	1
Summer	2024	American Robin	1
Summer	2024	Black-and-white Warbler	1
Summer	2024	Black-capped Chickadee	1
Summer	2024	Blackburnian Warbler	1
Summer	2024	Black-throated Blue Warbler	1
Summer	2024	Black-throated Green Warbler	1
Summer	2024	Broad-winged Hawk	1
Summer	2024	Cedar Waxwing	1
Summer	2024	Common Yellowthroat	1
Summer	2024	Dark-eyed Junco	1
Summer	2024	Eastern Wood-Pewee	1

Table 15: Incidental Observations- Upper Afton Wind Project

Project # 24-11145

Season	Year	Common Name	#
Summer	2024	European Starling	1
Summer	2024	Hairy Woodpecker	1
Summer	2024	Hermit Thrush	1
Summer	2024	Magnolia Warbler	1
Summer	2024	Mourning Warbler	1
Summer	2024	Northern Flicker	1
Summer	2024	Northern Parula	1
Summer	2024	Ovenbird	1
Summer	2024	Red-eyed Vireo	1
Summer	2024	Red-tailed Hawk	1
Summer	2024	Ruffed Grouse	1
Summer	2024	Swamp Sparrow	1
Summer	2024	Swainson's Thrush	1
Summer	2024	White-breasted Nuthatch	1
Summer	2024	Winter Wren	1
Summer	2024	White-throated Sparrow	1
Summer	2024	Yellow-bellied Flycatcher	1
Winter	2024	Ruffed Grouse	1
Winter	2024	Pine Siskin	1
Winter	2024	Dark-eyed Junco	1
Winter	2024	Downy Woodpecker	1
Winter	2024	Blue Jay	1
Winter	2024	American Crow	1
Winter	2024	Dark-eyed Junco	1
Winter	2024	Ruffed Grouse	1
Winter	2024	Ruffed Grouse	1
Winter	2024	Blue Jay	1
Winter	2024	Ruffed Grouse	1
Winter	2024	Ruffed Grouse	2
Winter	2024	Black-capped Chickadee	1
Winter	2024	Ruffed Grouse	1
Winter	2024	Black-capped Chickadee	8
Winter	2024	Golden-crowned Kinglet	2
Winter	2024	Blue Jay	1
Winter	2024	Downy Woodpecker	1
Winter	2024	Downy Woodpecker	1
Summer	2025	Canada Jay	2
Summer	2025	Olive-sided flycatcher	1
Summer	2025	Canada Warbler	1

Table 15: Incidental Observations- Upper Afton Wind Project**Project # 24-11145**

Season	Year	Common Name	#
Summer	2025	Olive-sided flycatcher	1
Summer	2025	Canada Warbler	1
Summer	2025	Canada Warbler	1
Summer	2025	Canada Warbler	1
Summer	2025	Olive-sided flycatcher	2
Summer	2025	Eastern Wood-pewee	1
Summer	2025	Eastern Wood-pewee	1

APPENDIX O
AUSENCO SPRING 2023 RADAR MONITORING

Upper Afton Wind Project: Spring 2023 Radar Monitoring

Prepared for:

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March 25, 2025

Executive Summary

The Proponent proposes to install and operate 26 turbines as part of the Upper Afton Wind Project, located in Antigonish County, Nova Scotia.

The Nova Scotia *Environment Act* [SNS 1994-95, c 1] requires all wind energy projects that produce at least two megawatts of energy to submit a Class I Environmental Assessment to the Nova Scotia Department of Environment and Climate Change. Prior to Environmental Assessment submission, the Nova Scotia Department of Environment and Climate Change requests one year of radar and acoustic monitoring and a second year may occur during project development. Environment and Climate Change Canada and Canadian Wildlife Service Atlantic Region recommend using radar and acoustic monitoring during migration periods for a minimum of two years of consecutive monitoring. These monitoring periods are designed to facilitate assessment of impacts to multiple avian species groups which use coastal regions.

To support environmental monitoring requirements for this project, Ausenco Sustainability ULC completed avian radar monitoring for McCallum Environmental Ltd. (now Strum Consulting) in 2023. This report provides a summary of the avian data collected by Ausenco Sustainability ULC and an assessment of risk to nocturnally migrating birds at the Project. This study focused on nocturnally migrating birds because the majority of migration occurs at night when there is increased collision risk with wind turbines, particularly during inclement weather.

Nocturnal migration was observed for a total of 54 nights between April 22 and June 15, 2023. The greatest number of birds within the rotor swept zone were observed in late May and early June. Similarly, late May had the greatest number of birds observed overall in the study area.

High avian flight volumes in the rotor swept zone were associated with strong headwinds. The risk of collision is therefore anticipated to increase during nights with strong headwinds.

To assess whether mitigation measures are needed, Ausenco Sustainability ULC recommends two-year post-construction monitoring to determine collision risk at the Project, as per federal recommendations.

This Executive Summary is not intended to be a stand-alone document, but a summary of findings as described in the following Report. It is intended to be used in conjunction with the scope of services and limitations describes therein.

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Appendix A	Complete Spring 2023 Radar Data
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List of Acronyms and Abbreviations

Acronym / Abbreviation	Definition
AGL	above ground level
Ausenco	Ausenco Sustainability ULC
CWS	Canadian Wildlife Service
EA	Class I Environmental Assessment
ECCC	Environment and Climate Change Canada
IAA	Impact Assessment Agency of Canada
MBCA	<i>Migratory Bird Convention Act</i>
MBR	Migratory Bird Regulations
NCAR	National Center for Atmospheric Research
NCEP	National Centers for Environmental Prediction
NS	Nova Scotia
NS NSECC	Nova Scotia Department of Environment and Climate Change
Project	Upper Afton Wind Project
RSZ	rotor-swept zone
SARA	<i>Species at Risk Act</i>
SSD	solid-state drive

List of Symbols and Units of Measure

Symbol / Unit of Measure	Definition
GMT	Global Mean Time
km	kilometre
kW	kilowatt
m	metre
m/s	metres per second
MW	megawatt
MHz	megahertz
rpm	revolutions per minute

1.0 Introduction

This Work was performed in accordance with 2300573 between Ausenco Sustainability ULC, a wholly owned subsidiary of Ausenco Engineering Canada Inc. (Ausenco), and McCallum Environmental Ltd., now Strum Consulting (Client), dated March 27, 2023. This Report has been prepared by Ausenco, based on fieldwork conducted by Ausenco, for sole benefit and use by the Client. In performing this Work, Ausenco has relied in good faith on information provided by others, and has assumed that the information provided by those individuals is both complete and accurate. This Work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and project terms of reference; further, the findings are time sensitive and are considered valid only at the time the Report was produced. The conclusions and recommendations contained in this Report are based upon the applicable guidelines, regulations, and legislation existing at the time the Report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

The Client retained Ausenco to conduct radar monitoring of nocturnal migrating birds at the proposed Project Area in spring 2023. Ausenco conducted this work with the technical support of Dr. Phil Taylor of Tabanid Consulting Ltd. This report provides a summary of the data collected during spring 2023 and an assessment of risk to nocturnally migrating birds at the Project as per federal recommendations (Government of Canada 2007b, 2007a, 2022).

1.1 Project Background

As part of the Upper Afton Wind Project (Project), located in Antigonish County, Nova Scotia (NS), the Proponent proposes to install and operate 26 turbines.

The Nova Scotia *Environment Act* [SNS 1994-95, c 1] requires all wind energy projects that produce at least two megawatts (MW) of energy to submit a Class I Environmental Assessment (EA) to the Nova Scotia Department of Environment and Climate Change (NS NSECC) with radar and acoustic monitoring. Refer to **Section 1.2** for further details on the regulatory requirements and guidelines.

The primary objective of this study was to measure and describe the general patterns of nocturnally migrating birds during spring at the Project Area prior to construction. This study focused on migratory bird activity at night because the majority of migration occurs at night and there is increased collision risk with wind turbines at this time, particularly during inclement weather.

The original scope of work included one year of radar monitoring during the spring and fall migration periods in 2023 including the deployment of a marine radar unit. The radar monitoring was proposed to be completed in conjunction with acoustic monitoring completed by the Client. However, only spring migration radar surveys in 2023 were completed. At the Client's request, the remaining scope of work was not completed.

1.2 Regulatory Context

Pertinent federal and provincial regulations and their relevance to the Project are summarised below.

Federal

Key federal legislation relevant to environmental aspects of wind energy development includes the *Migratory Bird Convention Act* [SC 1994, c 22] (MBCA), which protects nearly all migratory songbirds, the *Migratory Bird Regulations* [SOR/2022-105] (MBR), and the *Species at Risk Act* [SC 2009, c 29] (SARA), particularly Schedule 1 of the Act (Committee on the Status of Endangered Wildlife in Canada 2021). Additional statutes under the jurisdiction of NAV Canada, Transport Canada, and Natural Resources Canada may also be relevant to wind energy development. A federal EA pursuant to the *Impact Assessment Act* [SC 2019, c. 28, s. 1] (Government of Canada 2019) is not required for land-based wind project development in Canada. Sections 42 through 45 of the *Physical Activity Regulations* under the *Impact Assessment Agency of Canada (IAA)* [SOR 2019-285] identify thresholds for renewable energy facilities. In March 2023 the Supreme Court of Canada found that the *Physical Activity Regulations* are in part unconstitutional. At the time of writing, no new projects are being assessed under IAA until new regulations are in place.

Guidelines for wind energy development environmental studies include *Recommended Protocols for Monitoring Impacts of Wind Turbines on Birds* (CWS 2007), *Wind Turbines and Birds: A Guidance Document for Environmental Assessment* (Government of Canada 2007), and *CWS Atlantic Region – Wind Energy & Birds Environmental Assessment Guidance Update* (Government of Canada 2022). The latter document was prepared by Environment and Climate Change Canada and Canadian Wildlife Service (ECCC-CWS) Atlantic Region to provide updated standards and best approaches related to impact assessment for wind energy development in Atlantic Canada. ECCC-CWS Atlantic Region recommends using radar and acoustic monitoring during the spring and fall migration periods, in addition to standard avian surveys, for a minimum of two years of consecutive monitoring. ECCC-CWS Atlantic Region recommends that spring surveys be completed between March 15 and June 7 and fall surveys completed between July 15 and November 30. These monitoring periods are designed to facilitate assessment of impacts to multiple avian species groups which use coastal regions. Federal guidelines recommend that radar surveys are conducted at night as the majority of migration occurs at night when there is increased collision risk with wind turbines, particularly during inclement weather (Government of Canada 2007a, b).

Provincial

The Nova Scotia *Environment Act* [SNS 1994-95, c 1] requires all wind energy projects that produce at least two MW of energy to submit a Class I EA to the NSECC. An EA registration document must be prepared and assessed by the EA Branch of NS Environment. Avian radar study is required for projects that include turbines greater than 150 m in height (Government of Nova Scotia 2021). NSECC requests one year of radar and acoustic monitoring during the avian migration periods prior to EA submission. A second year of monitoring may occur during project development presuming construction does not happen at night and does not impact the survey results (Canadian Wildlife Services – Atlantic Canada 2018 in: Government of New Brunswick 2019). Radar baseline studies should be designed in consultation with the ECCC-CWS and NS Environment. The following guidance document has been used to implement the regulatory requirements into this report: *Guide to Preparing an EA Registration Document for Wind Power Projects in Nova Scotia* (Government of Nova Scotia 2021).

1.3 Spatial and Temporal Scope

The Project is located in the Upper Afton community of Antigonish County in northwest Nova Scotia, approximately 25 kilometres (km) east of the Town of Antigonish (**Figure 1.1**).

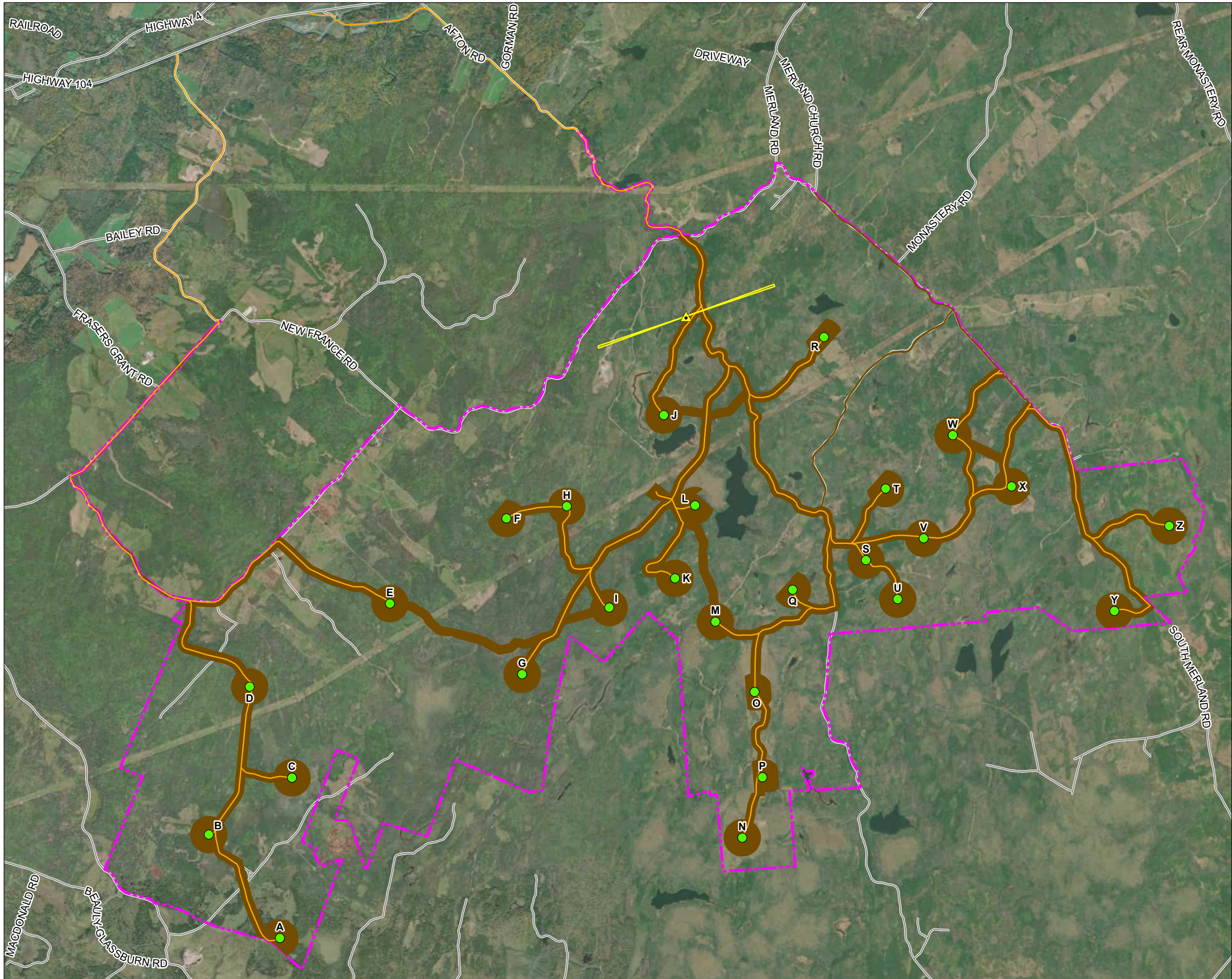
For the purposes of this report, the Project includes the Project Footprint and the Project Area, as defined below.

- Project Footprint: the area directly impacted by the Project's activities, including construction, operations, and associated facilities.
- Project Area: the broader geographic area where the Project is planned, encompassing the Project Footprint and surrounding areas where potential impacts from the Project on environmental resources are anticipated.

There are two main access roads to the Project Area, Afton Road and Merland Road, which can both be accessed from the Trans-Canada Highway 104. These roads are primarily gravel roads and meet each other in the northeast corner of the Project Area. From here Afton Road continues to cross the east side of the Project Area, and Merland Road continues as New France Afton Road and runs along the northern border of the Project Area and turns away from the Project Area in the far northwest corner of the Project Footprint. A network of unpaved roads extends from these two main roads and provides access to all turbine locations.

The Project is located in the Atlantic Maritime Ecozone, which is characterized by temperate, humid climate and forests dominated by both coniferous and deciduous trees. There is suitable habitat for nocturnally migrating birds in the Project Area and adjacent landscapes. The Project Area contains several water courses, wetlands, and lakes which are suitable for waterbirds. There are both forested areas and open areas that are suitable for nesting and foraging raptors. The Project Area lies within the migratory path for birds.

The temporal scope of the radar monitoring study was during the 2023 spring migration period. ECCC-CWS Atlantic Region recommends that spring surveys be completed between March 15 and June 7 to facilitate assessment of impacts to multiple avian species groups which use coastal regions. The radar surveys were conducted at night as most migration occurs at night when there is increased collision risk with wind turbines, particularly during inclement weather (Government of Canada 2007a, b). The temporal scope of this study was selected to align with the regulatory recommendations described in **Section 1.2**.



Upper Afton Wind
Nova Scotia, Canada

Project and Study Area



Legend

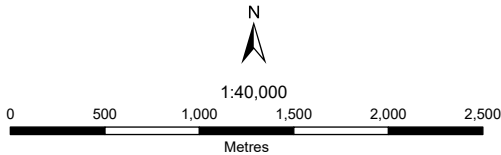
- Radar Location
- Turbine Location
- Access Road
- Extent of Radar Beam (Study Area)
- Road
- Project Area Boundary
- Project Footprint

Notes

1. All mapped features are approximate and should be used for discussion purposes only.
2. This map is not intended to be a "stand-alone" document, but a visual aid of the information contained within the referenced Report. It is intended to be used in conjunction with the scope of services and limitations described therein.

Sources

- Contains information licensed under the Open Government Licence(s) - Nova Scotia
- Aerial Image: ESRI World Imagery
- Inset Basemap: ESRI World Topographic Map



NAD 1983 UTM Zone 20N
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107613-01 Production Date: Mar 25, 2025 Figure 1.1

Ausenco

Strum
Consulting

2.0 Methods

This study used radar monitoring to evaluate the number of birds migrating through the Project Area during the 2023 spring migration. The methods used to collect and analyse radar data to assess risk to nocturnal avian migrants at the Project are described in the following sections. The study assessed the number of birds flying in the rotor-swept zone (RSZ) (i.e., within the path of the turbines around 70 - 200 metres [m] above ground level [AGL]), as well as birds flying above the RSZ.

2.1 Radar Monitoring

The purpose of radar monitoring was to assess the number and altitude of birds migrating through the Project Area at night. Radar is an acronym for radio detection and ranging. Objects that pass through the radar beam, referred to as targets, are recorded when the radar beam bounces off and returns to the instrument. Biologists use this technology to record birds at night, when they cannot be observed with the unaided eye.

2.1.1 Radar Data Collection

The radar was programmed to begin operation 30 minutes before sunset, when nocturnal migrants generally start flight (Alerstam et al. 1990). Radar operation ended approximately 30 minutes after sunrise during each night. Sunset and sunrise times were derived with the Suncalc package in R, which calculates the sunset and sunrise times for a given time and location. Recordings were made in 10-minute increments, three times each hour, throughout the night. The location of the radar was selected to provide the following:

- A representative sample of the nocturnal migrants that pass through the Project Area
- Land to host the radar, and access to that land, from participating landowners
- Security
- Clear sight lines with minimal clutter.

The radar was oriented perpendicular to the anticipated flight direction to maximize the likelihood of target detection (**Figure 2.1**).



Figure 2.1 **Photographs of Radar Setup Including Support Structure, Solar Panels and the Furuno 1962 Marine Radar Antenna**

Ausenco employed a Furuno 1962 BB marine radar operating in the microwave X-band ($9,410 \pm 30$ megahertz (MHz), 25 kilowatt (kW)) with a 1.8 metre XN13A open-array antenna. This system has a beam width of approximately 22 degrees in the horizontal plane and approximately 1.35 degrees in the vertical plane. The radar was mounted on a custom support framework in a vertical orientation, which allows for a more accurate measurement of flight altitude compared to a horizontal oriented radar. The radar ran in a short pulse mode (2,100 pulses per second) at 24 revolutions per minute (rpm). The top of the radar was oriented at 160 degrees from true north, which meant that the radar beam was projecting 250 and 70 degrees from true north. The radar signal was digitized at 4.5 m range resolution with an azimuth resolution of 1.35 degrees using a Dspnor ScanStreamer (Bergen, Norway).

The radar registers movement of targets from 70 m up to approximately 1,000 m AGL, which covers most of the RSZ and extends well beyond the Atlantic songbird nocturnal flight corridor (i.e. 150–600 m; (Horton et al. 2016)). This radar system has also proven to provide an adequate representation of flight volume and flight altitude to meet the regulatory requirements at two other wind energy projects 2021; Ausenco Sustainability ULC 2022).

Raw radar data (i.e. unprocessed radar scans) were stored locally on an SSD (solid-state drive) drive during the sampling period. At the end of each field season, raw radar data were copied to external hard drives and archived. Raw radar data were processed locally throughout the sampling period. Processed data were uploaded to a remote cloud-based server each hour as described below.

2.1.2 Radar Data Processing

Radar processing is a two-step process: 1) autonomous hourly processing during recording in the field and 2) secondary data cleaning after the radar data have been uploaded.

During the first step of radar data processing, radar scans are processed using standalone software that captures radar sweeps. Radar sweeps are numerical data from a single rotation of the antenna. Every hour, radar sweeps are automatically amalgamated and converted into blipmovies, which are a data format similar to a video, using the open-source software package radR (Taylor et al. 2010). The processed data includes an associated SQLite database of target detections. The parameters for these locally processed data are liberal, in the sense that they include radar clutter and smaller non-bird and non-bat targets. Radar clutter is defined as surfaces or particles such as grass, trees, water, clouds, or atmospheric particles, etc. which obscure target detection.

During the second step of radar data processing, blipmovies are processed again with radR using more conservative parameters to eliminate radar clutter and non-bird targets. These parameters vary by site, so professional judgment is required to effectively filter out unwanted data while retaining a sufficiently large sampling area. The data are also filtered to include only detections from within an 'area' that is a specific distance from the radar, thus effectively capturing the activity in a vertical column a set distance from the radar. This step helps reduce bias caused by the radar beam sampling a larger area of space at greater ranges. Finally, periods of heavy rain are filtered from the processed dataset using automated methods because targets cannot be detected in the presence of rain. Rain is readily identified by sharp changes in the presence of targets, such that very large numbers of targets occur at all altitudes, and usually quite suddenly. Analysts examine processed radar files to validate the presence of rain. In addition, targets below 70 m AGL are filtered out because they are often masked by ground clutter and are located below the RSZ of turbines. The remaining targets form the dataset are used for further analysis and data visualization. This data includes flight altitude, flight volumes, flight direction, and flight timing.

2.2 Weather Data

Weather may influence migration patterns and thus alter the degree of risk to birds flying through the Project Area. Weather variables were collected to assess the effects of weather on flight volumes and the proportion of flights within RSZ. Avian migrants generally prefer to fly with positive tailwind assistance (Bagg 1950; Muller 1976; Åkesson and Hedenström 2000; Peckford and Taylor 2008) and as such collision risk may be higher with strong southern winds during the spring migration. Rain also plays an important part in predicting migration activity. In general, flight activity is reduced during periods of rainfall (Parslow 1969; Erni et al. 2002), which is likely due to the increased energetic cost of flying in rain (Erni et al. 2002). Birds generally wait for rain to pass before continuing migration, which often leads to increased flight activity on the first day after heavy rainfall (Erni et al. 2002). In cases where birds continue flight in rain, flight altitudes tend to be lower in altitude which increases the risk of collision, drowning, or heat loss (Kennedy 1970; Richardson 1978). Another factor which influences migration activity is temperature. Spring migration is generally triggered by higher and rising temperatures (Muller 1976), although temperature was found to be less consistent in predictor of migration activity than wind and rain (Richardson 1990). Atmospheric pressure, humidity and cloud cover have also been argued to influence migration intensity (Muller 1976; Richardson 1978; Åkesson et al. 2001).

The following weather variables were selected alongside the radar data to assess their relationship with the number and altitude of avian migrants:

- Wind speed
- Wind direction
- Precipitation.

Weather data was acquired from the National Centers for Environmental Prediction (NCEP) and National Center for Atmospheric Research (NCAR) Reanalysis data product (NCEP-NCAR Reanalysis 1; <https://psl.noaa.gov/data/gridded/data.ncep.reanalysis.html>) and downloaded via the RNCEP package (Kemp et al. 2011). This method uses data from multiple weather stations surrounding the Project Area to predicts weather conditions at the Project Area.

2.3 Data Analysis

The number and altitude of avian migrants recorded by radar were used to determine the following measures of bird activity within and around Project airspace:

1. Flight volume, which is the total number of targets per unit time (i.e. passage rate).
2. The proportion of targets within the RSZ (i.e., the number of targets within the RSZ divided by the total number of targets, including those above the RSZ).

Flight volume is used to describe temporal trends in targets detected at the Project Area, and flight altitude is used to evaluate the likelihood of flights occurring within the RSZ. The total number of targets above and within the RSZ for each day was presented in a histogram to visualize the flight volumes throughout the spring season. This shows in what period the flight volumes and the proportion of targets within the RSZ were greatest.

General flight patterns were evaluated by visually inspecting the total flight volumes throughout the migratory periods and comparing the flight volumes within and above the rotor swept zone (RSZ; which is the area between lowest and highest rotor tip height). Flight volumes were also visually inspected against select weather variables to understand if collision risk increases under certain weather conditions.

To show the variability in flight volume and flight altitude for the spring season, several nights that stand out from the rest have been selected and visualized in more detail. For each night the flight volumes are presented across the full altitudinal range from sunset to sunrise to show at what time of night most targets passed through the Project Area, and at what elevation they crossed. This is visualized in combination with wind direction and speed, as well as periods of rain, to understand if the flight volume or altitude was influenced by wind or rain. For each night the flight volume was also presented in 50 m altitudinal segments to show at what altitude flight volumes were greatest. Targets below 70 m were excluded from analysis because ground clutter made target identification unreliable, as described in **Section 2.1.2**.

Because wind is known to effect migration intensity, the effect from wind on flight volumes and flight altitude was further analyzed. The metric used for analysis was tailwind assistance, which is calculated from airspeed and ground speed. Airspeed was calculated with the vector addition procedure called “triangle of velocities” (Pennycuick 1968), using flight direction, flight speed, wind direction and wind speed as input variables. Since the exact flight trajectory of the birds are unknown, a heading of 45 degrees was assumed for the spring migration. Tailwind assistance is then calculated as the difference between the ground speed (speed relative to the ground) and airspeed (speed relative to the air). When a flying bird’s power output remains constant, but the wind behind the bird increases, the airspeed remains unchanged, but the ground speed increases. This results in positive tailwind assistance. Wind that blows against the front of a flying bird (a headwind), is indicated by negative tailwind assistance.

To determine the effect of wind on flight volume and proportion of targets within RSZ, tailwind assistance was plotted against the flight volume and proportion of targets within RSZ. Time of night was added as additional explanatory variable and was grouped as:

- Sunset (sunset until two hours after sunset)
- Sunrise (two hour before sunrise until sunrise)
- Night (representing the remaining hours in the night).

3.0 Results

Spring migration was observed for a total of 54 nights between April 22 and June 15, 2023. The radar functioned properly during 95 percent off all spring nights. The following sections describe the observed flight volumes and flight patterns. A few nights with large numbers of radar detections have been selected to illustrate the different migration activity patterns observed throughout the study. The full 2023 spring radar dataset is illustrated in figures within **Appendix A**.

3.1 Radar Monitoring

During the monitoring period the highest flight volumes were observed at the end of May, peaking over 20,000 detections, and highest proportion of flights within RSZ were observed between the end of May and mid-June, peaking over 8,000 detections (**Figure 3.1**).

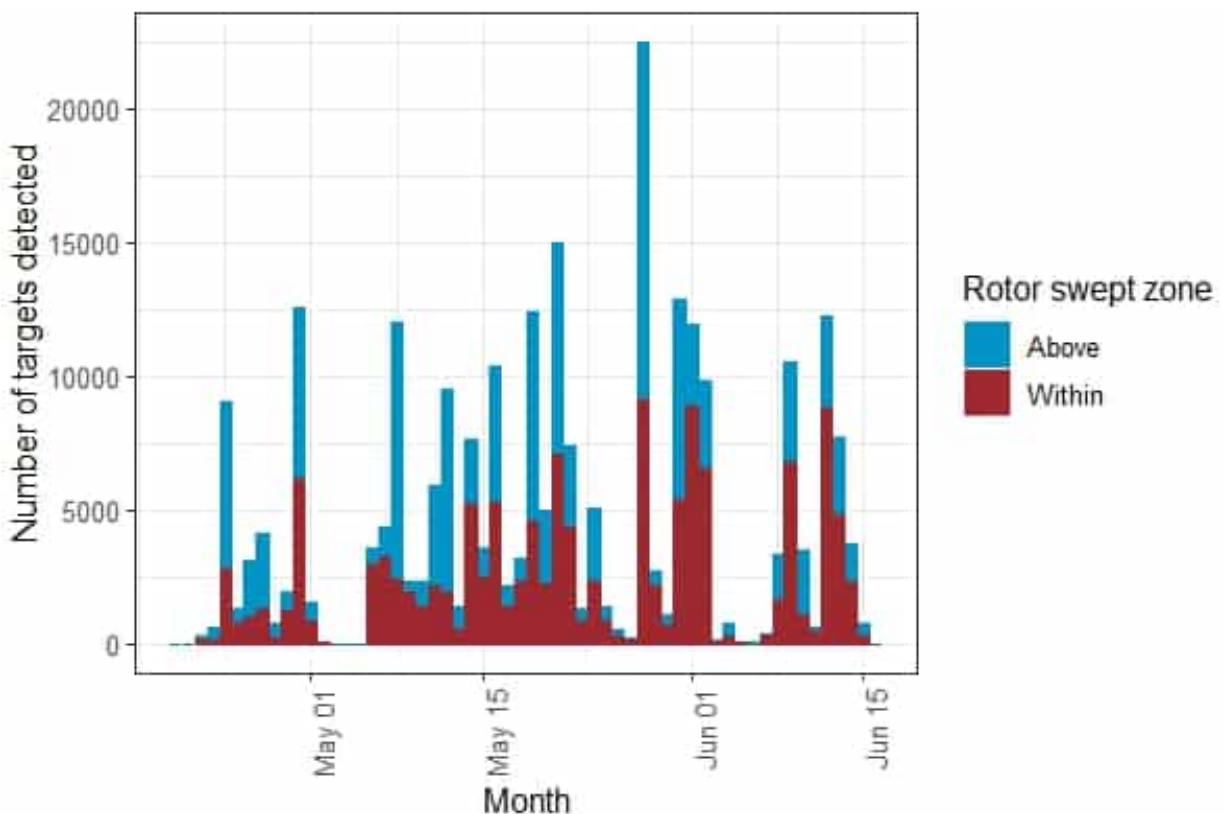
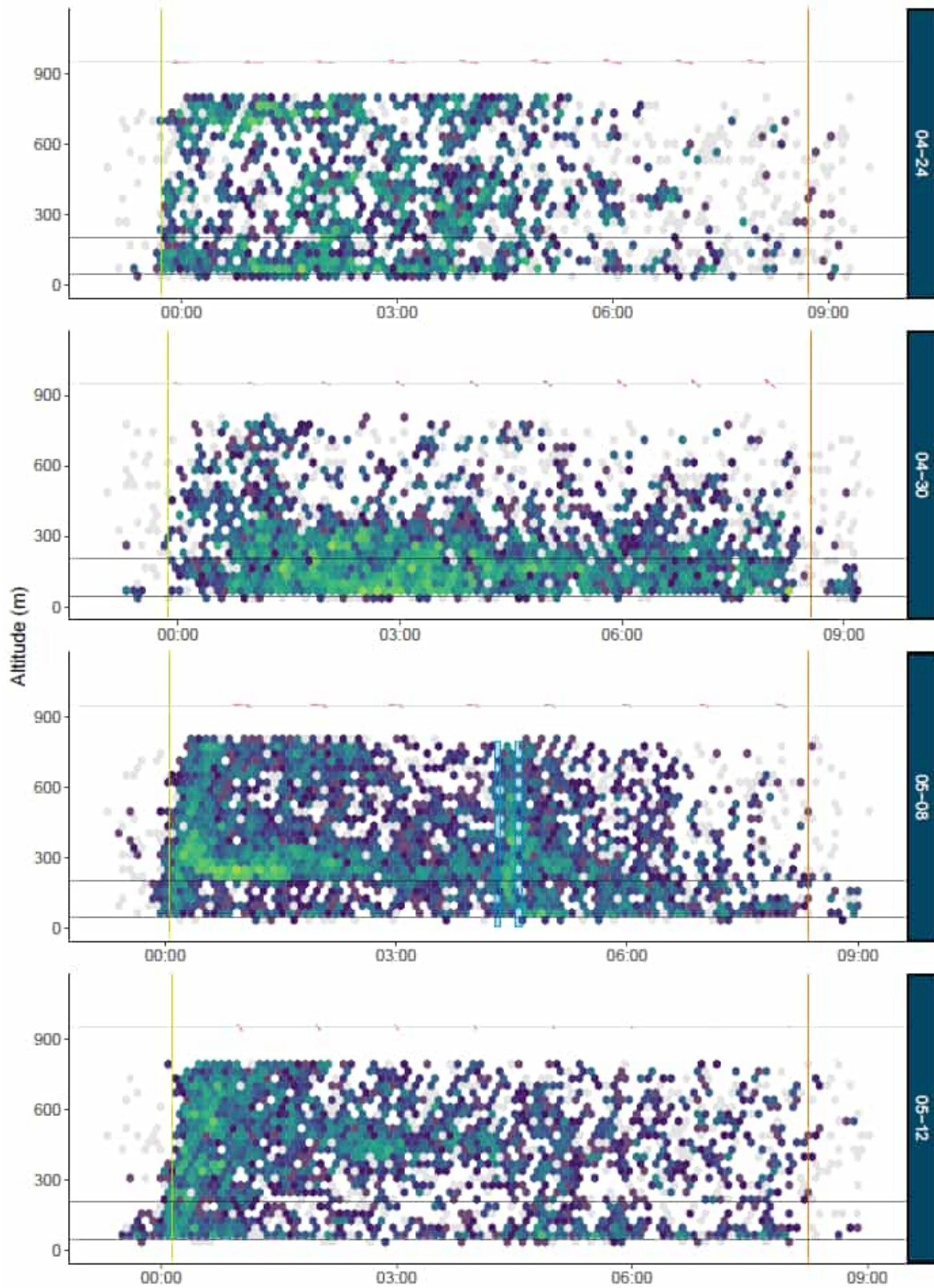


Figure 3.1 Radar Detections per Survey Night during Spring 2023.

To illustrate how flight volumes change throughout the night, radar data has been visualized for a subset of high-volume nights. The nights include April 24 and 30, and May 5, 8, 12, 14, 21 and 28, 2023 (**Figure 3.2**). From these selected nights, the greatest flight volumes were observed during the first half of the night, indication that most flight activity is observed during the initiation of flight at the start of the night. During most nights flight activity is even across flight altitudes. However, during the night of May 14th most birds were observed within rotor swept area, which was likely caused by the strong headwind that night. Flight activity is also lower during periods of heavy rain, which is particularly noticeable during the night of May 14th. Target flight altitude extends to 800 m AGL in the Project Area throughout each night, suggesting that nocturnally migrating birds use a large airspace above the ground.



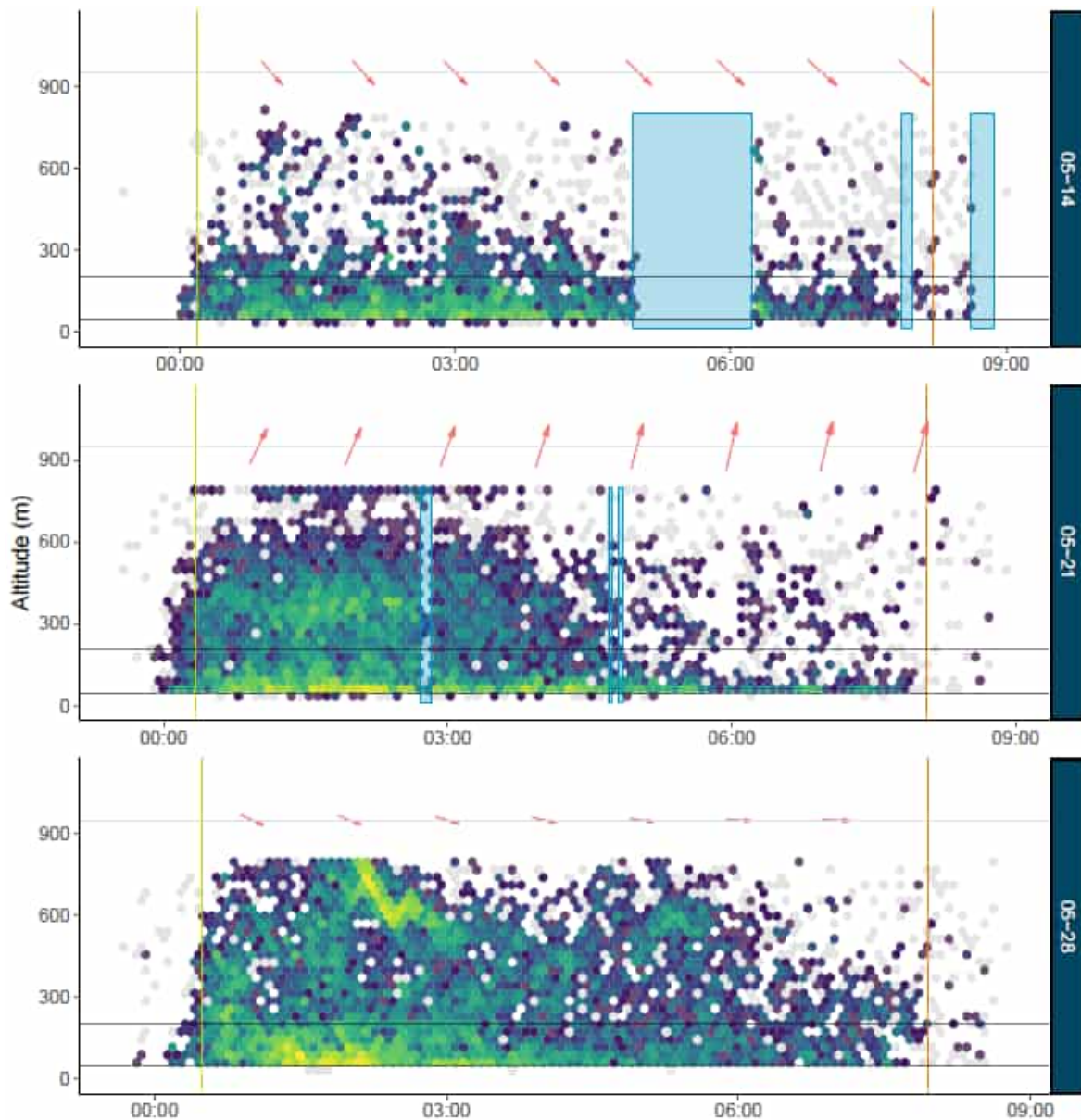


Figure 3.2 Targets Detected by Radar on April 28 and 30, and May 8, 12, 14, 21 and 28, 2023.

Each panel in the figures is a separate survey night. Time is indicated using Global Mean Time (GMT) on the x-axis with the beginning and end of civil twilight indicated by the vertical green and orange lines, respectively. Target altitude is on the y-axis, including the proposed RSZ indicated with black horizontal lines. Data points are radar detections scaled from light grey (few detections) through dark purple, to yellow (many detections). Wind direction (cardinal direction of red arrow) and wind strength (arrow size) at approximately 700 m AGL is indicated for each hour at the top of each plot. Blue boxes represent periods of rain when rain could not be distinguished from bird detections.

The flight volume during spring monitoring was greatest within the RSZ (**Figure 3.3**). Cumulatively, most targets in the spring were detected above the RSZ.

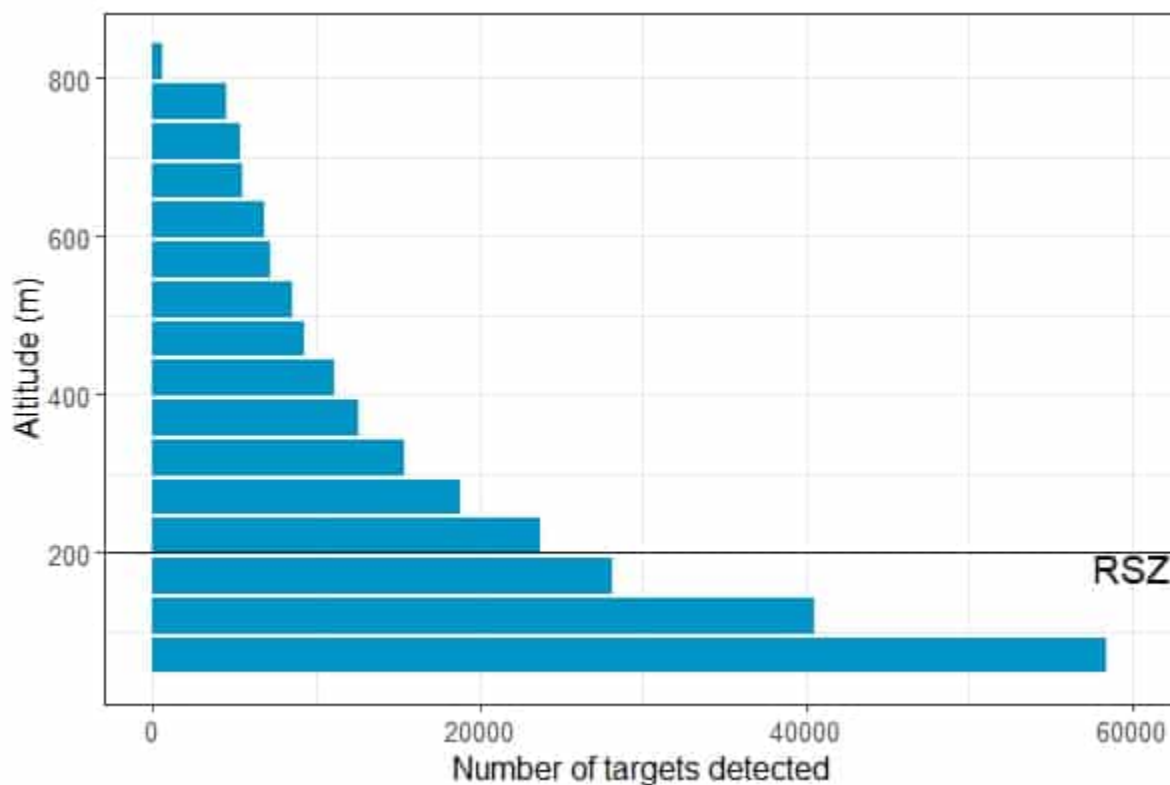


Figure 3.3 Altitudinal Profile of Targets Detected in Spring 2023.

To illustrate how flight altitude changes throughout the night, radar data were visualized for a subset of nights with high flight volumes (i.e., number of targets detected per unit of time). For the seven selected nights, altitudinal profiles were generally variable between nights (**Figure 3.4**). During most nights, flight volumes were most concentrated within the RSZ. On May 8th, however, the number of targets peaked above the RSZ, and on April 24, May 12, 21, and 28 there is a second peak of targets above the RSZ. Cumulatively, the number of targets was greatest above the RSZ during most presented nights except for May 14th, which is also visible in **Figure 3.2**.

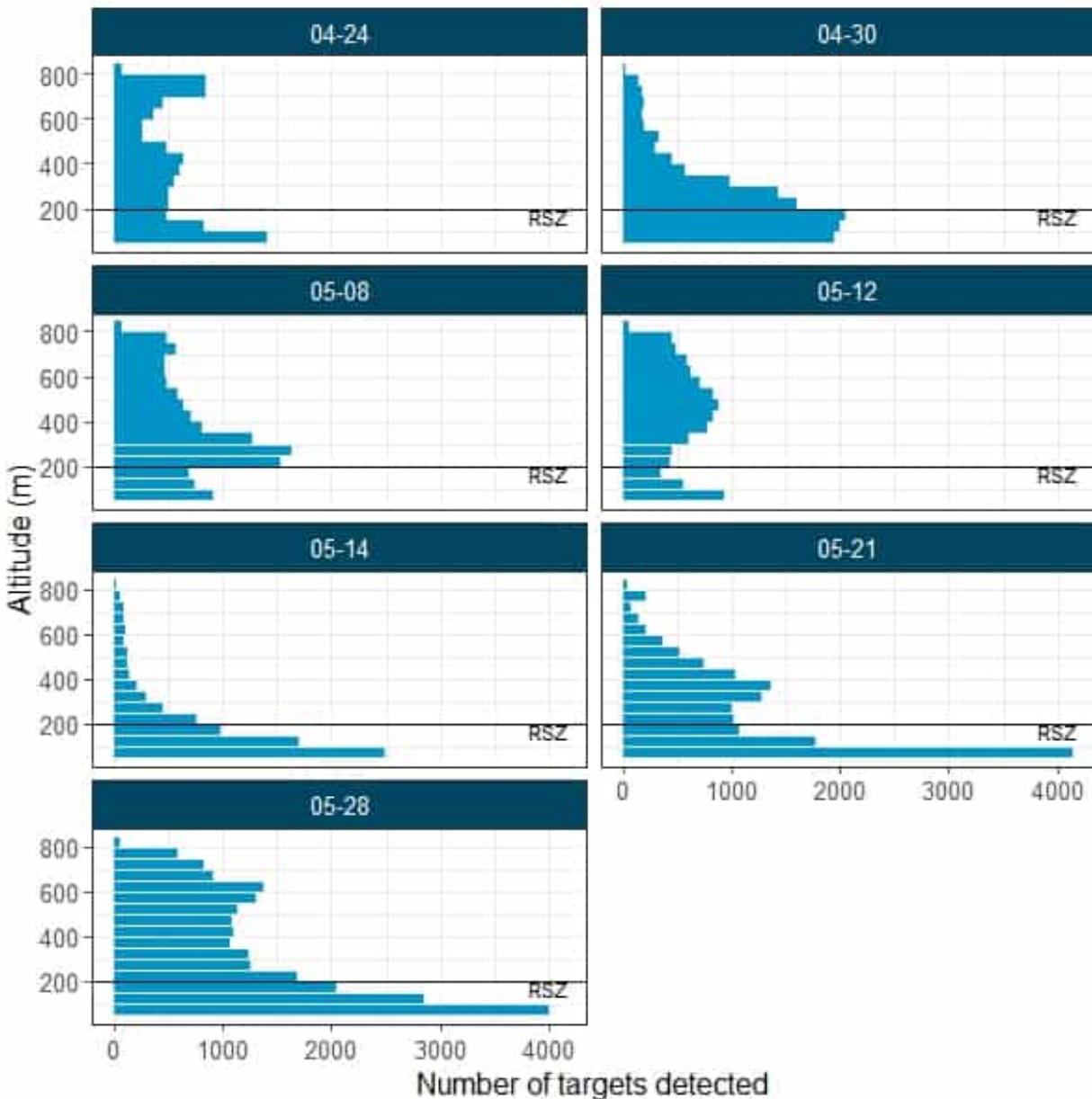


Figure 3.4 Altitudinal Profiles of Targets Detected on April 28 and 30, and May 8, 12, 14, 21 and 28, 2023.

During spring, target detections increase with tailwind assistance during sunset in all months, increase in the middle of the night in April and May and continue to increase during sunrise in April and May (**Figure 3.5**). This shows that more birds migrated during nights with tailwind assistance.

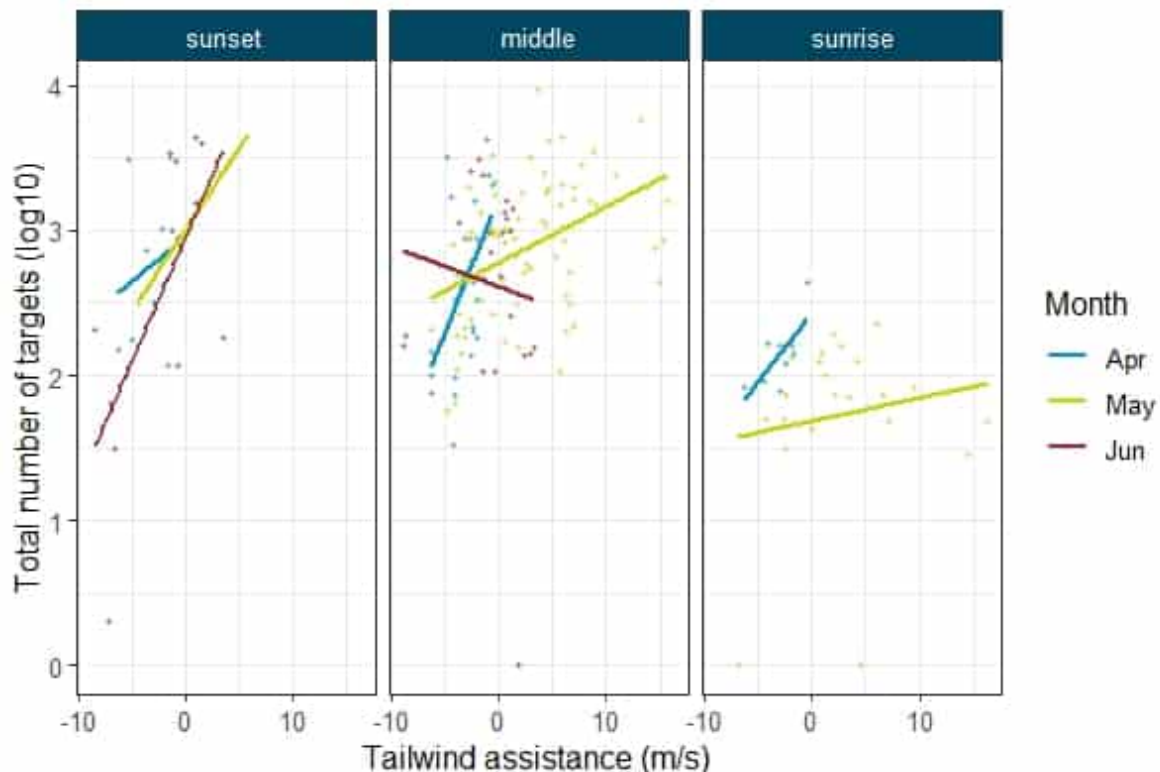
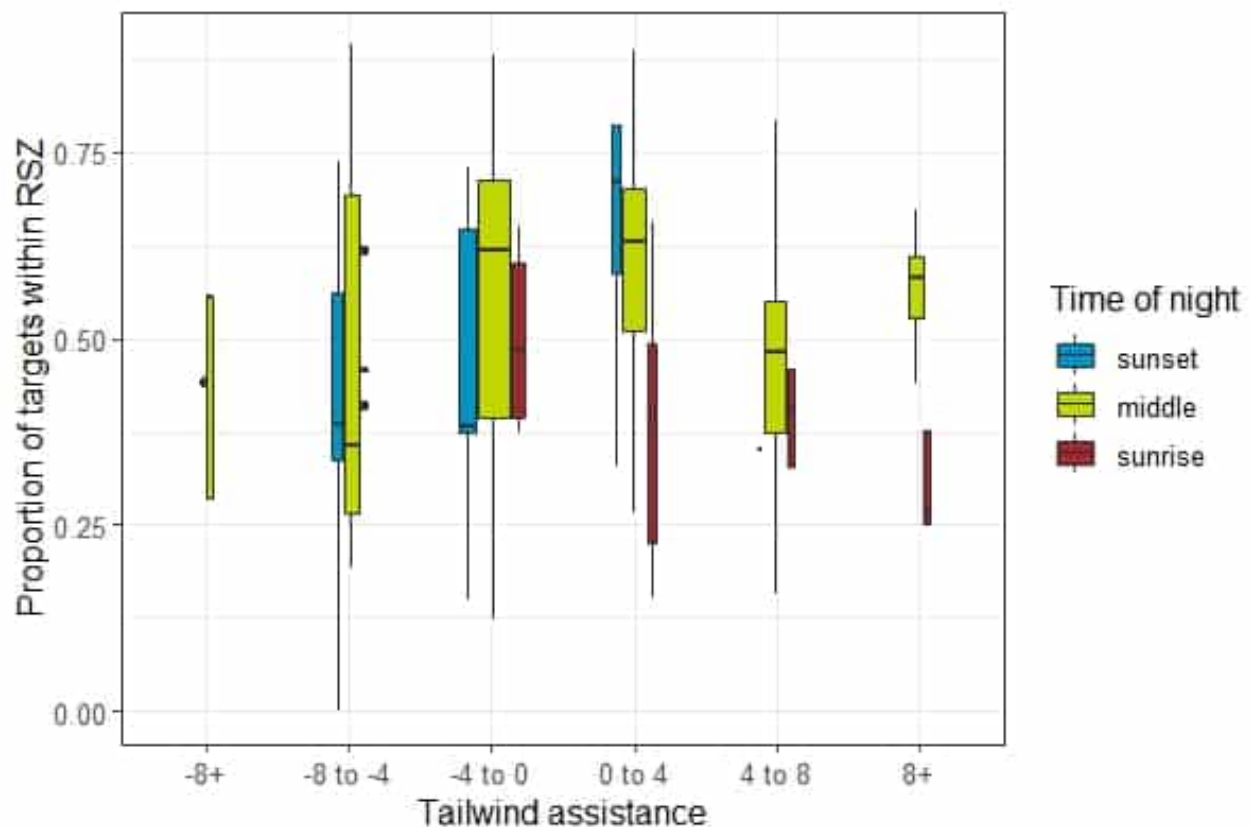


Figure 3.5 Relationship between Tailwind Assistance and the Total Number of Targets across Time of Night and Season during Spring 2023.

Tailwind assistance is plotted on the x-axis, with negative numbers representing headwind and positive numbers representing tailwind. Coloured lines represent the trend between total number of detections (log10) and tailwind assistance in metres per second (m/s). Horizontal lines indicate no effect from tailwind assistance on total number of targets and inclining lines mean a positive effect from tailwind assistance on total number of targets.

During spring migration, the highest numbers of targets were observed at tailwind assistance between negative 4 and 0 m/s. This suggests that most birds migrated during a mild tailwind or during conditions when there was no wind at all.



Tailwind assistance is plotted on the x-axis, with negative numbers representing headwind and positive numbers representing tailwind. The proportion of targets within the RSZ are grouped by time of night indicated with blue, green, and red. Each boxplot shows 50 percent of the data centred around the median in colour, and the median is shown with a black horizontal line. The upper and lower 25 percent of the data are shown with black vertical lines, and outliers are shown as black points. The total number of targets is illustrated by the width of the boxplot. A wider boxplot represents a greater number of targets.

4.0 Discussion

The radar data collected for this study characterize nocturnal migrating bird activity in the Project Area during spring 2023 to inform development of the Project and potentially help refine the Project design to lessen the potential for the Project to adversely affect migratory birds.

The radar data show that most targets detected in the Project Area during spring 2023 occurred above maximum turbine height. However, many targets were also detected within the RSZ throughout the spring migration period (**Figure 3.2**). The number of targets within the RSZ is particularly high during the night of May 14th when birds were faced with a strong headwind (**Figure 3.2, Figure 3.4**). Birds are generally expected to fly at lower altitude when faced with a strong headwind because wind speed increases with altitude and as such there is an energetic advantage to flying at lower altitude during strong headwinds. A high number of targets was also observed within the RSZ during a milder headwind on May 28th, and during a strong tailwind on May 21st. This suggests that birds will generally fly lower during headwinds, but a high number of birds may also fly within the RSZ during nights with a strong tailwind when the overall number of birds is higher (**Figure 3.5**). An increase in number of migratory birds during nights with tailwinds is expected because flight with tailwinds has an energetic advantage compared to flight during headwinds. This trend, with a high overall number of targets across altitudes during nights with tailwind and a greater proportion of birds within the RSZ during nights with headwinds, can be seen across all recorded nights shown in **Appendix A**.

Figure 3.6 shows that the highest proportion of targets within the RSZ occurred during periods of near-zero wind. This result is unexpected, as a decreasing proportion of targets within the RSZ is typically anticipated with increasing tailwind assistance. The observed peak is likely attributable to an increase in insect abundance during zero-wind conditions. To explore this further, future analyses could consider raising the intensity threshold to distinguish birds and insects during the data analysis process and conducting acoustic monitoring in conjunction with radar surveys.

The best indicator of risk is the volume of birds migrating within the RSZ. At the Project Area, the greatest proportion of flights within the RSZ were observed in the end of May and mid-June particularly during nights with strong headwinds. Therefore, the greatest risk is anticipated during May and particularly at nights with strong headwinds.

5.0 Data limitations

The following are limitations related to the data collected that should be considered when drawing conclusions from the data presented within this report. Radar data can provide a good understanding of nocturnal avian migration trends at proposed wind energy projects. However, there are limitations to how the data are collected and can be interpreted, such as:

- While it is assumed that most targets are migratory birds, a small proportion of targets may be insects, bats, ground clutter or precipitation.
- Detection probability of targets varies with several external factors such as: distance from radar, atmospheric conditions, ground clutter, altitudinal coverage, interference from large objects, and radar orientation. Given that target density varies with these external factors, direct comparison of flight volumes across sites can be difficult.
- Detections at very low altitudes (i.e. below RSZ) are difficult to capture with a radar due to ground clutter and background noise from vegetation.
- Since a vertical radar was used, it is unknown whether flight intensity differs spatially across the Project Area. The present analysis assumes that flight volumes in the surveyed area were generally representative of those occurring across the Project Area.
- The number of birds seen in the RSZ in this report is higher than the number of birds that are likely to interact with wind turbines in the Project Area. This is because the RSZ covers only a small part of the Project Area's airspace.

6.0 Recommendations

The 2023 spring radar monitoring data show that the greatest volumes of birds fly within the RSZ during end of May and mid-June particularly during nights with strong headwinds. The risk of collision is therefore expected to increase with strong headwinds during spring migration. If the Project proceeds, Ausenco recommends two years of post-construction monitoring to assess collision risk at the Project as per federal recommendations (Government of Canada 2022). Post-construction monitoring will also help determine whether mitigation measures are needed and, if so, what type of mitigation is best suited for the Project.

7.0 Closure

We sincerely appreciate the opportunity to have assisted you with this Project and if there are any questions, please do not hesitate to contact the undersigned.

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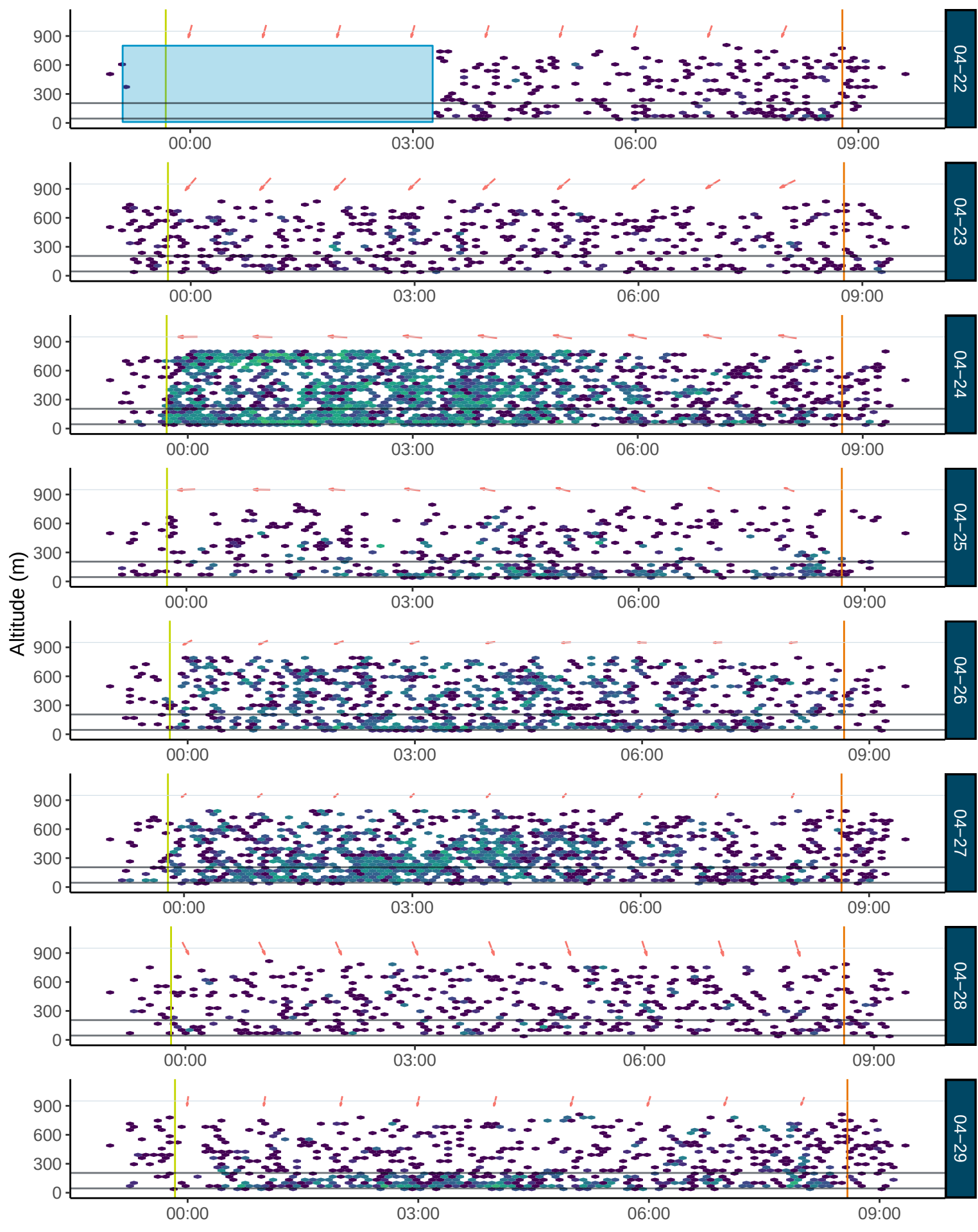
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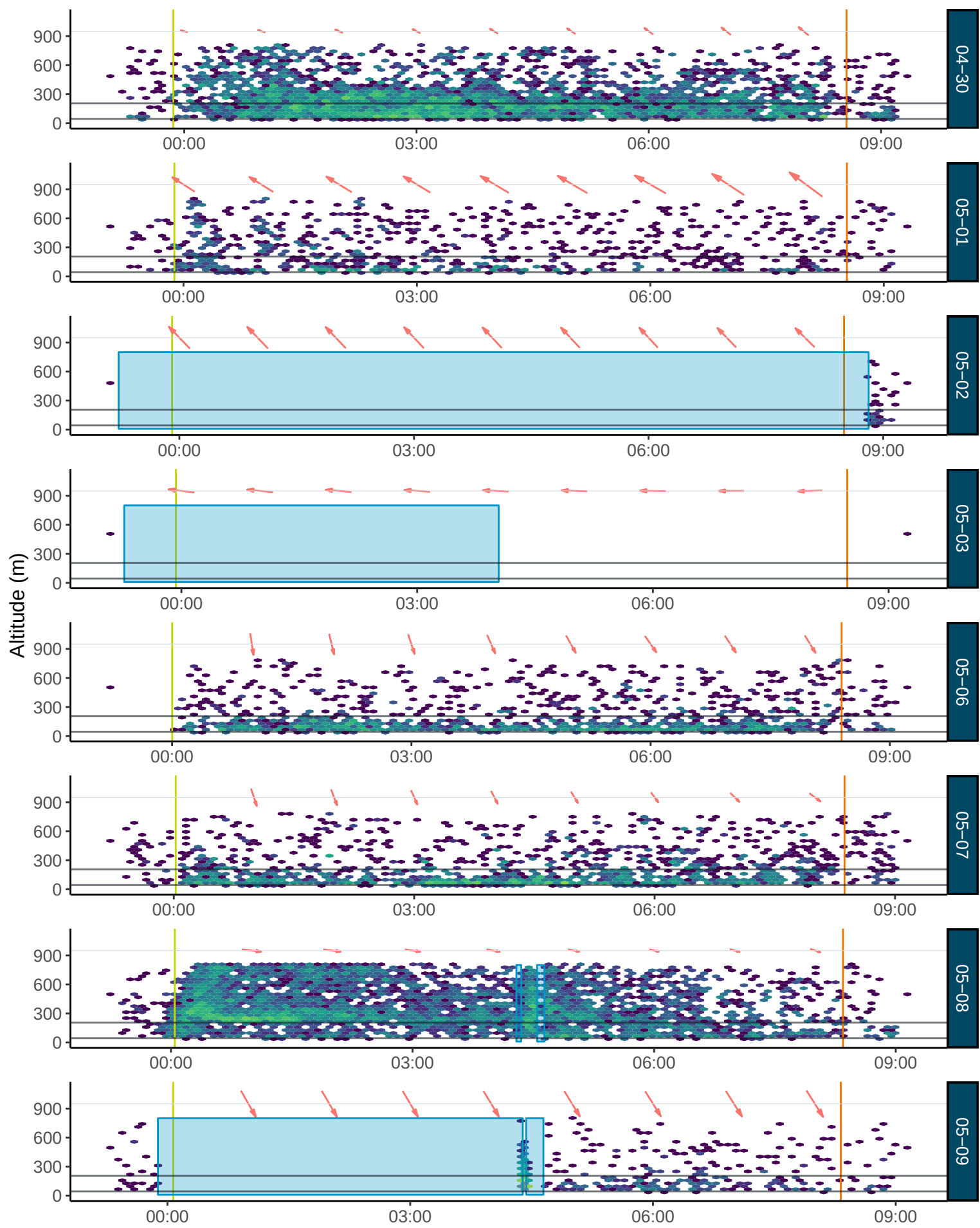
Appendix A

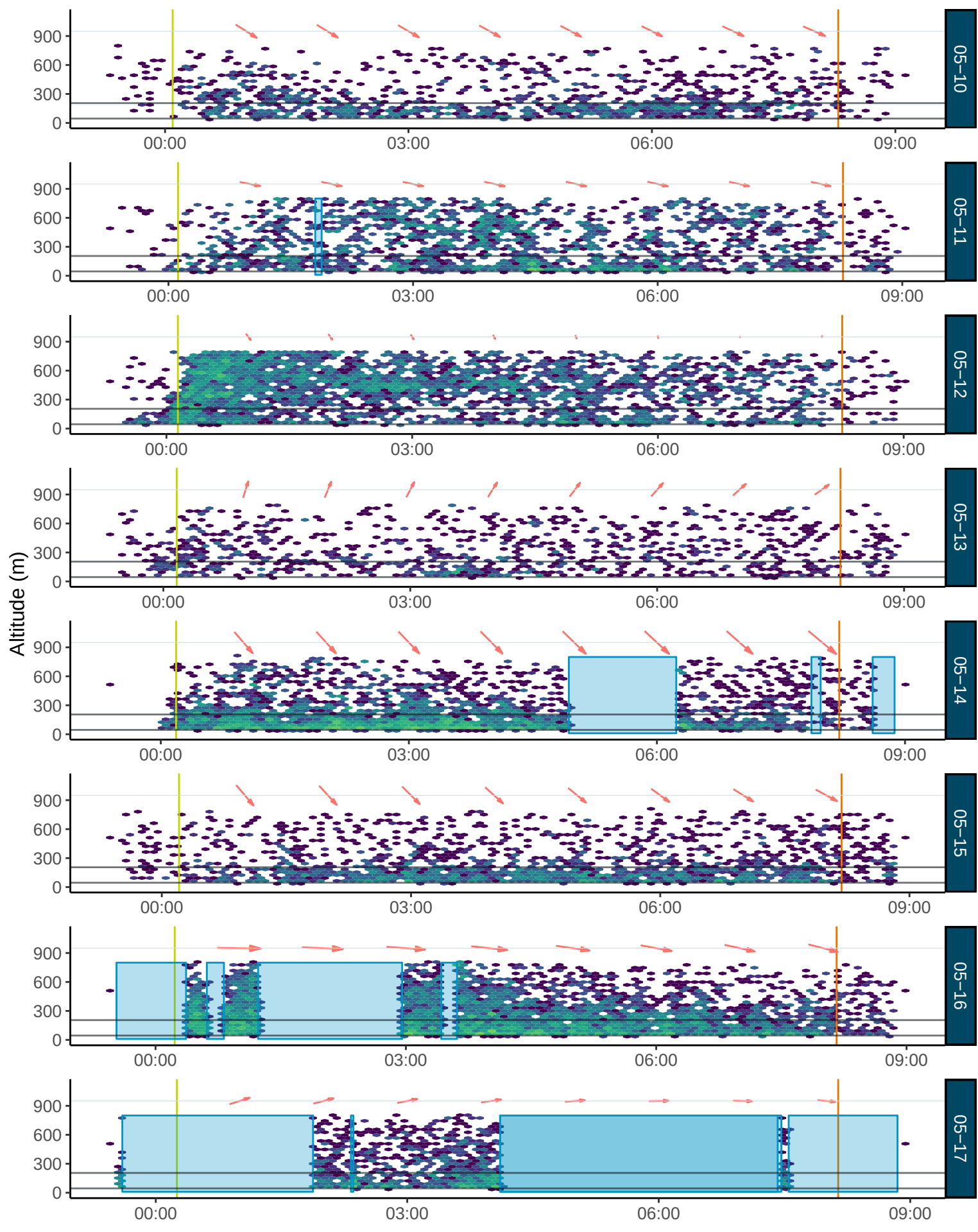
Spring 2023 Nightly Radar Detection Figures

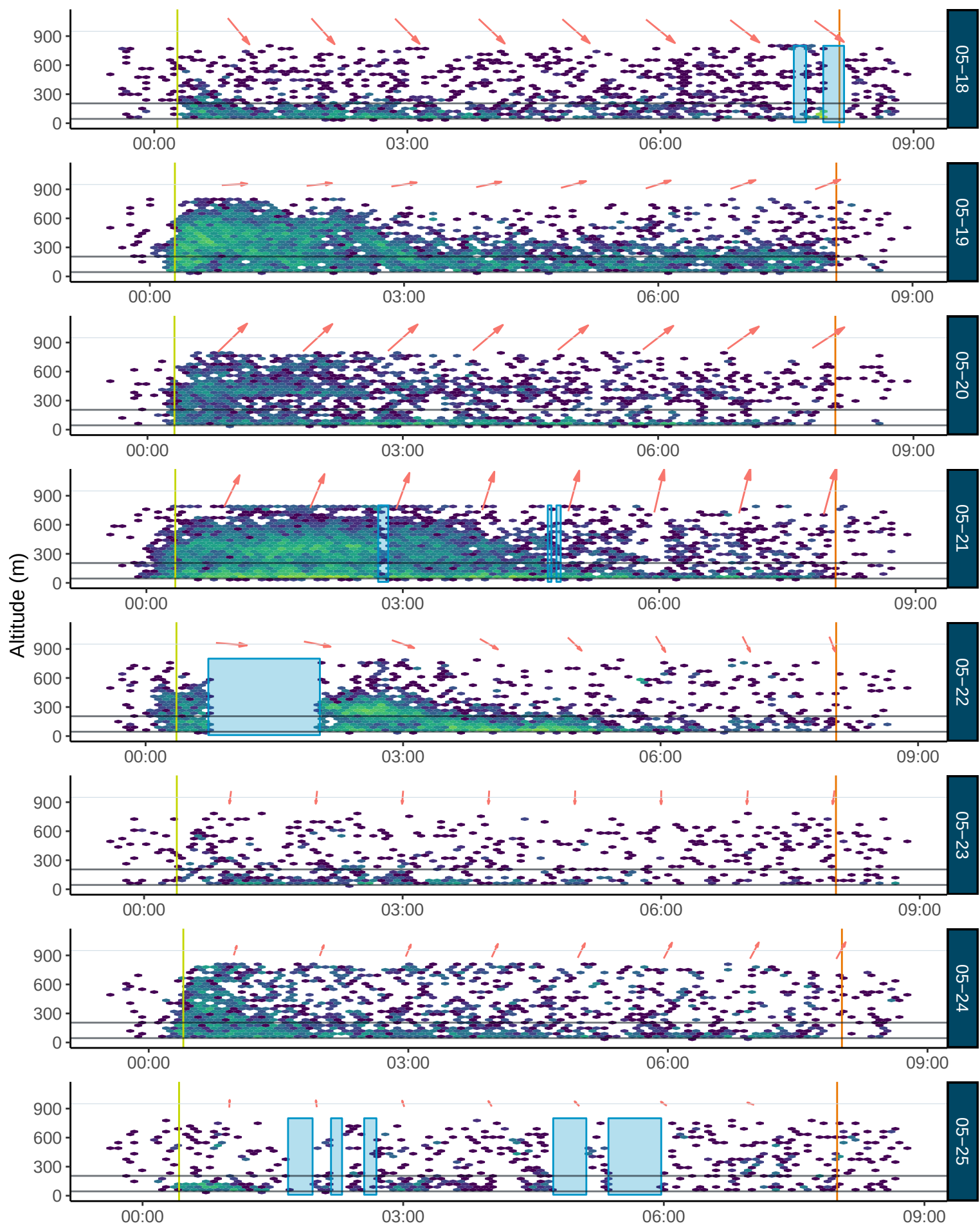
APPENDIX A – OVERVIEW

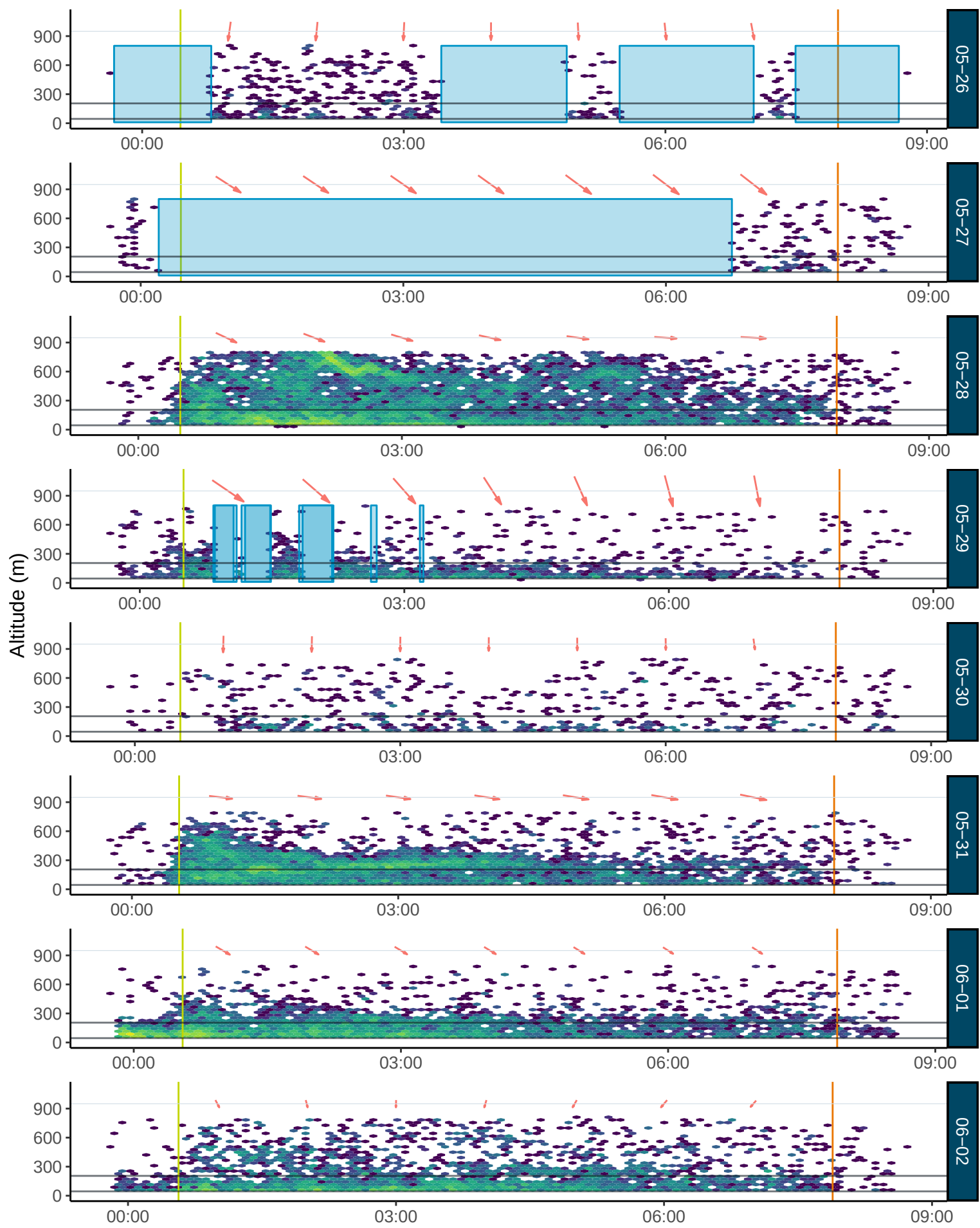
All radar detections for the spring season 2023 monitoring period are illustrated in the figures below. Each panel represents a separate night. Time is indicated using Global Mean Time (GMT) on the x-axis with the beginning and end of civil twilight indicated by the vertical green and yellow lines, respectively. Target altitude is on the y-axis, including the proposed rotor swept zone (i.e. 70–200 m) indicated with black horizontal lines. Data points are radar detections divided into hexagonal time and altitude bins, which are scaled from light grey (i.e. few detections) through dark purple to yellow (i.e. many detections). Wind direction (i.e. cardinal direction of red arrow) and wind strength (i.e. arrow size) at approximately 700 m AGL is indicated for each hour at the top of each plot. Blue boxes represent periods of rain when rain could not be distinguished from bird detections.

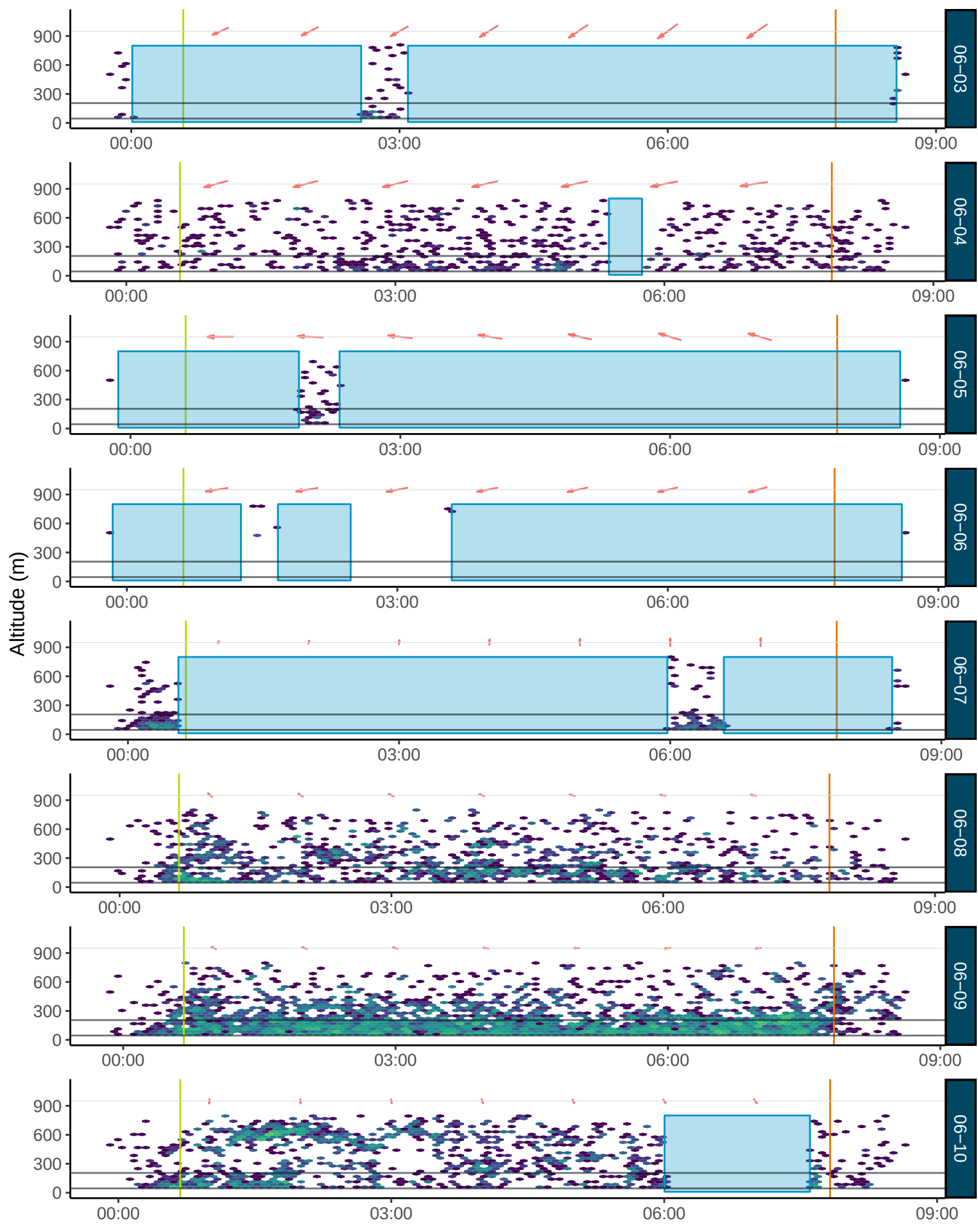


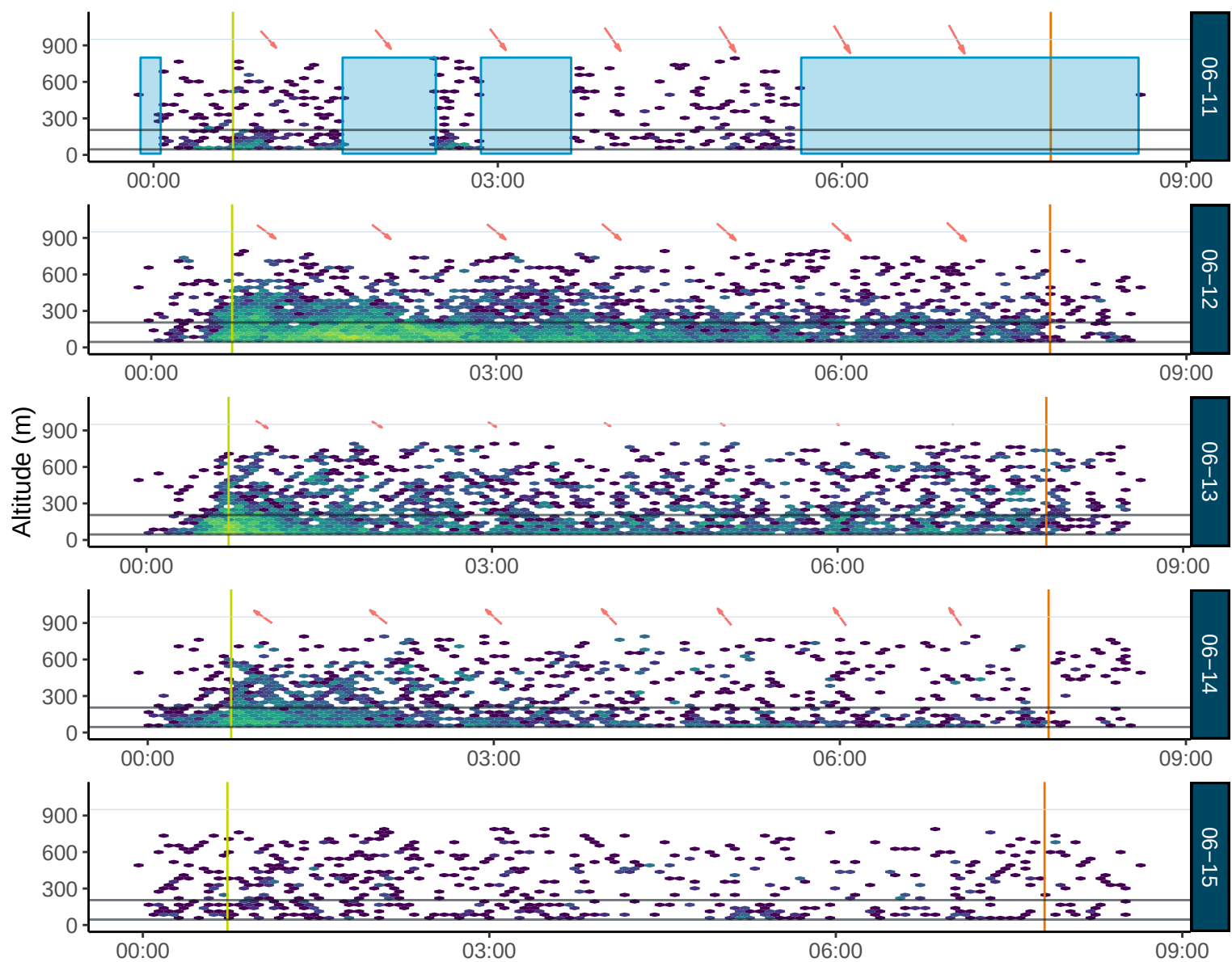














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APPENDIX P
AVIAN RADAR AND ACOUSTIC TECHNICAL REPORT

strum

CONSULTING



**AVIAN RADAR AND ACOUSTIC TECHNICAL REPORT
Upper Afton Wind Project**

February 25, 2026

February 25, 2026

Upper Afton Wind Ltd.

**Re: Avian Radar and Acoustic Technical Report
Upper Afton Wind Project**

Attached is the Avian Radar and Acoustic Technical Report prepared for the Upper Afton Wind Project.

We trust this to be satisfactory at this time. Once you have had an opportunity to review this correspondence, please contact us to address any questions you may have.

Thank you,



Mark MacDonald, M.ScF.
Senior Project Manager, Terrestrial Lead
Environmental Assessment & Approvals
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1.0 INTRODUCTION

Avian radar and avian acoustic assessments were undertaken during the spring 2023 and fall 2024 migratory periods. Avian radar deployment and data analysis for the 2023 spring monitoring period was completed by Ausenco Sustainability ULS, while avian radar deployment and data analysis for the 2024 fall monitoring period was completed by Strum Consulting. Avian acoustic deployment and analysis for both monitoring periods were completed by Strum Consulting. This report summarizes the findings of the 2024 radar monitoring program and the 2023 and 2024 acoustic monitoring program. The methodology and results of the spring 2023 radar program is discussed separately in Appendix O of the Environmental Assessment Registration Document.

2.0 SURVEY METHODOLOGY

Survey methodology followed guidance provided by Environment and Climate Change Canada-Canadian Wildlife Services (ECCC-CWS) for passive bird monitoring programs (ECCC-CWS, 2022).

The guidance also recommends that acoustic and radar studies be conducted from March 15 to June 7 (to capture migratory bird activity in the spring season) and from July 15 to November 30 (for the fall migration season) (ECCC-CWS, 2022).

2.1 Avian Radar System

2.1.1 Avian Radar System Deployment

During the 2024 fall monitoring period, a Simrad Halo20 pulse compression marine surveillance radar was employed and angled diagonally at 45° above the horizon. This avian radar system (ARS) consists of two x-band pulse compression surveillance radars oriented specifically to scan the airspace approximately 50 m to 3,000 m above the Project. The diagonal orientation allowed for a 150° scan of the airspace above the ARS, while the 210° below the radar is blanked. The diagonal orientation also allows for the calculation of the height of any potential avian target.

The ARS was deployed with an off grid 12V system that was designed for optimal active monitoring and specificity in deployment. It was designed to charge and store energy using solar panels and a battery bank, while also powering the radar and associated equipment for data collection and remote communications. The system in its entirety is designed to be mobile, so the movement of the ARS was possible throughout a season, if desired.

The ARS was placed in the same location as that of the 2023 spring monitoring period, in the northeastern portion of the Study Area (Drawing 1, Appendix A). This location provided a good line of sight (relatively few trees in the immediate area) into the airspace above the Project, southern exposure for solar charging, sufficient cellular and satellite coverage for remote

communications, and accessibility for spot checks. The ARS was mounted off the ground to minimize ground noise interference and lessen the impacts of local microtopography on data collection and quality.

2.1.2 Avian Radar Assessment

Avian radar assessment results were processed using the radR platform, an open-source platform designed for the processing of radar data for biological applications (Taylor et al., 2010). Outputs from this platform were then analyzed using Microsoft Excel. Standard settings for the identification of biological targets (BTs), such as birds and bats, were used. Targets reflected by the radar generated blips in the image of the radar scan. The radR platform helps filter sequential images of radar scans to identify blips that occur in the same area over at least four out of five scans. Should these constraints be met, a target is generated. BTs are most likely generated by birds, but could also be bats and insects, or even drones and planes. Weather occurrences, such as fog, rain, and low cloud cover, may cause interference with the radar (similarly to weather radar), which lowers the effectiveness of the system and reduces the reliability of the system's ability to detect birds. As such, data was excluded from the analysis when the minimum hourly rainfall was ≥ 0.5 mm. Rainfall data was obtained from ECCC's Tracadie Weather Station (ECCC, 2025).

Discussion of Migration Cues in Radar Results

The nature of migratory bird activity is likely attributable in large part to weather, as it is well established that weather and atmospheric conditions influence bird migration activity, especially wind speed and direction (La Sorte & Fink, 2017; Nussbaumer et al., 2022). Birds are thought to take advantage of favourable conditions such as tailwinds in order to travel further while using less energy (Nussbaumer et al., 2022). As such, birds migrating through Nova Scotia during the spring likely use northerly winds, while those travelling in fall likely use southerly winds. In addition to wind direction, migrating birds also take advantage of favourable wind speeds to expedite their migration or to avoid unfavourable headwinds (Nussbaumer et al., 2022). Other environmental and climatic cues also play a role in migratory bird activity.

Cues that are theorized to play a role in avian migration include:

- Wind speed and direction (Gudmundsson et al., 2011; La Sorte & Fink, 2017; Nussbaumer et al., 2022)
- Photoperiod (Assadi & Fraser, 2021; Helm & Liedvogel, 2024; Robart et al., 2018; Sockman & Hurlbert, 2020)
- Temperature (Brisson-Curadeau et al., 2020; Burnside et al., 2021)
- Changes in migration cohort or population sizes (Miller-Rushing et al., 2008)
- Food Availability (Robart et al., 2019)
- Lunar cycle (Bonnet-Lebrun et al., 2021; Korpach et al., 2024; Norevik et al., 2019; Pyle et al., 1993)

For this assessment, the variables of wind speed, wind direction, daily temperature, and lunar cycle were analyzed with avian radar data to determine the strength of influence each cue may have on avian migration over the Project.

Discussion of Migratory Bird Density

The Halo 20 radar emits a beam that is angled 12.5° upward and downward from the radar's antenna. The volume of airspace that the radar scans increase with range as the radar beam extends outwards; therefore, the number of BTs detected by the ARS generally increases with range, until such a point that the radar becomes limited by range and the number of BTs detected drops. To correct the distortions in BT detection counts at different ranges, it is necessary to correct the airspace volume scanned by the radar at each height bin.

Based on the geometry of the radar's beam angle, the volume of airspace scanned in each of the height bins was determined using CAD software. These volumes are shown for each height bin in Table 2.1 and were used to determine the target density (i.e., the number of targets detected per cubic km of airspace) based on number of BTs detected in each height bin. Birds per km³ has been used as a metric of bird migration in avifauna for other studies (Farnsworth, 2013). Target density is representative of, and likely proportional to, the migratory bird activity in the airspace above the Project for the cumulative monitoring period.

Table 2.1: Airspace Scanned (km³) within the ARS Height Bins

Range bin (m)	Airspace Scanned (km ³)
0-25	0
25-50	0.1015
50-100	0.2036
100-150	0.2043
150-200	0.2052
200-250	0.2063
250-500	1.052
500-1000	2.226
1000-1500	2.337
1500-2000	2.426
2000-3000	3.774
Total	12.8375

Avian Interaction Model

The level of interaction between migratory birds and the Project turbines can be estimated using data collected from the radar monitoring in 2024. Interactions may include sensory disturbance to birds passing near the turbines, requiring birds to maneuver around the turbines and thus forcing migratory birds to expend additional energy; bird collisions with the turbine components; or blade strikes (for operating turbines).

Table 2.2 shows the turbine dimensions for this Project and the parameters used to calculate the interaction airspace volume for the turbine model. The total height of the wind turbine infrastructure was calculated using the hub height and rotor diameter of the proposed turbine model, which was subsequently used to determine the rotor sweep area where avifauna could interact with the turbine (i.e., bird strike). The risk of avian interaction is calculated by comparing the proportion of avian targets detected within the calculated rotor sweep area of the proposed turbine.

Table 2.2: Turbine – Avifauna Interaction Volume Calculation Information

Turbine Model Information	
Turbine Model	Goldwind GWH182-8.0
Number of Turbines ⁽¹⁾	28
Hub Height	130 m
Total Height	221.7 m
Rotor Diameter	183.4
Blade Length	91.7 m
Rotor Sweep Area	26,417.31 m ²

⁽¹⁾ Number of turbines used for the application of statistical analysis. Actual turbine number varies.

2.2 Avian Acoustic Methodology

2.2.1 Autonomous Recording Units Deployment

Five Wildlife Acoustics Song Meter Micro autonomous recording units (ARUs) were deployed within the Study Area during the 2023 and 2024 monitoring periods, with one (ARU3) deployed approximately 600 m southwest of the ARS. The ARUs were deployed from March to November in 2023 and from July to November in 2024. Monitor locations were chosen before a layout change, which shifted coverage of one of the ARUs (ARU1) outside of the Study Area (Drawing 1). ARU2 to ARU5 were located within the centre and western portions of the Study Area. The five ARUs were placed in clearings or along roads for ease of access, to reduce noise interference from overhanging vegetation, and to provide open access of the microphone to the sky. Habitats surrounding the ARUs featured mixedwood forest, softwood forest, hardwood forest, wetlands, roads, and human disturbance.

2.2.2 Autonomous Recording Unit Data Processing

Data from the ARU closest to the ARS (ARU3) analyzed using Nighthawk, a machine learning model that specialize in the detection and classification of avian nocturnal flight calls (NFCs). The output files from the model were then brought into Raven Pro (2022), a computer program specializing in the visualization and analysis of sounds, for manual analysis. Data from the remaining ARUs was analyzed through manual listening.

Nighthawk

Nighthawk is a deep learning model designed by researchers at the Cornell Lab of Ornithology (Van Doren et al., 2023). The Nighthawk model was designed to detect and identify

vocalizations made by nocturnally migrating birds and was trained using recordings of NFCs from throughout the Americas. For the purposes of this analysis, Nighthawk was run on its own computer programming environment using Python programming language, and was set using the following default parameters:

- Model sample rate: 22,050 Hz
- Model input duration: 1 s
- Hop size: 20% (percentage of the model input duration)
- Length of detections: 0.2 s

Nighthawk assigns a probability score to each detection it makes, which represents the likelihood of the model making a correct prediction. For this analysis, only detections with a probability score of 0.8 (80%) or above were considered for further analysis in Raven Pro.

Nighthawk is capable of identifying 82 bird species (Table 1, Appendix B), although a species-level identification is not always possible (Van Doren et al., 2023). In instances where a species-level identification cannot be achieved, the model may identify vocalizations to the order, family, or group level. Order and family refer to the taxonomic levels, whereas group level refers to a subset of species with similar sounding NFCs. For example, the 'ZEEP' group consists of several similar-sounding warbler species that can be exceptionally difficult to vocally separate from one another. Nighthawk was fed a list containing only species that are likely to occur in this region to limit false species-level identifications.

Nighthawk produced a series of text files containing all detections and predictions for a given audio file input. The text files and audio files were then brought into Raven Pro (version 1.6) for manual verification.

Raven Pro

Raven Pro is a software program that specializes in the visualization and analysis of sounds. Environmental scientists with experience in bird identification brought raw audio files recorded by the ARUS and the text files containing the detections made by Nighthawk into Raven Pro. The scientists were then able to manually verify the detections and assess the accuracy of the Nighthawk results by listening to sound clips and visually analyzing the spectrograms of NFCs. The scientists listened to 30 vocalizations (or all vocalizations if fewer than 30 were detected) for each species identified by Nighthawk. The vocalizations were annotated 'Y' if the species-level identification made by the model was correct, or 'N' if the identification was incorrect.

ARU Manual Listening

Three dates were selected from both the spring 2023 and fall 2024 acoustic data for manual listening (Tables 2.3 and 2.4).

Table 2.3: Dates Selected for Manual Listening - Spring 2023

Date	Mean Temp (°C)	Total Precipitation (mm)	Direction of Max Gust (10s deg)	Speed of Max Gust (km/h)
May 3	1.8	0	10	38
May 16	12.5	0	29	35
May 28	19.5	0	35	59

Table 2.4: Dates Selected for Manual Listening – Fall 2024

Date	Mean Temp (°C)	Total Precipitation (mm)	Direction of Max Gust (10s deg)	Speed of Max Gust (km/h)
August 15	17.7	0	18	39
September 10	16.6	0	19	39
October 4	15.8	0	N/A	N/A

Manual listening involved two 10-minute audio clips (one around sunset and one around sunrise) from each day and recording all avian vocalizations heard. This process was repeated for each of the five ARUs. The dates selected did not overlap with dates when field surveys were completed.

Weather data from the Tracadie Weather Station (ECCC, 2025) was used to select dates with optimal conditions for avian migration and audio quality (e.g. dates with high winds and precipitation were avoided to reduce noise interference, while dates with low cloud cover and favourable wind directions for migration were prioritized). Limitations included noise interference from sources like frogs and other wildlife, human activity, wind, trees rustling, etc.

3.0 SURVEY RESULTS

3.1 Avian Radar Assessment

Data collected by the ARS during the 2024 fall monitoring period was analyzed to provide the number of biological target (nBTs) by date, wind direction and speed, and height (Table 2, Appendix B).

The ARS identified 24,010 BTs during the 2024 fall monitoring period. High numbers of BTs were detected on July 23 (nBTs = 2,418), August 15 (nBTs = 15,194), and August 19 (nBTs = 3,202) (Figure 3.1).

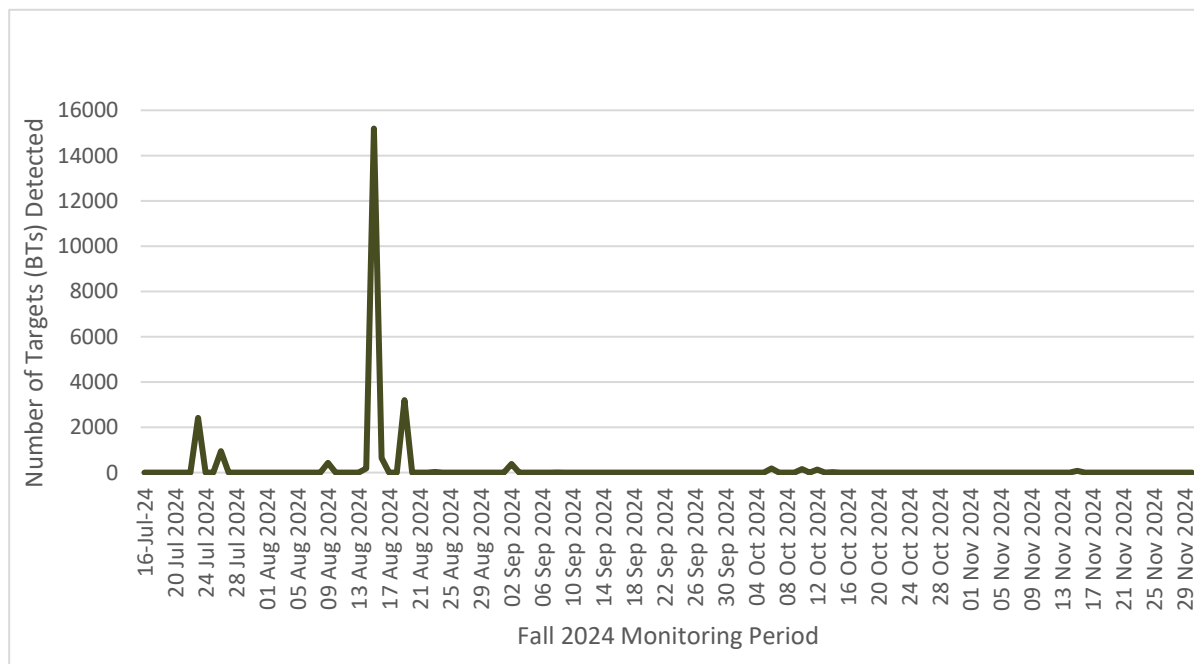


Figure 3.1: Number of BTs detected throughout the 2024 Fall Monitoring Period

The highest portion of BTs were detected at heights between 250 m to 2,000 m and the largest number of BTs occurred between 500 m to 1,000 m (nBTs = 10,043) (Table 3.1). While BT detections continued into mid-November, the daily total of BTs detection dropped drastically after late-August.

Table 3.1: Number of BTs Detected per ARS Height Bin in the 2024 Monitoring Period.

Range bin (m)	Number of Targets Detected (Spring)
0-25	0
25-50	3
50-100	4
100-150	5
150-200	11
200-250	156
250-500	2,505
500-1000	10,043
1000-1500	8,211
1500-2000	3,072
2000-3000	0
Total	24,010

Overall, the results of the 2024 ARS monitoring campaign suggest that avian migration activity occurred stochastically throughout the monitoring period. The ARS detected a small number of large migration events that occurred over the course of three-to-five-day periods throughout the

fall. It is likely that migration conditions were favourable during these relatively short mass migration events.

Timing of Migratory Movements

To determine the timing of peak migratory activity during the 2024 fall monitoring period, radar data from the most active nights were further analyzed. The dates selected for analysis include July 23, July 26, August 15, August 16, August 19, September 2 and October 6, 2024 (Figure 3.2)



Figure 3.2: Timing of Targets Detected by Avian Radar on July 23 and 26, August 15, 16, 19, September 2 and October 6, 2024

Figure 3.2 shows that the timing of migratory movement observed on peak dates was not consistent. Avian movement appears stochastic throughout each day, with large numbers of detections occurring within small discrete timeframes. Photoperiod may explain some of the migratory movements detected on the seven selected days as the timing of the movements happens earlier in the day during the later fall months when the sun sets at an earlier time. The majority of the recorded avian movements occurred above the maximum height of the proposed turbines across each of the selected days, suggesting little to no interaction between the turbine and avian movement.

Cues for Avian Migration

The list of environmental and climatic cues that were used to compare with the data collected by the avian radar systems included the following:

- Wind direction
- Wind speed
- Temperature
- Lunar cycle

A variety of migration cues not discussed above (e.g., photoperiod, tidal phases) may have also affected bird migration timing. Data analysis was conducted to test the correlation between these cues and migration timing; however, the relationships were deemed too weak to support evidence of these cues affecting migration timing.

Wind Direction and Wind Speed

Figure 3.3 shows that during the fall 2024 monitoring season, the highest number of BTs were detected when the winds are heading north (73%) and northeast (18%). This result is unexpected as migrating birds often used winds heading west and south to travel to southerly wintering grounds (Liechti & Bruderer, 1998). However, birds may show no wind selectivity when other cues are present during migration (Thorup et al., 2006). Most of the detections occurred on a single night, making it difficult to extract meaningful seasonal trends.

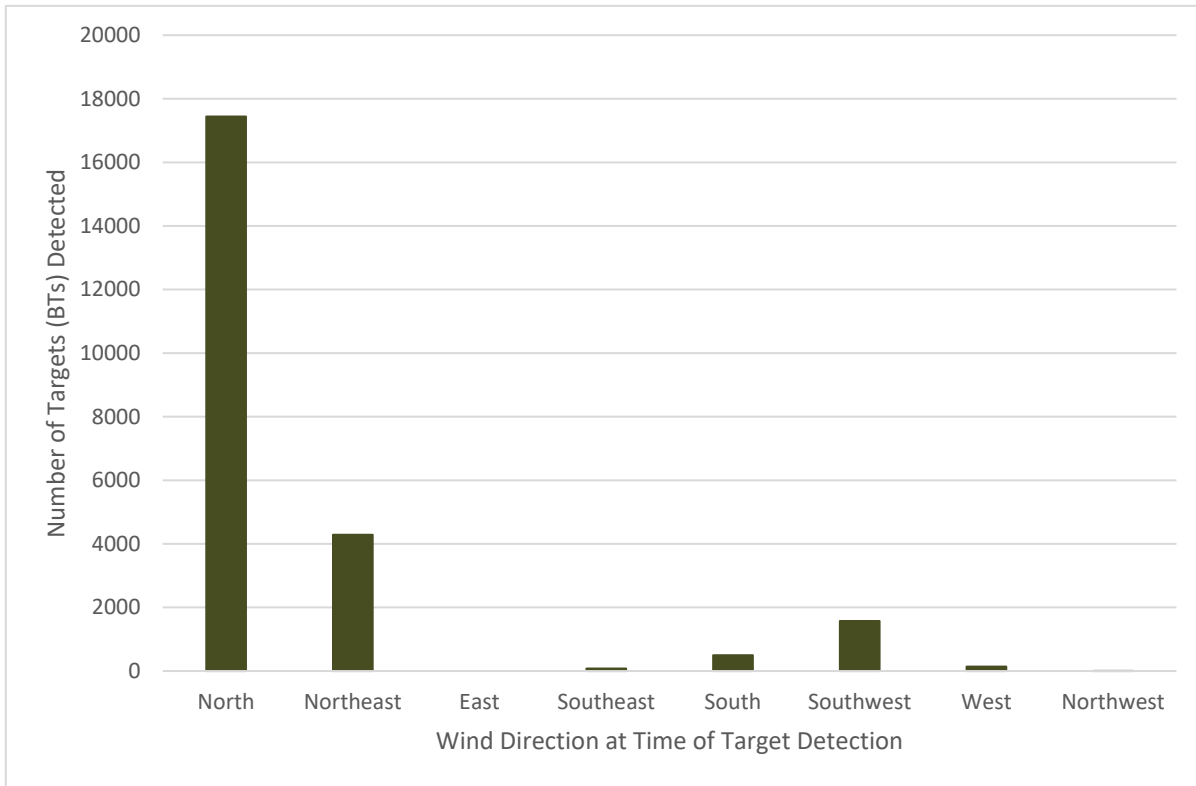


Figure 3.3: Wind Direction by Proportion of BTs Detected - Fall 2024

Most BTs were detected when wind speeds were between 12 to 19 km/hr (Figure 3.4). This result is not unexpected as birds prefer to fly during favorable wind conditions (Dossman et al., 2016). Higher wind speeds increase the flight speeds of migrating birds, but would not be so powerful as to shift birds off their migratory course (Alerstam, 2011; Dossman et al., 2016; Nussbaumer et al., 2022). Flying at reduced wind speeds may also explain why birds appeared to be less influenced by wind direction.

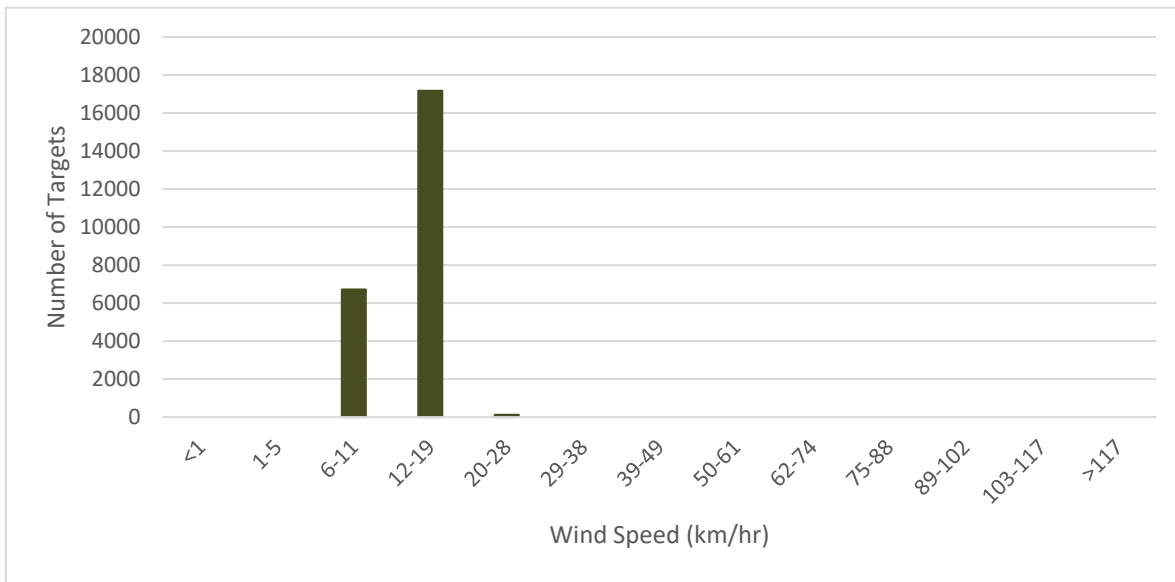


Figure 3.4: Wind Speed by Proportion of BTs Detected - Fall 2024

Temperature

Figure 3.5 shows the number of BTs detected based on daily mean temperatures for the 2024 fall monitoring period. Birds have been known to depend on consistent temperature cues to indicate migration departure, comparing daily mean temperature with ARS data may provide guidance on predicting peak migration events (Burnside et al., 2021; Klinner & Schmaljohann, 2020).

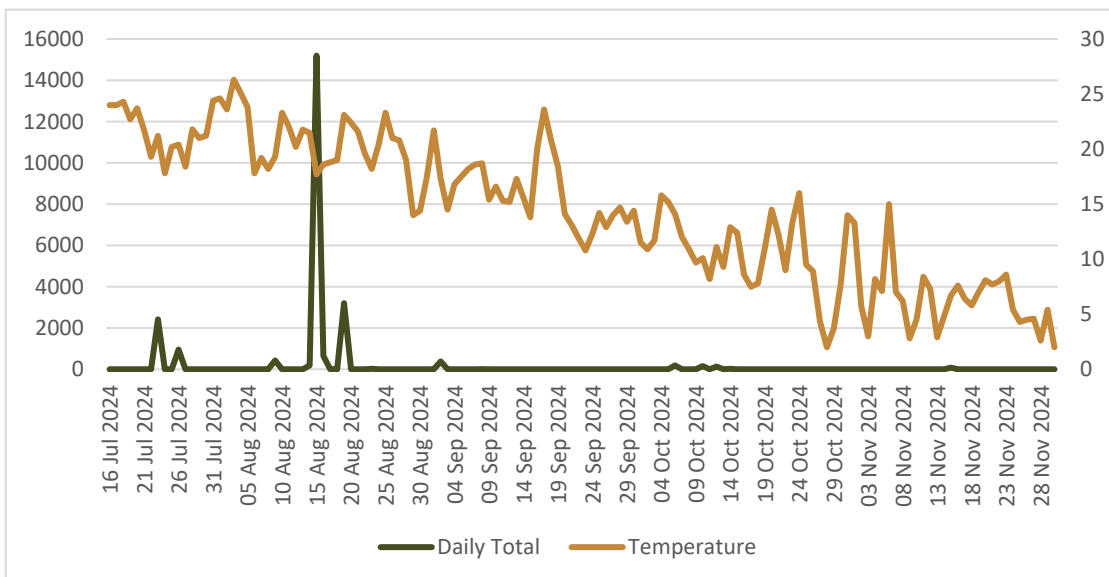


Figure 3.5: Number of Biological Targets Detected during the 2024 ARS Fall Monitoring Period Compared to Daily Mean Temperature (°C)

Most detections occurred when average temperatures were decreasing towards the seasonal low, and most detections occurred before temperatures dropped below 0°C. These results are expected as bird migration often occurs as temperatures drop during the fall season; however, climate change and unpredictable temperature fluctuations can cause migration delays (Brisson-Curadeau et al., 2020; La Sorte et al., 2015). This could help explain some of the later avian movements detected in the later fall months.

Lunar Cycle

The relationship between lunar cycle and daily number of BTs detected by the ARS during the 2024 monitoring period was quantified according to the percentage of exposed moonlight during each of moon's phases (i.e., new moon = 0%, first quarter = 50%, full moon = 100%, last quarter = 50%) (Figure 3.6).

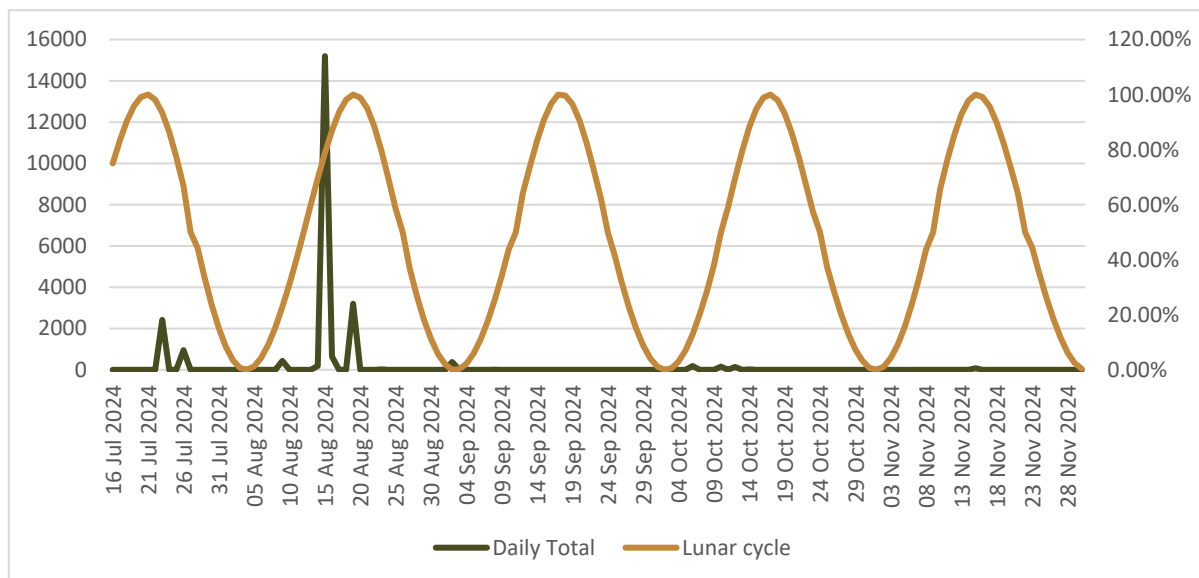


Figure 3.6: Number of Biological Targets Detected during the 2024 ARS Fall Monitoring Period Compared to Lunar Cycle

Most BTs were detected during lunar phases where the percentage of exposed moonlight was greater than 50% (Figure 3.6). These results suggest that nocturnal migrants may have taken advantage of the higher visibility provided by increased moonlight to forage in preparation for migration following periods of full moon (Norevik et al., 2019).

Migratory Bird Density

Table 3.2 details the target density of the ARS calculated using the volume of airspace scanned and the number of BTs detected within each height bin during the 2024 fall monitoring period. As the volume of airspace scanned by the radar beam increases the further a target is from the radar, higher height bins would be expected to detect a larger number of targets. To account for this, observing target density per cubic metre is useful in compensating for the varying volumes of airspace scanned at each height bin and in determining an accurate comparison of whether a specific height contains a high or low concentration of targets.

Table 3.2: Target Density – Fall 2024

Range Bin	Target Density (BT/km ³)
0-25	0
25-50	30
50-100	20
100-150	24
150-200	54
200-250	756
250-500	2,381
500-1000	4,512
1000-1500	3,513
1500-2000	1,266
2000-3000	0

During the fall 2024 monitoring period, the ARS detected the most targets in the 500 m to 1,000 m range bin. This is associated with the peaks in detections observed on August 15 and August 19, 2024. Approximately 42% of BTs (nBTs = 10,043) were within this range bin. The target density calculations show similar variation to target count, with target density increasing above 200 m, and peaking in the 500 m to 1,000 m range bin. Similar to target count, target density decreased above 1,000 m but remained higher than what was detected in the lower height bins (Figure 3.7).

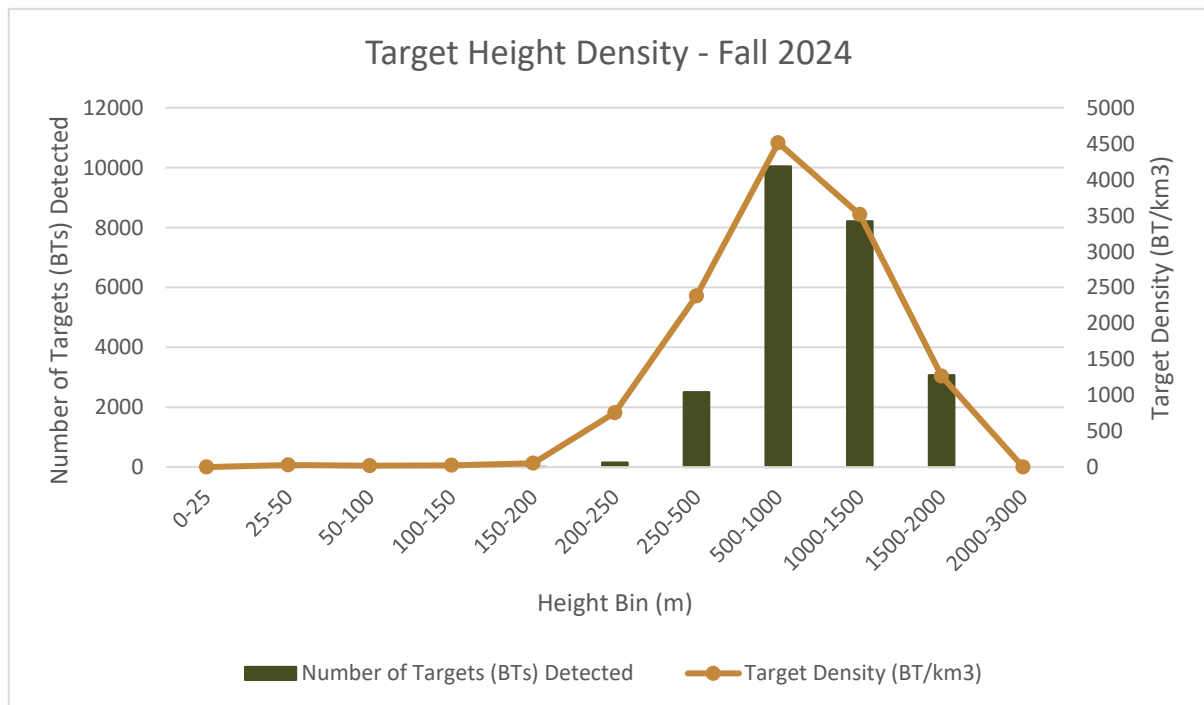


Figure 3.7: Target Height and Target Density – Fall 2024

Across all monitoring periods, target density was observed to be highest above 500 m and decreased after 1,000 m. Based on the height of the airspace the proposed turbines would occupy, birds flying at heights estimated between 25 m and 225 m would be at potential risk of interacting with the Project infrastructure; this is also referred as the rotor swept zone (calculated using Table 2.2). Approximately 1% of birds were detected in this height bin during the fall 2024 monitoring period (Figure 3.8).

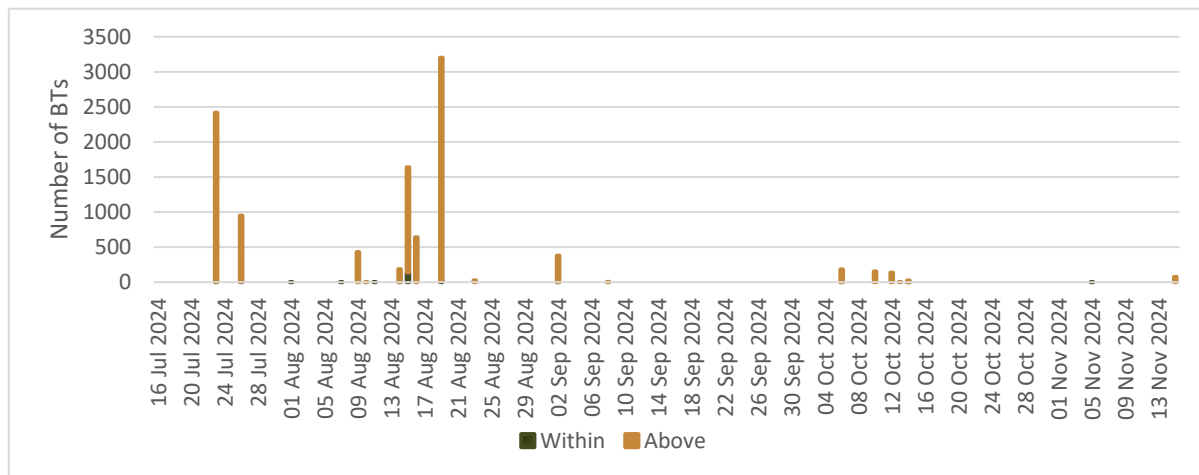


Figure 3.8: Number of Detections Within or Above the Rotor Swept Zone During the Fall 2024 Monitoring Period

3.2 Acoustic Monitoring Results

Data collected by the ARUs was analysed to provide peak detection periods and presence of species within the Study Area. Data from ARU3 (the ARU closest to the avian radar) was chosen to be analysed through Nighthawk. This data supplements the avian radar data by providing information on species composition of avifauna migrating over the Project. Data from the remaining four ARUs were analyzed through manual listened.

3.2.1 Nighthawk

2023 Spring Nighthawk Results

The Nighthawk model made a total of 5,529 detections from the ARU3 data during the 2023 spring monitoring period, the majority of which occurred in April and June (Table 3, Appendix B; Figure 3.9). Data from June was included in the analysis, although it is outside of the typical window for spring migration.

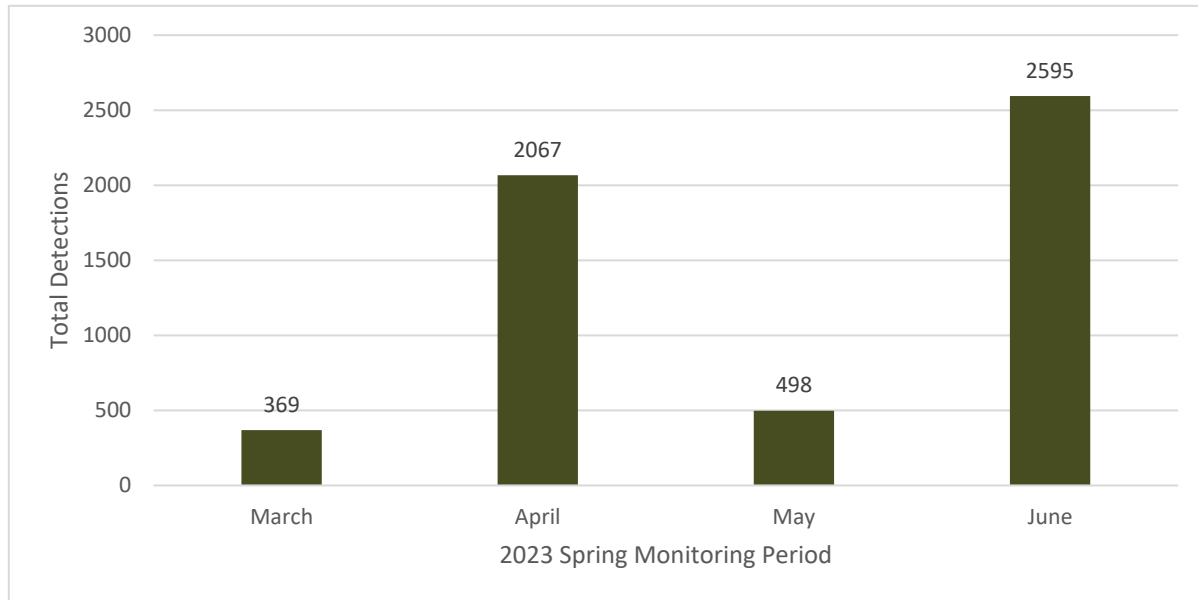


Figure 3.9: Detections made by Nighthawk from the ARU3 Data during the 2023 Spring Monitoring Period [PN1]

Most of the detections occurred from 20:00 to 00:00 and from 1:00 to 5:00, with the highest number of detections occurring within the 22:00 timeframe and 1:00 timeframe.

A subset of 215 detections was manually verified by Strum environmental scientists, and of those, 63 (29%) were correctly identified by Nighthawk (Table 3, Appendix B). Nighthawk was most successful at detecting American robin (*Turdus migratorius*), Canada warbler (*Cardellina canadensis*), hermit thrush (*Catharus guttatus*), and white-throated sparrow (*Zonotrichia albicollis*); all of which had a success rate of 90% or higher when a sample of detections was manually verified. Nighthawk also made 874 detections at the group level, 2,897 detections at the family level, and 1,487 detections at the order level, which are included in (Table 3.3). Detections were identified to the highest taxonomic level possible using Nighthawk. Table 3.5 was organized to avoid counting any given detection in more than one category (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Table 3.3: Summary of the 2023 Spring Monitoring Period Nighthawk Detections for ARU3

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American Pipit	8	8	0%	0.95
American Redstart	24	24	4%	0.89
American Robin	1	1	100%	1.00
Black-billed Cuckoo	1	1	0%	1.00
Black-throated Blue Warbler	23	23	0%	0.89

Bobolink	10	10	0%	0.99
Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Canada Warbler	1	1	100%	1.00
Chestnut-sided Warbler	39	31	0%	0.93
Common Yellowthroat	12	12	25%	1.00
Dark-eyed Junco	15	15	80%	0.99
Grasshopper Sparrow	1	1	0%	0.97
Greater Yellowlegs	7	7	0%	0.97
Green Heron	1	1	0%	1.00
Hermit Thrush	7	7	100%	1.00
Hooded Warbler	4	4	0%	0.93
Killdeer	3	3	100%	1.00
Ovenbird	2	2	0%	0.98
Red-breasted Nuthatch	2	2	0%	0.98
Savannah Sparrow	8	8	50%	0.99
Semipalmated Plover	1	1	0%	0.98
Short-billed Dowitcher	1	1	0%	1.00
Swainson's Thrush	18	17	0%	0.85
Upland Sandpiper	3	3	0%	0.99
White-crowned Sparrow	1	1	0%	1.00
White-throated Sparrow	105	31	100%	1.00
Nighthawk Group Name ⁽¹⁾	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
BUNT	1	0	N/A	N/A
BZWA	538	0	N/A	N/A
CUPS	5	0	N/A	N/A
DBUP	13	0	N/A	N/A
DESP	7	0	N/A	N/A
DEWA	1	0	N/A	N/A
SBUF	99	0	N/A	N/A
SFHS	53	0	N/A	N/A
SWLI	2	0	N/A	N/A
THSH	49	0	N/A	N/A
ZEEP	79	0	N/A	N/A
Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence

Ardeidae	1859	0	N/A	N/A
Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Calcariidae	2	0	N/A	N/A
Charadriidae	5	0	N/A	N/A
Cuculidae	6	0	N/A	N/A
Haematopodidae	2	0	N/A	N/A
Icteridae	5	0	N/A	N/A
Motacillidae	6	0	N/A	N/A
Parulidae	872	0	N/A	N/A
Passerellidae	51	0	N/A	N/A
Scolopacidae	66	0	N/A	N/A
Sittidae	1	0	N/A	N/A
Turdidae	22	0	N/A	N/A
Order Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Charadriiformes	27	0	N/A	N/A
Cuculiformes	1	0	N/A	N/A
Passeriformes	1420	0	N/A	N/A
Pelecaniformes	39	0	N/A	N/A

⁽¹⁾ Groupings of birds with similar NFCs.

Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

False positive detections can be attributed to an oversensitivity of the model in conjunction with noise interference from wind, vegetation, frogs, insects, and other environmental factors. Spring peeper frogs (*Pseudacris crucifer*) were noted as being a common source of error, since their calls closely resemble the nocturnal flight calls of avian species like the Swainson's thrush.

The number of confirmed positive vocalizations detected were similar in April (54%) and May (46%) with detections being consistent throughout the 2023 spring monitoring period (Figure 3.10).

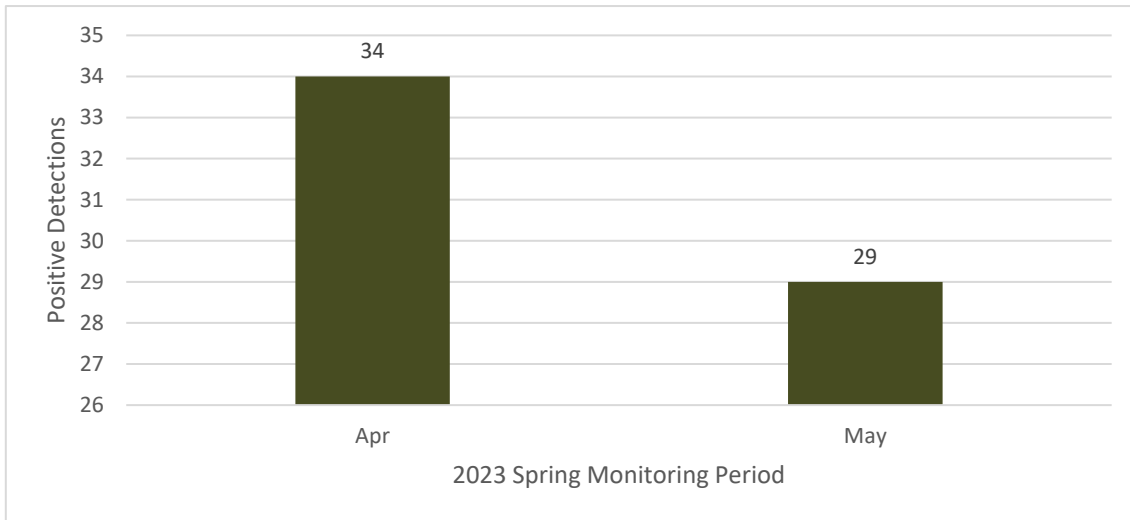


Figure 3.10: Positive Nighthawk Detections for ARU3 during the 2023 Spring Monitoring Period

There were no positive detections in March or June from the subset of detections that was manually verified.

Most of the positive detections occurred from 22:00 to 23:00 and from 05:00 to 07:00, with the highest detections occurring during the 05:00 to 07:00 timeframe (Figure 3.11). These findings are expected as most avian species begin and end nocturnal activity relatively close to sunset and sunrise times (Korpach et al., 2024; Van Doren et al., 2023). This is supported by the high number of detections occurring between 05:00 and 06:00, which coincided with the recorded sunrise times during the 2023 spring and early summer months (Time and Date, 2025).

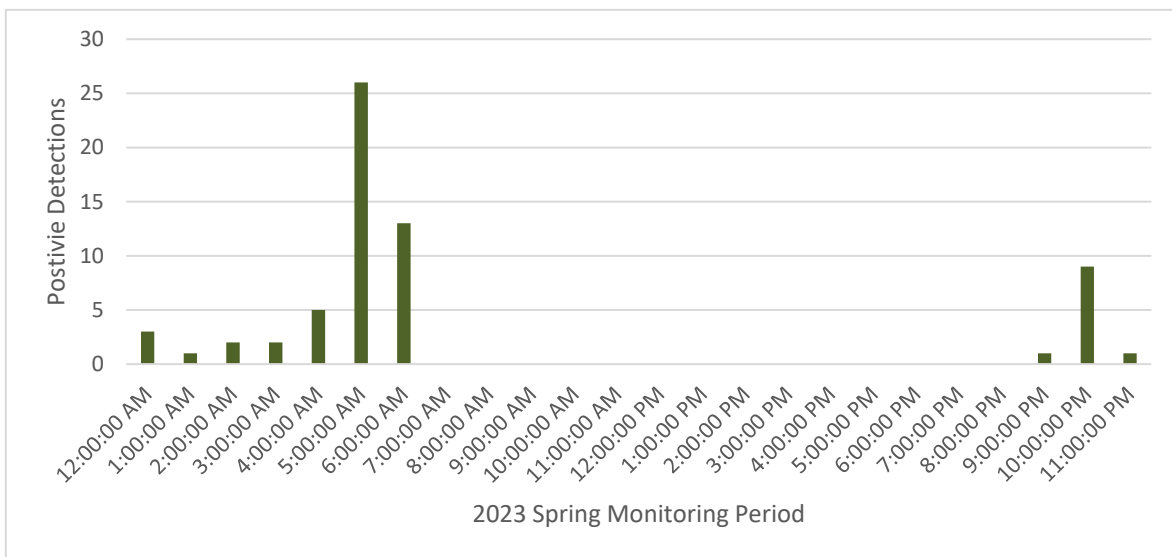


Figure 3.11: Timeframe of Positive Nighthawk Detections at ARU3 during the 2023 Spring Monitoring Period

Nine species were confirmed to have been positively detected by the model during the 2023 spring monitoring period.

Of these species, the most common were:

- White-throated sparrow
- Dark-eyed junco (*Junco hyemalis*)
- Hermit thrush
- Savannah sparrow (*Passerculus sandwichensis*)

Killdeer (*Charadrius vociferus*) was the only species of conservation interest (SOI) positively identified by Nighthawk (all detections made in early-April), and Canada warbler was the only species at risk (SAR) detected, on May 31. April was the month with the highest number of unique species detected (Figure 3.12).

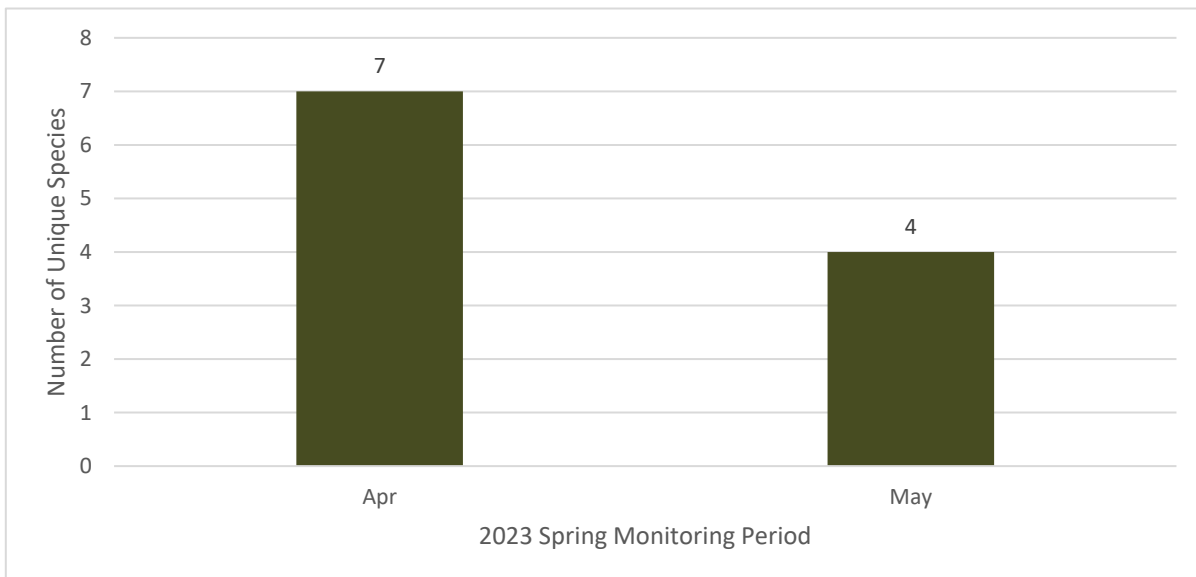


Figure 3.12: Nighthawk Species Richness at the ARU3 Monitoring Location during the 2023 Spring Monitoring Period.

2024 Fall Nighthawk Results

Nighthawk made 24,898 detections from the ARU3 data, most of which occurred in August (30%) and September (54%) (Table 4, Appendix B; Figure 3.13).

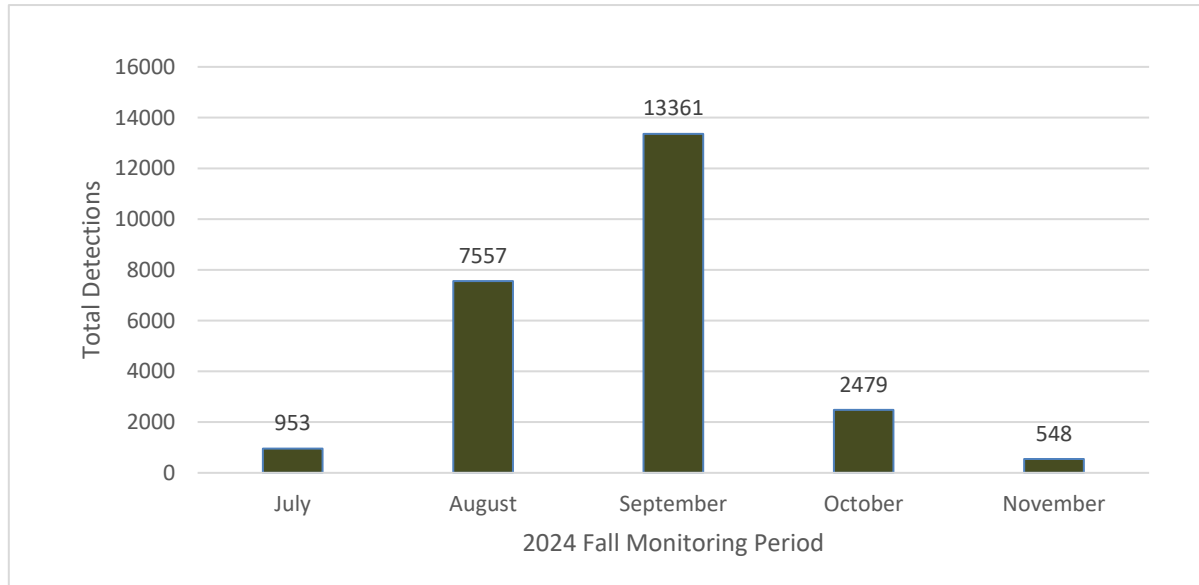


Figure 3.13: Detections made by Nighthawk from the ARU3 Data during the 2024 Fall Monitoring Period.

Most of the detections occurred from 21:00 to 22:00 and from 00:00 to 7:00, with the highest detections occurring within the 21:00 timeframe and 5:00 timeframe.

A subset of 843 detections was manually verified by Strum environmental scientists, and of those, 402 (48%) were correctly identified by Nighthawk (Table 4, Appendix B). Nighthawk was most successful at detecting American robin, black-and-white warbler (*Mniotilta varia*), common yellowthroat (*Geothlypis trichas*), dark-eyed junco, hermit thrush, mourning warbler (*Geothlypis philadelphia*), northern parula (*Setophaga americana*), palm warbler (*Setophaga palmarum*), and white-throated sparrow; all of which had a success rate of 90% or higher when a sample of detections were manually verified. Nighthawk also made 7,135 detections at the group level, 6,571 detections at the family level, and 6,995 detections at the order level (Table 3.4).

Table 3.4: Summary of the 2024 Fall Monitoring Period Nighthawk Detections for ARU3

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
American Pipit	32	30	0%	0.93
American Redstart	641	34	41%	0.90
American Robin	11	11	73%	1.00
American Tree Sparrow	8	8	0%	1.00
Black-and-white Warbler	142	30	93%	1.00
Black-billed Cuckoo	1	1	100%	1.00
Black Oystercatcher	1	1	0%	0.89
Bobolink	149	34	0%	0.99

Species Common Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Black-throated Blue Warbler	15	15	0%	0.89
Cape May Warbler	9	9	56%	0.99
Canada Warbler	29	29	62%	0.99
Chipping Sparrow	19	19	16%	0.94
Chestnut-sided Warbler	184	32	72%	0.95
Common Yellowthroat	213	36	94%	1.00
Dark-eyed Junco	65	35	100%	0.99
Grasshopper Sparrow	13	13	0%	0.99
Greater Yellowlegs	5	5	40%	0.93
Green Heron	4	4	50%	1.00
Hermit Thrush	24	24	100%	1.00
Hooded Warbler	57	33	0%	0.91
Indigo Bunting	1	1	0%	0.97
Killdeer	4	4	0%	1.00
Least Sandpiper	73	30	33%	1.00
Lincoln's Sparrow	8	8	25%	0.96
Mourning Warbler	28	28	100%	0.97
Northern Parula	41	29	97%	1.00
Northern Waterthrush	91	30	60%	1.00
Ovenbird	110	30	77%	0.96
Palm Warbler	15	15	93%	1.00
Red-breasted Nuthatch	2	2	0%	1.00
Rose-breasted Grosbeak	38	30	3%	0.99
Savannah Sparrow	99	31	81%	0.99
Scarlet Tanager	3	3	0%	1.00
Semipalmated Plover	11	11	0%	0.95
Short-billed Dowitcher	103	30	0%	0.99
Solitary Sandpiper	21	21	10%	0.95
Spotted Sandpiper	26	26	38%	0.99
Swainson's Thrush	828	34	9%	0.87
Upland Sandpiper	4	4	0%	0.99
Veery	23	23	35%	0.98
Vesper Sparrow	1	1	0%	1.00
White-crowned Sparrow	3	3	0%	0.99
White-throated Sparrow	1030	34	97%	0.99
Yellow-billed Cuckoo	12	12	8%	0.99

Nighthawk Group Name ⁽¹⁾	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
BUNT	6	0	N/A	N/A
BZWA	1761	0	N/A	N/A
CUPS	38	0	N/A	N/A
DBUP	220	0	N/A	N/A
DESP	103	0	N/A	N/A
DEWA	14	0	N/A	N/A
HSSP	6	0	N/A	N/A
MWAR	40	0	N/A	N/A
SBUF	561	0	N/A	N/A
SFHS	703	0	N/A	N/A
SWLI	369	0	N/A	N/A
THSH	929	0	N/A	N/A
ZEEP	2385	0	N/A	N/A
Family Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Ardeidae	37	0	N/A	N/A
Bombycillidae	7	0	N/A	N/A
Calcariidae	34	0	N/A	N/A
Cardinalidae	7	0	N/A	N/A
Charadriidae	91	0	N/A	N/A
Cuculidae	14	0	N/A	N/A
Haematopodidae	10	0	N/A	N/A
Motacillidae	13	0	N/A	N/A
Parulidae	4746	0	N/A	N/A
Passerellidae	861	0	N/A	N/A
Scolopacidae	377	0	N/A	N/A
Sittidae	5	0	N/A	N/A
Turdidae	250	0	N/A	N/A
Icteridae	119	0	N/A	N/A
Order Name	Total Detections	Number Manually Verified	Correct Detections (%)	Confidence
Charadriiformes	260	0	N/A	N/A
Cuculiformes	7	0	N/A	N/A
Passeriformes	6726	0	N/A	N/A
Pelecaniformes	2	0	N/A	N/A

⁽¹⁾ Groupings of birds with similar NFCs.

Each detection was identified to the highest taxonomic level possible, and detections were not double counted (i.e., if a detection was identified to species level, it was not also counted in the group, family, or order level categories).

Most of the confirmed positive detections occurred in August (41%) and September (36%), which represent peak fall migration movement. Positive detections began in July (8%) which likely represents the beginning of post-breeding dispersal and ended in October (15%) which likely signifies later migratory movement in the fall season (Figure 3.14). These detections represent peak fall migration for many species leaving Nova Scotia. There were no positive detections that occurred during November.

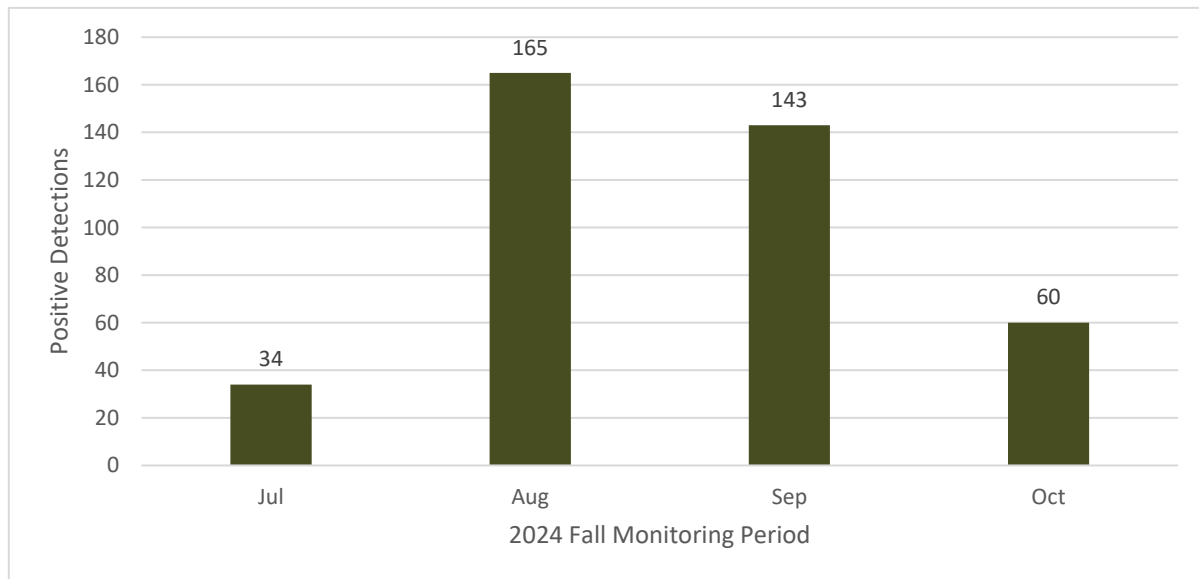


Figure 3.14: Positive Nighthawk Detections at ARU3 during the 2024 Fall Monitoring Period

The highest number of detections occurred from 21:00 to 22:00 and from 05:00 to 06:00 (Figure 3.15). Positive detections occurred consistently from 22:00 to 08:00 with average of 34 vocalizations occurring during the timeframe. In contrast to the findings within the 2023 dataset, detections occurred frequently throughout the night from 21:00 to 07:00, suggesting active nocturnal activity that may implied migratory movement.

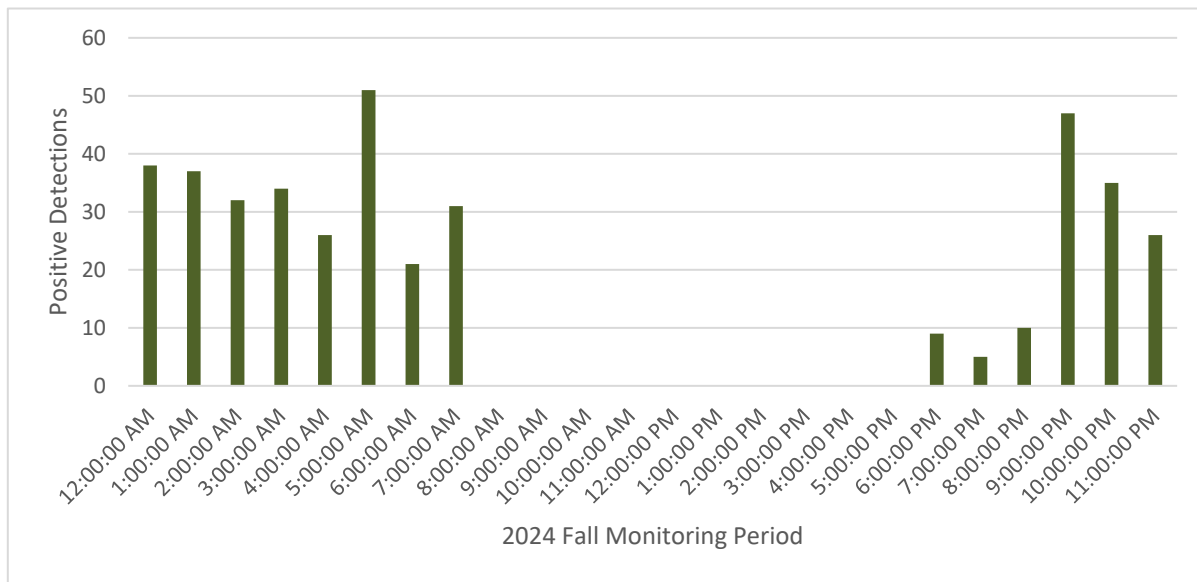


Figure 3.15: Timeframe of Positive Nighthawk Detections at ARU3 during the 2024 Fall Monitoring Period

During the 2024 fall monitoring period, 27 species were confirmed to have been positively detected by the model.

Of these species, the most common were:

- Dark-eyed junco
- Common yellowthroat
- White-throated sparrow
- Black-and-white warbler
- Mourning warbler

SOCI detected were:

- Cape May warbler (*Setophaga tigrina*)
- Greater yellowlegs (*Tringa melanoleuca*)
- Least sandpiper (*Calidris minutilla*)
- Rose-breasted grosbeak (*Pheucticus ludovicianus*)
- Spotted sandpiper (*Actitis macularius*)

There were 18 confirmed Canada warbler detections made between late-July and early-September. Canada warbler was the only SAR detected. Four species of migratory shorebird were detected during the 2024 fall monitoring period, consisting of spotted sandpiper (10), least sandpiper (10), greater yellowlegs (two) and solitary sandpiper (*Tringa solitaria*) (two). The frequency of individual shorebird detections was primarily focused to a 7-to-14-day window. Spotted sandpiper detections were primarily from July 15 to 21 with eight detections during this timeframe and some outlier detections occurring on August 13 and on September 3. The least

amount of sandpiper detections were made from August 3 to 15, with one detection on July 17 and two detections on September 4. Solitary sandpiper detections occurred on September 12 and 14 and greater yellowlegs detections occurred on July 26 and August 2. These detections suggest the movement of migrating shorebirds through the area between July and early-September.

Species richness during the 2024 fall monitoring period was three times higher that of the 2023 spring monitoring period, with 27 species detected compared to nine (Figure 3.16).

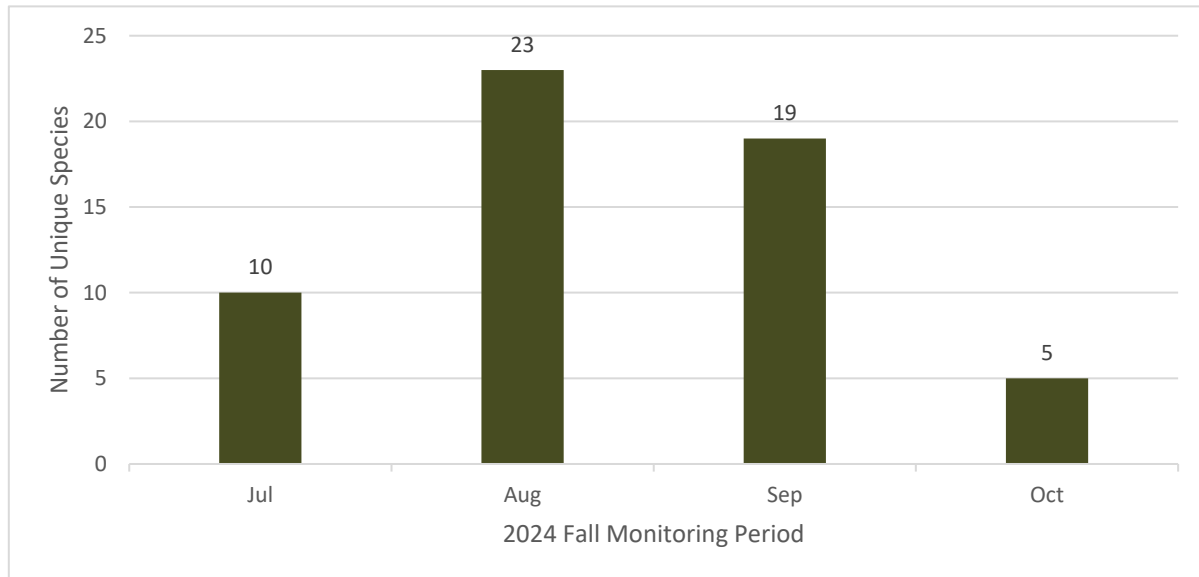


Figure 3.16: Nighthawk Species Richness at ARU3 during the 2024 Fall Monitoring Period

3.2.2 Manual Listening

2023 Spring Migration Manual Listening

During manual listening for the 2023 spring migration data, 287 individual birds were detected, representing 44 species (Table 5, Appendix B).

The most common species were:

- White-throated sparrow
- American robin
- Hermit thrush
- Yellow-rumped warbler (*Setophaga coronata*)

SOCI observed included boreal chickadee (*Poecile hudsonicus*), Canada jay (*Perisoreus canadensis*), pine siskin (*Spinus pinus*), purple finch (*Haemorhous purpureus*), and Wilson's snipe (*Gallinago delicata*). No SAR was observed during this period. Passerines accounted for 80% of the species and 94% of the individual birds observed.

Between mid-May to late-May, there was an increase in the number of unique species detected by the four ARUs, suggesting signs of peak spring migration into late May. It is noted that the morning period saw higher species richness than that of the evening period throughout May.

2024 Fall Migration Manual Listening

During manual listening for the 2024 fall migration data, 211 individual birds were detected, representing 41 species (Table 6, Appendix B).

The most common species were:

- Common grackle (*Quiscalus quiscula*)
- White-throated sparrow
- Blue jay (*Cyanocitta cristata*)
- Cedar waxwing (*Bombycilla cedrorum*)
- American crow (*Corvus brachyrhynchos*)

The two species of corvid (common grackle [*Quiscalus quiscula*] and blue jay) only appeared in large numbers in October and were in groups. Passerines accounted for 83% of the species and 95% of the individual birds observed. Many of the warblers detected were displaying their flight call, which indicates migratory behaviour.

SOCI detected were blackpoll warbler (*Setophaga striata*), Canada jay, cape may warbler, pine siskin, purple finch, and Wilson's snipe. One SAR, a solitary olive-sided flycatcher (*Contopus cooperi*), was detected on August 15 by ARU4 and was heard vocalizing its call note frequently. The timing of this observation makes it difficult to determine whether this bird was displaying breeding or migratory behaviour, as this species can often still be present on its breeding grounds in mid-August.

4.0 LIMITATIONS

4.1 Radar Data

Data collected by the avian radar helps provide useful data that can provide a greater understanding of migration events over the area of a proposed wind project as well as the magnitude of such movements. Data collected from the radar can also be used to determine the heights at which avian species tend to travel at during migration events and the potential risk of interactions with turbine blades. However, while most targets detected by the radars are assumed to be migratory birds, some targets may also be insects, bats or ground interference. The radar can also confuse precipitation with BTs, therefore days with large amounts of rain or snowfall were omitted from data analysis for this Project. While avian flight activity is generally reduced during periods of rainfall, avian species may still fly during these periods, but will not be accurately recorded by the radar (Gordo, 2007).

While the Simrad Halo 20 radar is useful for detecting individual BTs, it cannot infer the size of the target or any additional information on the species detected. Acoustic and field surveys are

therefore often necessary to supplement radar surveys to gain a greater understanding of which species the radars are detecting.

For the radars to determine if a detected target is a bird that target must stay in the radar's detection field for an extended period (approximately 4 seconds). Therefore, birds that only fly into the detection field momentarily will likely not be recorded by the radar. The duration that a target needs to be in the detection field to be considered a target can be reduced depending on the scope of the proposed project and location of the radar however, reducing the duration increases the likelihood of non avian targets being detected and recorded.

4.2 Nighthawk

The Nighthawk model was designed for the detection and identification of avian NFCs; however, not all birds migrate nocturnally. Finches, blackbirds, corvids, and swallows are examples of birds that primarily migrate during the day and may therefore go undetected by the model (Van Doren et al., 2023).

While some species' NFCs are distinctive, others can be very difficult to discern. In some instances, NFCs cannot be identified with certainty by models or by the human ear. The Nighthawk model attempts to address this limitation by identifying on a broader level (e.g., to the group, family, or order level) when it cannot confidently identify a nocturnal flight call to species level.

Furthermore, Nighthawk often attempts (unsuccessfully) to classify daytime songs and calls as NFCs. This is a common source of error near sunset and sunrise, when many birds are still actively singing. Noise from non-target sources may also impact the functionality of the model. Calls made by spring peeper frogs, for example, sound very similar to the nocturnal flight call of the Swainson's thrush and can mislead the model. Anthropogenic and environmental noise can also affect the model's accuracy.

The makers of Nighthawk preprogrammed the model with a set list of species it is capable of accurately detecting (82 species in total), and since this list cannot be manually modified, species cannot be added or removed. Common nighthawk (*Chordeiles minor*) is an example of a species that was missing from the preprogrammed Nighthawk list and could not be added manually.

5.0 STATEMENT OF QUALIFICATIONS AND LIABILITY

This Report (the "Report") has been prepared by Strum Consulting (the "Consultant") for the benefit of Upper Afton Wind Ltd. (the "Client") in accordance with the agreement between the Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations, and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations").
- represents the Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports.
- may be based on information provided to the Consultant which has not been independently verified.
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued.
- must be read as a whole and sections thereof should not be read out of such context.
- was prepared for the specific purposes described in the Report and the Agreement.
- in the case of subsurface, environmental, or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

Consultant will be entitled to rely upon the accuracy and completeness of information that was provided and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental, or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

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Should additional information become available, Strum requests that this information be brought to our attention immediately so we may re-assess the conclusions presented in this report. This report was prepared by Blake Fairclough, BTT, EPT., Environmental Scientist and Connor Nishikawa, Environmental Scientist, MSc., and was reviewed by Mark MacDonald, M.ScF., Senior Project Manager, Terrestrial Lead.

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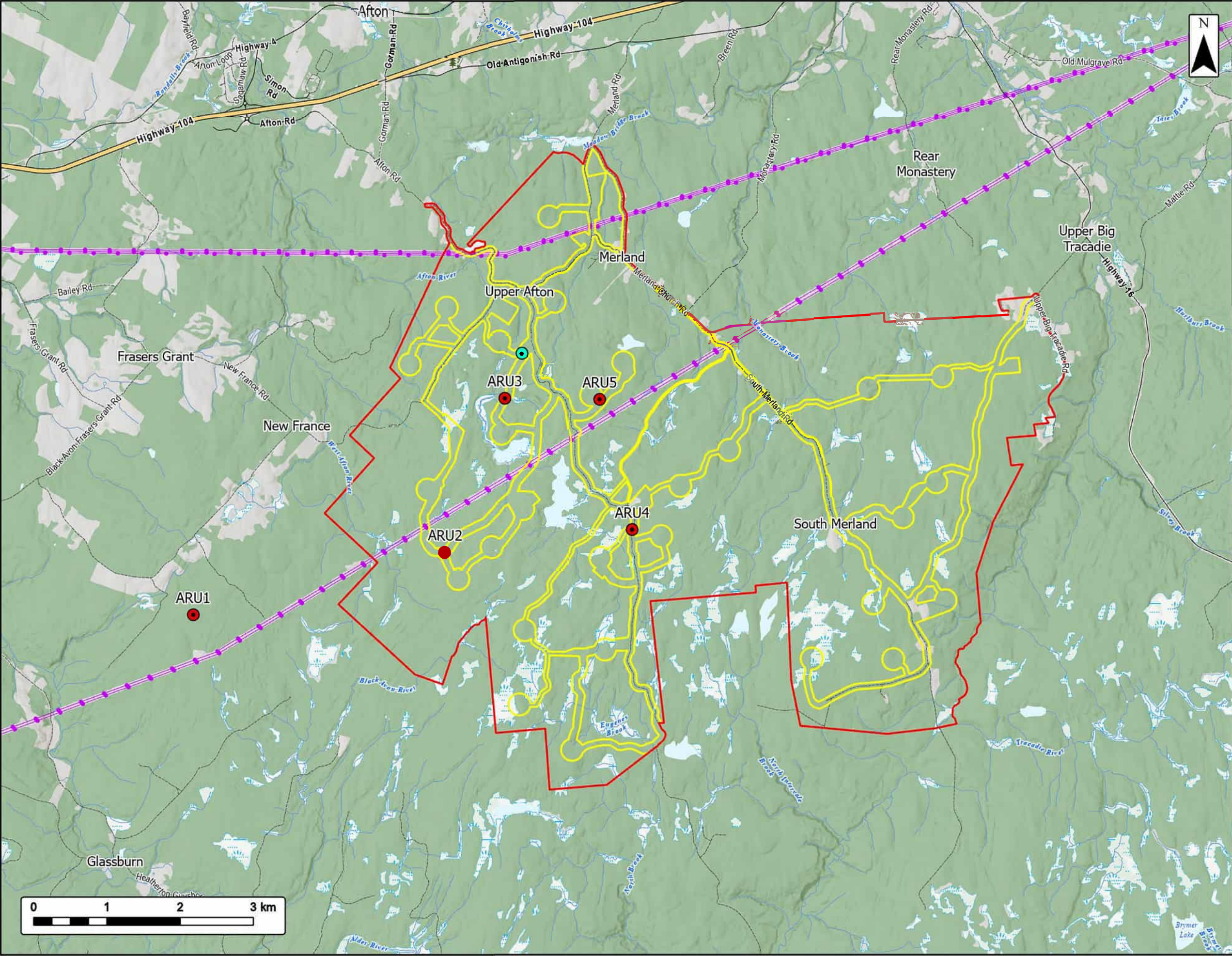
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APPENDIX A
DRAWING



Upper Afton Wind Project

Avian Radar and Acoustic Monitor Locations



Study Area

Assessment Area

Acoustic Monitor

Avian Radar System

Transportation

Trans-Canada Highway

Road

Unpaved Road

Utilities (Line)

Existing Transmission Lines

Water Features

Mapped Watercourses

Mapped Lakes and Rivers

Mapped Wetlands



Coordinate System: NAD 1983 CSRS UTM Zone 20N
Sources: Esri, NASA, NGA, USGS, Service Nova Scotia, GeoNOVA, SNSIS, NSNRR, ACCDC, ISA Canada, CNWI, HERE, Garmin

Date:	2026-02-13	Project #:	24-11145
Scale:	1:50,000	Drawing #:	1
Drawn By:	K. Wallace		
Checked By:	R. Hearn		



APPENDIX B
TABLES

Table 1: Species Detectable by Nighthawk - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name
American Redstart	<i>Setophaga ruticilla</i>
American Bittern	<i>Botaurus lentiginosus</i>
American Pipit	<i>Anthus rubescens</i>
American Robin	<i>Turdus migratorius</i>
American Tree Sparrow	<i>Spizelloides arborea</i>
Bicknell's Thrush	<i>Catharus bicknelli</i>
Black Oystercatcher	<i>Haematopus bachmani</i>
Black Skimmer	<i>Rynchops niger</i>
Black-and-white Warbler	<i>Mniotilta varia</i>
Black-bellied Plover	<i>Pluvialis squatarola</i>
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Brewer's Sparrow	<i>Spizella breweri</i>
Canada Warbler	<i>Cardellina canadensis</i>
Cape May Warbler	<i>Setophaga tigrina</i>
Cerulean Warbler	<i>Setophaga cerulea</i>
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>
Chipping Sparrow	<i>Spizella passerina</i>
Clay-colored Sparrow	<i>Spizella pallida</i>
Common Tern	<i>Sterna hirundo</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Dark-eyed Junco	<i>Junco hyemalis</i>
Dickcissel	<i>Spiza americana</i>
Eastern Meadowlark	<i>Sturnella magna</i>
Forster's Tern	<i>Sterna forsteri</i>
Golden-crowned Kinglet	<i>Regulus satrapa</i>
Golden-winged Warbler	<i>Vermivora chrysoptera</i>
Grasshopper Sparrow	<i>Ammodramus savannarum</i>
Gray-cheeked Thrush	<i>Catharus minimus</i>
Great Egret	<i>Ardea alba</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Green Heron	<i>Butorides virescens</i>
Harris's Sparrow	<i>Zonotrichia querula</i>

Table 1: Species Detectable by Nighthawk - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name
Henslow's Sparrow	<i>Centronyx henslowii</i>
Hermit Thrush	<i>Catharus guttatus</i>
Hermit Warbler	<i>Setophaga occidentalis</i>
Hooded Warbler	<i>Setophaga citrina</i>
Indigo Bunting	<i>Passerina cyanea</i>
Kentucky Warbler	<i>Geothlypis formosa</i>
Killdeer	<i>Charadrius vociferus</i>
Kirtland's Warbler	<i>Setophaga kirtlandii</i>
Lapland Longspur	<i>Calcarius lapponicus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Least Bittern	<i>Ixobrychus exilis</i>
Least Sandpiper	<i>Calidris minutilla</i>
Lesser Yellowlegs	<i>Tringa flavipes</i>
Lincoln's Sparrow	<i>Melospiza lincolni</i>
MacGillivray's Warbler	<i>Geothlypis tolmiei</i>
Mourning Warbler	<i>Geothlypis philadelphia</i>
Nashville Warbler	<i>Leiothlypis ruficapilla</i>
Northern Parula	<i>Setophaga americana</i>
Northern Waterthrush	<i>Parkesia noveboracensis</i>
Orchard Oriole	<i>Icterus spurius</i>
Ovenbird	<i>Seiurus aurocapilla</i>
Painted Bunting	<i>Passerina ciris</i>
Palm Warbler	<i>Setophaga palmarum</i>
Red-breasted Nuthatch	<i>Sitta canadensis</i>
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Scarlet Tanager	<i>Piranga olivacea</i>
Seaside Sparrow	<i>Ammospiza maritima</i>
Semipalmated Plover	<i>Charadrius semipalmatus</i>
Short-billed Dowitcher	<i>Limnodromus griseus</i>
Solitary Sandpiper	<i>Tringa solitaria</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Sprague's Pipit	<i>Anthus spragueii</i>
Summer Tanager	<i>Piranga rubra</i>
Swainson's Thrush	<i>Catharus ustulatus</i>

Table 1: Species Detectable by Nighthawk - Upper Afton Wind Project

Project # 24-11145

Common Name	Scientific Name
Upland Sandpiper	<i>Bartramia longicauda</i>
Veery	<i>Catharus fuscescens</i>
Vesper Sparrow	<i>Poocetes gramineus</i>
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
White-throated Sparrow	<i>Zonotrichia albicollis</i>
Wilson's Snipe	<i>Gallinago delicata</i>
Wilson's Warbler	<i>Cardellina pusilla</i>
Wood Thrush	<i>Hylocichla mustelina</i>
Worm-eating Warbler	<i>Helmitheros vermivorum</i>
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
Yellow-rumped Warbler	<i>Setophaga coronata</i>
Yellow-throated Warbler	<i>Setophaga dominica</i>

Table 2: 2024 Fall Radar Monitoring Period - Upper Afton Wind Project

Project # 24-11145

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Daily Total
16 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Jul 2024	0	0	0	3	1	2	29	666	1262	455	0	2418
24 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Jul 2024	0	0	1	0	1	3	56	540	286	63	0	950
27 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Jul 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Aug 2024	0	1	0	0	0	0	0	0	0	0	0	1
02 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Aug 2024	0	0	1	0	0	0	0	0	0	0	0	1
08 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Aug 2024	0	0	0	0	0	0	1	14	213	202	0	430
10 Aug 2024	0	0	0	0	0	0	0	0	0	1	0	1
11 Aug 2024	0	1	0	0	0	0	0	0	0	0	0	1
12 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Aug 2024	0	1	0	0	0	0	21	142	22	0	0	186
15 Aug 2024	0	0	0	0	7	132	1968	6418	4897	1772	0	15194
16 Aug 2024	0	0	0	0	0	0	0	164	288	188	0	640
17 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: 2024 Fall Radar Monitoring Period - Upper Afton Wind Project

Project # 24-11145

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Daily Total
18 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Aug 2024	0	0	0	0	1	17	356	1588	962	278	0	3202
20 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Aug 2024	0	0	0	0	0	0	0	12	8	6	0	26
24 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Aug 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Sep 2024	0	0	0	0	1	0	11	195	133	39	0	379
03 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Sep 2024	0	0	0	0	0	0	0	1	3	1	0	5
09 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: 2024 Fall Radar Monitoring Period - Upper Afton Wind Project

Project # 24-11145

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Daily Total
20 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
23 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Sep 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
06 Oct 2024	0	0	2	0	0	1	23	153	4	0	0	183
07 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Oct 2024	0	0	0	0	0	0	7	50	52	45	0	154
11 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Oct 2024	0	0	0	0	0	0	17	49	53	17	0	136
13 Oct 2024	0	0	0	0	0	0	0	0	1	1	0	2
14 Oct 2024	0	0	0	0	0	1	3	14	6	0	0	24
15 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
16 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
17 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
18 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
19 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
20 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
21 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
22 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: 2024 Fall Radar Monitoring Period - Upper Afton Wind Project

Project # 24-11145

Date	0-25	25-50	50-100	100-150	150-200	200-250	250-500	500-1000	1000-1500	1500-2000	2000-3000	Daily Total
23 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
24 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
25 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
26 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
27 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
28 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
29 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
30 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
31 Oct 2024	0	0	0	0	0	0	0	0	0	0	0	0
01 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
02 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
03 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
04 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
05 Nov 2024	0	0	0	2	0	0	0	0	0	0	0	2
06 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
07 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
08 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
09 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
10 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
11 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
12 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
13 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
14 Nov 2024	0	0	0	0	0	0	0	0	0	0	0	0
15 Nov 2024	0	0	0	0	0	0	13	37	21	4	0	75
Number of Targets (BTs) Detected	0	3	4	5	11	156	2505	10043	8211	3072	0	24010
Aispace Scanned (km3)	0.1015	0.1016	0.2036	0.2043	0.2052	0.2063	1.052	2.226	2.337	2.426	3.774	12.8375
Target Density (BT/km3)	0	29.527559	19.646365	24.473813	53.606238	756.18032	2381.1787	4511.6801	3513.4788	1266.2819	0	1870.30185

Table 3: 2023 Spring Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
57.4	60.4	0	11025	Charadriiformes	0.98113936	Charadriidae	0.99955744			killde	0.9999968	killde	0.999996781	2023-04-04	38:57.4	Y
45.6	47	0	11025	Charadriiformes	0.9773033	Charadriidae	0.9992889			killde	0.99999344	killde	0.999993443	2023-04-05	18:45.6	Y
63.6	65.4	0	11025	Charadriiformes	0.98103666	Charadriidae	0.99959916			killde	0.9999975	killde	0.999997497	2023-04-05	19:03.6	Y
561.2	563	0	11025	Passeriformes	0.9644089	Passerellidae	0.99341416			daejun	0.9934915	daejun	0.993491471	2023-04-09	12:21.2	Y
541.2	543.8	0	11025	Passeriformes	0.9696988	Passerellidae	0.9948573			daejun	0.99659425	daejun	0.99659425	2023-04-09	12:01.2	Y
571.6	573	0	11025	Passeriformes	0.9703782	Passerellidae	0.9951881			daejun	0.996636	daejun	0.996635973	2023-04-09	12:31.6	Y
592.8	594.8	0	11025	Passeriformes	0.96948683	Passerellidae	0.9949779			daejun	0.9966363	daejun	0.996636271	2023-04-09	12:52.8	Y
491.4	493	0	11025	Passeriformes	0.97199136	Passerellidae	0.9955318			daejun	0.99698	daejun	0.996980011	2023-04-09	11:11.4	Y
413	414.8	0	11025	Passeriformes	0.97206926	Passerellidae	0.9955545			daejun	0.9969772	daejun	0.99697721	2023-04-10	11:53.0	Y
417.8	419.2	0	11025	Passeriformes	0.95741457	Passerellidae	0.9934975			daejun	0.99421245	daejun	0.994212449	2023-04-10	11:57.8	Y
469	470.4	0	11025	Passeriformes	0.9687038	Passerellidae	0.99510866			daejun	0.9966577	daejun	0.996657729	2023-04-10	12:49.0	Y
346	347.6	0	11025	Passeriformes	0.97009677	Turdidae	0.9557787			amerob	0.9999746	amerob	0.999974608	2023-04-11	11:46.0	Y
0.6	3.4	0	11025	Passeriformes	0.97222733	Passerellidae	0.9955863			daejun	0.9970095	daejun	0.997009516	2023-04-11	06:00.6	Y
4.2	6	0	11025	Passeriformes	0.9721316	Passerellidae	0.9955544			daejun	0.9969913	daejun	0.996991277	2023-04-11	06:04.2	Y
152.2	154	0	11025	Passeriformes	0.97207963	Passerellidae	0.99549884	SFHS	0.9898503	whtspa	0.99210125	whtspa	0.992101252	2023-04-11	08:32.2	Y
303.2	304.8	0	11025	Passeriformes	0.97202444	Passerellidae	0.99546224	SFHS	0.9898358	whtspa	0.9973802	whtspa	0.997380197	2023-04-11	11:03.2	Y
390.2	392.2	0	11025	Passeriformes	0.9719096	Turdidae	0.9589417	THSH	0.945958	herthr	0.99999905	herthr	0.999999046	2023-04-20	24:30.2	Y
38.4	40.2	0	11025	Passeriformes	0.97190386	Passerellidae	0.9953734	DESP	0.99099755	savspa	0.99747086	savspa	0.997470856	2023-04-23	03:38.4	Y
469.6	471.4	0	11025	Passeriformes	0.9721932	Passerellidae	0.9955384	SFHS	0.9901142	whtspa	0.9985668	whtspa	0.998566806	2023-04-23	10:49.6	Y
93.8	95.4	0	11025	Passeriformes	0.9721897	Passerellidae	0.99550337	SFHS	0.9898835	whtspa	0.9984041	whtspa	0.998404086	2023-04-23	44:33.8	Y
102.4	104	0	11025	Passeriformes	0.9688534	Passerellidae	0.994383	SFHS	0.9855541	whtspa	0.99728835	whtspa	0.997288346	2023-04-23	44:42.4	Y
108.8	110.6	0	11025	Passeriformes	0.97162086	Passerellidae	0.9954014	SFHS	0.9892931	whtspa	0.9982601	whtspa	0.998260081	2023-04-23	44:48.8	Y
405.2	406.6	0	11025	Passeriformes	0.94938195	Passerellidae	0.99233234			daejun	0.9925275	daejun	0.992527485	2023-04-25	50:45.2	Y
483.2	485	0	11025	Passeriformes	0.97169197	Passerellidae	0.99541134			daejun	0.9969216	daejun	0.996921599	2023-04-25	52:03.2	Y
276	277.8	0	11025	Passeriformes	0.97207445	Passerellidae	0.99548584	DESP	0.9917149	savspa	0.998386	savspa	0.998386025	2023-04-28	33:36.0	Y
301.4	303	0	11025	Passeriformes	0.96925676	Parulidae	0.9499447	BZWA	0.96427673	comyel	0.9996063	comyel	0.999606311	2023-04-29	54:01.4	Y
450.6	452	0	11025	Passeriformes	0.9706759	Passerellidae	0.99531144	DESP	0.99156004	savspa	0.9980107	savspa	0.998010695	2023-04-29	56:30.6	Y
6.8	8.2	0	11025	Passeriformes	0.9637996	Passerellidae	0.9937118	DESP	0.9617012	savspa	0.987326	savspa	0.987326026	2023-04-29	11:06.8	Y
434.6	436.2	0	11025	Passeriformes	0.9680209	Passerellidae	0.99357295	SFHS	0.9835144	whtspa	0.9963439	whtspa	0.996343911	2023-04-29	38:14.6	Y
92.8	94.6	0	11025	Passeriformes	0.97222316	Passerellidae	0.9955805	SFHS	0.9901633	whtspa	0.99855334	whtspa	0.998553336	2023-04-29	12:32.8	Y
265.4	266.8	0	11025	Passeriformes	0.95864046	Parulidae	0.92379785	BZWA	0.9216418	comyel	0.99982834	comyel	0.999828339	2023-04-30	35:25.4	Y
473	474.6	0	11025	Passeriformes	0.95008606	Parulidae	0.91998315	BZWA	0.9545456	comyel	0.9999765	comyel	0.999976516	2023-04-30	19:53.0	Y
453.2	455	0	11025	Passeriformes	0.97215456	Passerellidae	0.9954787	SFHS	0.98982847	whtspa	0.9981558	whtspa	0.998155773	2023-04-30	58:33.2	Y
159.2	161	0	11025	Passeriformes	0.968472	Passerellidae	0.9946478	SFHS	0.9878983	whtspa	0.9975865	whtspa	0.997586489	2023-04-30	33:39.2	Y
199.8	201.2	0	11025	Passeriformes	0.96772546	Turdidae	0.95610356	THSH	0.9434177	herthr	0.9999987	herthr	0.999998689	2023-05-27	05:19.8	Y
201.8	203.2	0	11025	Passeriformes	0.96871793	Turdidae	0.94711286	THSH	0.9315637	herthr	0.99999857	herthr	0.999998569	2023-05-27	05:21.8	Y
225	226.4	0	11025	Passeriformes	0.9720852	Turdidae	0.95928407	THSH	0.9466524	herthr	0.9999989	herthr	0.999998927	2023-05-27	05:45.0	Y
228.6	230	0	11025	Passeriformes	0.96833825	Turdidae	0.95355856	THSH	0.9388261	herthr	0.9999958	herthr	0.999995828	2023-05-27	05:48.6	Y
236.6	238	0	11025	Passeriformes	0.97153485	Turdidae	0.95883393	THSH	0.9458248	herthr	0.9999988	herthr	0.999998808	2023-05-27	05:56.6	Y
242.8	244.2	0	11025	Passeriformes	0.9652092	Turdidae	0.95017534	THSH	0.93580925	herthr	0.9999951	herthr	0.999995112	2023-05-27	06:02.8	Y
306.8	308.2	0	11025	Passeriformes	0.9638675	Passerellidae	0.9926783	SFHS	0.9852681	whtspa	0.996033	whtspa	0.996033013	2023-05-27	07:06.8	Y

Table 3: 2023 Spring Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
315.2	318	0	11025	Passeriformes	0.9710127	Passerellidae	0.9952394	SFHS	0.98988616	whtspa	0.9983455	whtspa	0.998345494	2023-05-27	07:15.2	Y
360.6	365.4	0	11025	Passeriformes	0.9667582	Passerellidae	0.99440163	SFHS	0.98941046	whtspa	0.99839944	whtspa	0.998399436	2023-05-27	08:00.6	Y
370.2	372.8	0	11025	Passeriformes	0.9717425	Passerellidae	0.99544084	SFHS	0.9897942	whtspa	0.9975969	whtspa	0.99759692	2023-05-27	08:10.2	Y
376	379.4	0	11025	Passeriformes	0.9716555	Passerellidae	0.9948494	SFHS	0.9895275	whtspa	0.9982607	whtspa	0.998260677	2023-05-27	08:16.0	Y
517	519.8	0	11025	Passeriformes	0.9720358	Passerellidae	0.9953288	SFHS	0.9899366	whtspa	0.9983158	whtspa	0.998315811	2023-05-27	10:37.0	Y
523.2	526	0	11025	Passeriformes	0.97171897	Passerellidae	0.99539125	SFHS	0.9893309	whtspa	0.9980921	whtspa	0.998092115	2023-05-27	10:43.2	Y
530.6	533.6	0	11025	Passeriformes	0.97198325	Passerellidae	0.99519134	SFHS	0.98968863	whtspa	0.9984786	whtspa	0.998478591	2023-05-27	10:50.6	Y
534.6	536.4	0	11025	Passeriformes	0.9721041	Passerellidae	0.99552995	SFHS	0.99010986	whtspa	0.99848443	whtspa	0.998484433	2023-05-27	10:54.6	Y
539.6	543	0	11025	Passeriformes	0.9722331	Passerellidae	0.9955804	SFHS	0.9900967	whtspa	0.9983929	whtspa	0.99839288	2023-05-27	10:59.6	Y
545.2	546.6	0	11025	Passeriformes	0.94944245	Passerellidae	0.9869797	SFHS	0.9754303	whtspa	0.9932209	whtspa	0.993220925	2023-05-27	11:05.2	Y
551.6	553.2	0	11025	Passeriformes	0.97065836	Passerellidae	0.99476963	SFHS	0.98880893	whtspa	0.99774253	whtspa	0.997742534	2023-05-27	11:11.6	Y
556.8	558.4	0	11025	Passeriformes	0.9709952	Passerellidae	0.9951115	SFHS	0.9890894	whtspa	0.99828255	whtspa	0.998282552	2023-05-27	11:16.8	Y
582.4	584.2	0	11025	Passeriformes	0.9700228	Passerellidae	0.99505866	SFHS	0.9895195	whtspa	0.99816126	whtspa	0.998161256	2023-05-27	11:42.4	Y
584.4	587.4	0	11025	Passeriformes	0.9721725	Passerellidae	0.9955455	SFHS	0.9900596	whtspa	0.9977101	whtspa	0.997710109	2023-05-27	11:44.4	Y
593.4	595.2	0	11025	Passeriformes	0.96015507	Passerellidae	0.9878324	SFHS	0.9811779	whtspa	0.99640733	whtspa	0.99640733	2023-05-27	11:53.4	Y
373.4	375.2	0	11025	Passeriformes	0.97220266	Parulidae	0.95642865			amered	0.9032345	amered	0.903234482	2023-05-28	49:13.4	Y
201.4	203	0	11025	Passeriformes	0.97115636	Passerellidae	0.99528486	SFHS	0.98897845	whtspa	0.99695337	whtspa	0.996953368	2023-05-29	47:21.4	Y
222.6	224.2	0	11025	Passeriformes	0.92762965	Passerellidae	0.9878578	SFHS	0.97831297	whtspa	0.98414654	whtspa	0.984146535	2023-05-29	47:42.6	Y
233	234.8	0	11025	Passeriformes	0.97143847	Passerellidae	0.99491346	SFHS	0.9896661	whtspa	0.99800414	whtspa	0.998004138	2023-05-29	47:53.0	Y
246	247.8	0	11025	Passeriformes	0.9586251	Passerellidae	0.9889607	SFHS	0.9773556	whtspa	0.9896144	whtspa	0.989614427	2023-05-29	48:06.0	Y
249.4	251.2	0	11025	Passeriformes	0.9697168	Passerellidae	0.99445087	SFHS	0.98845565	whtspa	0.9976367	whtspa	0.997636676	2023-05-29	48:09.4	Y
300	301.8	0	11025	Passeriformes	0.9719971	Parulidae	0.9555734			canwar	0.9967674	canwar	0.996767402	2023-05-31	51:00.0	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
451.2	452.6	0	11025	Passeriformes	0.9570387	Turdidae	0.9341257	THSH	0.9041416	herthr	0.99999785	herthr	0.999997854	2024-07-10	23:31.2	Y
458.6	459.8	0	11025	Passeriformes	0.96541446	Turdidae	0.95120573	THSH	0.9348803	herthr	0.99999845	herthr	0.99999845	2024-07-10	23:38.6	Y
394.6	396	0	11025	Passeriformes	0.9338247	Turdidae	0.932506	THSH	0.9088756	herthr	0.99999595	herthr	0.999995947	2024-07-14	19:34.6	Y
437.4	439	0	11025	Charadriiformes	0.98147213	Scolopacidae	0.9957141			sposan	0.9986659	sposan	0.998665929	2024-07-15	39:17.4	Y
350.8	352.2	0	11025	Charadriiformes	0.92431664	Scolopacidae	0.97544026			leasan	0.9999527	leasan	0.999952674	2024-07-17	56:50.8	Y
538	539.4	0	11025	Charadriiformes	0.9774418	Scolopacidae	0.9941684			sposan	0.9978613	sposan	0.997861326	2024-07-17	59:58.0	Y
597.4	598.8	0	11025	Charadriiformes	0.98068076	Scolopacidae	0.99529344			sposan	0.9987533	sposan	0.998753309	2024-07-18	39:57.4	Y
356.6	357.8	0	11025	Passeriformes	0.9711186	Turdidae	0.9573107	THSH	0.9432412	herthr	0.99999833	herthr	0.999998331	2024-07-19	14:56.6	Y
406.8	409	0	11025	Charadriiformes	0.98023957	Scolopacidae	0.9950924			sposan	0.9994973	sposan	0.999497294	2024-07-21	53:46.8	Y
420.8	422.8	0	11025	Charadriiformes	0.9798371	Scolopacidae	0.9948808			sposan	0.9993401	sposan	0.999340117	2024-07-21	54:00.8	Y
437.8	439.6	0	11025	Charadriiformes	0.9811591	Scolopacidae	0.9953264			sposan	0.9992538	sposan	0.999253809	2024-07-21	54:17.8	Y
442	444	0	11025	Charadriiformes	0.9807802	Scolopacidae	0.99501413			sposan	0.9993487	sposan	0.9993487	2024-07-21	54:22.0	Y
445	446.8	0	11025	Charadriiformes	0.98116577	Scolopacidae	0.995408			sposan	0.9994764	sposan	0.999476373	2024-07-21	54:25.0	Y
342.2	343.6	0	11025	Passeriformes	0.9627352	Turdidae	0.9316442	THSH	0.9042273	herthr	0.9998259	herthr	0.999825895	2024-07-24	09:42.2	Y
407.2	409	0	11025	Passeriformes	0.9721814	Parulidae	0.95554465			canwar	0.9974486	canwar	0.997448623	2024-07-25	30:47.2	Y
431.8	433.4	0	11025	Passeriformes	0.97216505	Parulidae	0.95593745			canwar	0.99532557	canwar	0.995325565	2024-07-25	31:11.8	Y
245.2	247	0	11025	Charadriiformes	0.9803177	Scolopacidae	0.9947766			greyel	0.98454016	greyel	0.984540164	2024-07-26	06:05.2	Y
321.8	323.6	0	11025	Passeriformes	0.971686	Passerellidae	0.9951031	SFHS	0.98931843	whtspa	0.99801683	whtspa	0.998016834	2024-07-28	26:21.8	Y
385	386.8	0	11025	Passeriformes	0.91543	Passerellidae	0.9697603	SFHS	0.96961707	whtspa	0.98780304	whtspa	0.987803042	2024-07-28	27:25.0	Y
425.8	427	0	11025	Passeriformes	0.96809095	Passerellidae	0.99443495	SFHS	0.98465216	whtspa	0.9951408	whtspa	0.995140791	2024-07-28	28:05.8	Y
573.2	574.8	0	11025	Passeriformes	0.96557707	Passerellidae	0.9881615	SFHS	0.9780557	whtspa	0.99452704	whtspa	0.994527042	2024-07-28	30:33.2	Y
295.2	296.6	0	11025	Passeriformes	0.96690434	Parulidae	0.94874436	BZWA	0.9785266	comyel	0.9939558	comyel	0.993955791	2024-07-29	24:55.2	Y
17	18.4	0	11025	Passeriformes	0.92465645	Passerellidae	0.9874812	SFHS	0.9692017	whtspa	0.9926905	whtspa	0.992690504	2024-07-29	20:17.0	Y
121	122.8	0	11025	Passeriformes	0.9631718	Passerellidae	0.98706645	SFHS	0.97515196	whtspa	0.9932151	whtspa	0.993215084	2024-07-29	22:01.0	Y
125.8	128.4	0	11025	Passeriformes	0.9568718	Passerellidae	0.9858279	SFHS	0.95432895	whtspa	0.98051685	whtspa	0.980516851	2024-07-29	22:05.8	Y
222.4	224.2	0	11025	Passeriformes	0.97129446	Passerellidae	0.9950499	SFHS	0.98874587	whtspa	0.99635786	whtspa	0.996357858	2024-07-29	23:42.4	Y
228.4	230.2	0	11025	Passeriformes	0.97110915	Passerellidae	0.9946554	SFHS	0.9874177	whtspa	0.99544686	whtspa	0.995446861	2024-07-29	23:48.4	Y
233.6	234.8	0	11025	Passeriformes	0.9658594	Passerellidae	0.9928883	SFHS	0.9829374	whtspa	0.9725691	whtspa	0.972569108	2024-07-29	23:53.6	Y
243.2	245	0	11025	Passeriformes	0.9680979	Passerellidae	0.990559	SFHS	0.98484427	whtspa	0.98554045	whtspa	0.98554045	2024-07-29	24:03.2	Y
496.8	498.2	0	11025	Passeriformes	0.9691256	Passerellidae	0.99365234	SFHS	0.9871285	whtspa	0.96480644	whtspa	0.964806437	2024-07-29	28:16.8	Y
532.4	534.2	0	11025	Passeriformes	0.9634079	Passerellidae	0.9858338	SFHS	0.96278954	whtspa	0.9941176	whtspa	0.994117618	2024-07-29	28:52.4	Y
564.2	566	0	11025	Passeriformes	0.9721397	Parulidae	0.95635545			amered	0.90313816	amered	0.903138161	2024-07-31	06:24.2	Y
38.2	40	0	11025	Passeriformes	0.97216785	Parulidae	0.9563532			bawwar	0.99999976	bawwar	0.999999762	2024-07-31	57:38.2	Y
262.4	263.8	0	11025	Passeriformes	0.962368	Parulidae	0.9364454	ZEEP	0.9530682	norwat	0.9424426	norwat	0.942442596	2024-07-31	40:22.4	Y
474.8	476.6	0	11025	Passeriformes	0.9720026	Parulidae	0.9501407	ZEEP	0.92565495	norwat	0.9999846	norwat	0.999984622	2024-08-01	43:54.8	Y
87.8	89.2	0	11025	Passeriformes	0.97081405	Parulidae	0.9486416	ZEEP	0.8604216	camwar	0.93132645	camwar	0.931326449	2024-08-01	17:27.8	Y
157.4	158.8	0	11025	Charadriiformes	0.9796566	Scolopacidae	0.9950794			greyel	0.86804867	greyel	0.868048668	2024-08-02	16:37.4	Y
273.8	275.2	0	11025	Passeriformes	0.9588799	Turdidae	0.9480072	THSH	0.9343838	swathr	0.8545714	swathr	0.854571402	2024-08-02	57:33.8	Y
528.4	530	0	11025	Passeriformes	0.97059995	Turdidae	0.9574295	THSH	0.94488066	swathr	0.87798053	swathr	0.87798053	2024-08-02	01:48.4	Y
546.6	548	0	11025	Passeriformes	0.96830577	Turdidae	0.9519834	THSH	0.9391882	swathr	0.8655341	swathr	0.865534127	2024-08-02	02:06.6	Y
524.4	525.8	0	11025	Passeriformes	0.9720201	Parulidae	0.94938016	DEWA	0.9999759	norpar	0.9995695	norpar	0.999569476	2024-08-03	01:44.4	Y
366.2	368	0	11025	Charadriiformes	0.98023635	Scolopacidae	0.9949768			leasan	0.9999999	leasan	0.999999881	2024-08-03	59:06.2	Y
16.2	18	0	11025	Passeriformes	0.97194034	Parulidae	0.95514375			amered	0.902178	amered	0.902177989	2024-08-05	30:16.2	Y
114.8	116.6	0	11025	Passeriformes	0.9722138	Parulidae	0.95638853			amered	0.9030684	amered	0.903068423	2024-08-05	31:54.8	Y
196	197.6	0	11025	Passeriformes	0.971271	Parulidae	0.955354			amered	0.90055716	amered	0.90055716	2024-08-05	33:16.0	Y
225.4	227	0	11025	Passeriformes	0.9706824	Parulidae	0.95533746			amered	0.89984334	amered	0.899843335	2024-08-05	33:45.4	Y
243.8	245.6	0	11025	Passeriformes	0.9688072	Parulidae	0.9548835			amered	0.90156066	amered	0.901560664	2024-08-05	34:03.8	Y
517	518.8	0	11025	Passeriformes	0.9716804	Parulidae	0.95566016			amered	0.9018714	amered	0.901871383	2024-08-05	38:37.0	Y
61.8	63.4	0	11025	Passeriformes	0.9571204	Parulidae	0.9411316	SBUF	0.913458	ovenbi1	0.9376546	ovenbi1	0.937654614	2024-08-05	31:01.8	Y
52.6	54	0	11025	Passeriformes	0.97223365	Passerellidae	0.9955681	SWLI	0.9970913	linspa	0.93841016	linspa	0.938410163	2024-08-05	49:52.6	Y
59.2	60.6	0	11025	Passeriformes	0.9722344	Passerellidae	0.9955701	SWLI	0.99708575	linspa	0.95317674	linspa	0.953176737	2024-08-05	49:59.2	Y
439.6	440.8	0	11025	Passeriformes	0.9711504	Passerellidae	0.9951742	SFHS	0.9879745	whtspa	0.9825165	whtspa	0.982516527	2024-08-05	56:19.6	Y
332.6	334	0	11025	Charadriiformes	0.98068583	Scolopacidae	0.9951409			leasan	0.9999999	leasan	0.999999881	2024-08-05	14:32.6	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
444.8	446.4	0	11025	Passeriformes	0.9718176	Parulidae	0.95582205	SBUF	0.9246814	ovenbi1	0.9733708	ovenbi1	0.97337079	2024-08-05	16:24.8	Y
54.4	55.6	0	11025	Passeriformes	0.94753695	Turdidae	0.91490346	THSH	0.8776012	herthr	0.99980956	herthr	0.999809563	2024-08-06	48:54.4	Y
312	313.6	0	11025	Passeriformes	0.97214186	Parulidae	0.9563052			bawwar	0.99974376	bawwar	0.99974376	2024-08-07	53:12.0	Y
230.2	231.6	0	11025	Pelecaniformes	0.98515886	Ardeidae	0.9908805			grnher	0.9917543	grnher	0.991754293	2024-08-07	31:50.2	Y
172	173.2	0	11025	Passeriformes	0.9614435	Passerellidae	0.99009424	SFHS	0.9836812	whtspa	0.9960819	whtspa	0.996081889	2024-08-07	30:52.0	Y
196.8	198.6	0	11025	Passeriformes	0.96515024	Passerellidae	0.99087054	SFHS	0.9840822	whtspa	0.99612033	whtspa	0.996120334	2024-08-07	31:16.8	Y
354.2	356	0	11025	Passeriformes	0.9722295	Parulidae	0.9564388			bawwar	0.99999857	bawwar	0.999998569	2024-08-08	11:54.2	Y
434.4	436	0	11025	Passeriformes	0.9719089	Parulidae	0.955613			canwar	0.9901329	canwar	0.990132928	2024-08-08	13:14.4	Y
517.6	518.8	0	11025	Passeriformes	0.97018033	Parulidae	0.9418219	BZWA	0.9554061	chswar	0.9369854	chswar	0.936985373	2024-08-08	14:37.6	Y
239.4	240.8	0	11025	Pelecaniformes	0.98970324	Ardeidae	0.99401146			grnher	0.99263424	grnher	0.992634237	2024-08-08	09:59.4	Y
94	95.6	0	11025	Passeriformes	0.9722186	Parulidae	0.95633453			bawwar	0.99999917	bawwar	0.999999166	2024-08-08	07:34.0	Y
437	438.8	0	11025	Passeriformes	0.9711189	Passerellidae	0.99473804	SFHS	0.9892971	whtspa	0.9975051	whtspa	0.997505128	2024-08-08	33:17.0	Y
587.2	588.6	0	11025	Passeriformes	0.9321701	Passerellidae	0.975812	SFHS	0.96500623	whtspa	0.9877009	whtspa	0.98770088	2024-08-08	35:47.2	Y
351	352.6	0	11025	Passeriformes	0.9716451	Parulidae	0.95593685			amered	0.9026261	amered	0.902626097	2024-08-08	30:51.0	Y
576	577.8	0	11025	Passeriformes	0.9721973	Parulidae	0.95636123			amered	0.9027251	amered	0.902725101	2024-08-08	34:36.0	Y
99	100.8	0	11025	Passeriformes	0.96994096	Parulidae	0.94500273	SBUF	0.9075823	ovenbi1	0.96364725	ovenbi1	0.963647246	2024-08-08	26:39.0	Y
404.8	406.4	0	11025	Cuculiformes	0.9931571	Cuculidae	0.9939569			yebcuc	0.99949706	yebcuc	0.999497056	2024-08-08	51:44.8	Y
461.8	463	0	11025	Passeriformes	0.97054493	Parulidae	0.9480455			canwar	0.9934144	canwar	0.993414402	2024-08-09	52:41.8	Y
174	175.6	0	11025	Passeriformes	0.971602	Parulidae	0.9550166	SBUF	0.9397415	ovenbi1	0.98225963	ovenbi1	0.982259631	2024-08-09	07:54.0	Y
553.4	555	0	11025	Charadriiformes	0.9680476	Scolopacidae	0.9908958			leasan	0.9999989	leasan	0.999998927	2024-08-11	11:13.4	Y
104.2	106	0	11025	Passeriformes	0.97208214	Parulidae	0.9547025	SBUF	0.92274934	ovenbi1	0.97294724	ovenbi1	0.97294724	2024-08-11	23:44.2	Y
225	226.8	0	11025	Passeriformes	0.9718071	Parulidae	0.9557405	SBUF	0.93832	ovenbi1	0.9836045	ovenbi1	0.983604491	2024-08-11	03:45.0	Y
588.6	590.4	0	11025	Passeriformes	0.9714938	Parulidae	0.95377374	BZWA	0.9794438	chswar	0.96314824	chswar	0.963148236	2024-08-12	49:48.6	Y
282.6	284.2	0	11025	Passeriformes	0.9714335	Parulidae	0.95276815	ZEEP	0.9559871	norwat	0.9999987	norwat	0.999998689	2024-08-12	04:42.6	Y
144.6	146	0	11025	Passeriformes	0.9698593	Parulidae	0.9516772	BZWA	0.98173356	comyel	0.93873674	comyel	0.938736737	2024-08-12	42:24.6	Y
339.4	341	0	11025	Charadriiformes	0.9790354	Scolopacidae	0.9939288			leasan	0.9999999	leasan	0.999999881	2024-08-12	45:39.4	Y
426.8	428	0	11025	Charadriiformes	0.98122597	Scolopacidae	0.99560887			leasan	0.9999999	leasan	0.999999881	2024-08-12	47:06.8	Y
505.4	507.2	0	11025	Charadriiformes	0.9814104	Scolopacidae	0.9956506			leasan	0.9999999	leasan	0.999999881	2024-08-12	48:25.4	Y
402.6	404	0	11025	Passeriformes	0.97127795	Passerellidae	0.99437946	SFHS	0.87827504	whtspa	0.9172531	whtspa	0.917253077	2024-08-12	46:42.6	Y
455.8	457.6	0	11025	Passeriformes	0.9698112	Passerellidae	0.99430543	SFHS	0.98677665	whtspa	0.9975407	whtspa	0.997540712	2024-08-12	47:35.8	Y
466.6	468.2	0	11025	Passeriformes	0.9715452	Passerellidae	0.9953754	SFHS	0.98954684	whtspa	0.9969207	whtspa	0.996920705	2024-08-12	47:46.6	Y
11	12.6	0	11025	Passeriformes	0.9720839	Parulidae	0.9555001			bawwar	0.99994063	bawwar	0.999940634	2024-08-12	39:11.0	Y
34.8	36.6	0	11025	Passeriformes	0.97210395	Parulidae	0.95561343			bawwar	0.99999976	bawwar	0.999999762	2024-08-12	39:34.8	Y
477.4	479.2	0	11025	Passeriformes	0.97221375	Parulidae	0.95641917			amered	0.9032698	amered	0.903269827	2024-08-13	06:57.4	Y
22	23.8	0	11025	Passeriformes	0.97221833	Parulidae	0.9563292	SBUF	0.94061744	ovenbi1	0.9828792	ovenbi1	0.982879221	2024-08-12	59:22.0	Y
496	497.6	0	11025	Charadriiformes	0.9681149	Scolopacidae	0.991919			sposan	0.9953518	sposan	0.995351791	2024-08-13	07:16.0	Y
562.6	564.4	0	11025	Passeriformes	0.97130054	Parulidae	0.9559318			amered	0.9023206	amered	0.902320623	2024-08-13	48:22.6	Y
485.4	487.2	0	11025	Passeriformes	0.9722338	Parulidae	0.956439			bawwar	0.99999905	bawwar	0.999999046	2024-08-13	47:05.4	Y
449.4	451.2	0	11025	Passeriformes	0.97185665	Parulidae	0.95502955	SBUF	0.9234871	ovenbi1	0.97286946	ovenbi1	0.972869456	2024-08-13	46:29.4	Y
333.4	334.8	0	11025	Passeriformes	0.9712385	Parulidae	0.94163394	ZEEP	0.95211065	norwat	0.99999845	norwat	0.99999845	2024-08-13	44:33.4	Y
306.8	308.6	0	11025	Passeriformes	0.97205925	Parulidae	0.9538961			canwar	0.9896936	canwar	0.989693582	2024-08-13	24:06.8	Y
165	166.8	0	11025	Passeriformes	0.9713409	Passerellidae	0.9951729	SFHS	0.9884992	whtspa	0.99674267	whtspa	0.996742666	2024-08-13	41:45.0	Y
168	169.8	0	11025	Passeriformes	0.97168374	Passerellidae	0.9953601	SFHS	0.98898405	whtspa	0.9978231	whtspa	0.997823119	2024-08-13	41:48.0	Y
170	171.8	0	11025	Passeriformes	0.9721504	Passerellidae	0.99550277	SFHS	0.98992866	whtspa	0.99792993	whtspa	0.997929931	2024-08-13	41:50.0	Y
264	265.6	0	11025	Passeriformes	0.97160983	Passerellidae	0.9953702	SFHS	0.98931795	whtspa	0.99835443	whtspa	0.998354435	2024-08-13	43:24.0	Y
433.8	435.6	0	11025	Passeriformes	0.9590521	Passerellidae	0.9922099	SFHS	0.9811585	whtspa	0.9940274	whtspa	0.994027376	2024-08-13	46:13.8	Y
562.8	564.2	0	11025	Passeriformes	0.9673235	Passerellidae	0.992968	SFHS	0.9872973	whtspa	0.9970975	whtspa	0.997097492	2024-08-13	48:22.8	Y
569.4	570.6	0	11025	Passeriformes	0.92543405	Passerellidae	0.98475546	SFHS	0.9510464	whtspa	0.89789355	whtspa	0.897893548	2024-08-13	48:29.4	Y
538.6	540.2	0	11025	Passeriformes	0.9721582	Parulidae	0.95488614	MWAR	0.9969253	mouwar	0.8559253	mouwar	0.855925322	2024-08-13	25:58.6	Y
31.8	33.6	0	11025	Passeriformes	0.9718617	Parulidae	0.95002794			amered	0.890332	amered	0.890331984	2024-08-14	17:31.8	Y
558	559.6	0	11025	Passeriformes	0.9720053	Parulidae	0.95552266			canwar	0.994476	canwar	0.99447602	2024-08-14	26:18.0	Y
99.4	101	0	11025	Passeriformes	0.94380873	Parulidae	0.8979717	BZWA	0.94111943	comyel	0.999488	comyel	0.999487996	2024-08-14	38:39.4	Y
318	319.2	0	11025	Passeriformes	0.97072554	Parulidae	0.95422834	MWAR	0.99663514	mouwar	0.9703038	mouwar	0.970303774	2024-08-14	02:18.0	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
541.6	543	0	11025	Passeriformes	0.9720283	Turdidae	0.94530714	THSH	0.9177081	veery	0.91927713	veery	0.919277132	2024-08-14	06:01.6	Y
199.8	201.2	0	11025	Passeriformes	0.96535325	Parulidae	0.93631727	ZEEP	0.94538784	norwat	0.9834449	norwat	0.983444929	2024-08-14	38:19.8	Y
241.2	243	0	11025	Passeriformes	0.97163975	Parulidae	0.9452306	DEWA	0.9999416	norpar	0.99916327	norpar	0.99916327	2024-08-14	59:01.2	Y
545.4	546.8	0	11025	Passeriformes	0.9707273	Parulidae	0.95218056	MWAR	0.9970969	mouwar	0.9624663	mouwar	0.9624663	2024-08-15	24:05.4	Y
258.6	260.2	0	11025	Passeriformes	0.9720247	Parulidae	0.95423084			canwar	0.9972766	canwar	0.997276604	2024-08-15	19:18.6	Y
308.8	310.4	0	11025	Charadriiformes	0.978023	Scolopacidae	0.9940561			leasan	0.9999987	leasan	0.999998689	2024-08-15	20:08.8	Y
254.4	256	0	11025	Passeriformes	0.9722324	Parulidae	0.9563791			bawwar	0.9999999	bawwar	0.999999881	2024-08-15	59:14.4	Y
260.8	262.6	0	11025	Passeriformes	0.9721352	Parulidae	0.95620483			bawwar	0.99999976	bawwar	0.999999762	2024-08-15	59:20.8	Y
267.8	269.4	0	11025	Passeriformes	0.97211164	Parulidae	0.9560309			bawwar	0.9999728	bawwar	0.99997282	2024-08-15	59:27.8	Y
279.2	281	0	11025	Passeriformes	0.9721957	Parulidae	0.95619273			bawwar	0.9999999	bawwar	0.999999881	2024-08-15	59:39.2	Y
287.2	289	0	11025	Passeriformes	0.97003204	Parulidae	0.9386793			bawwar	0.9996283	bawwar	0.999628305	2024-08-15	59:47.2	Y
133.8	135.6	0	11025	Passeriformes	0.9713234	Turdidae	0.9582404			amerob	0.9999993	amerob	0.999999285	2024-08-15	37:13.8	Y
353.4	355.2	0	11025	Passeriformes	0.9720721	Parulidae	0.95476836			canwar	0.99713147	canwar	0.997131467	2024-08-16	17:53.4	Y
434.2	435.8	0	11025	Passeriformes	0.9719828	Parulidae	0.9545551	BZWA	0.93446904	chswar	0.94761485	chswar	0.947614849	2024-08-16	19:14.2	Y
329.2	330.6	0	11025	Passeriformes	0.97136873	Parulidae	0.9508762	SBUF	0.92047775	ovenbi1	0.96021616	ovenbi1	0.960216165	2024-08-16	17:29.2	Y
53.2	55	0	11025	Passeriformes	0.9721734	Parulidae	0.95620537			canwar	0.99595994	canwar	0.995959938	2024-08-17	52:53.2	Y
443.4	445	0	11025	Passeriformes	0.9707692	Parulidae	0.94979906	SBUF	0.93551475	ovenbi1	0.96931255	ovenbi1	0.969312549	2024-08-17	59:23.4	Y
28	29.4	0	11025	Passeriformes	0.968072	Parulidae	0.95234716			amered	0.898713	amered	0.898712993	2024-08-17	12:28.0	Y
174	175.8	0	11025	Passeriformes	0.97212964	Parulidae	0.9551797			canwar	0.99646324	canwar	0.996463239	2024-08-17	14:54.0	Y
583	584.4	0	11025	Passeriformes	0.9719027	Parulidae	0.9552687	BZWA	0.9811272	comyel	0.9845902	comyel	0.984590173	2024-08-17	21:43.0	Y
395.4	397	0	11025	Passeriformes	0.9721739	Parulidae	0.95597357			canwar	0.99431014	canwar	0.994310141	2024-08-17	58:35.4	Y
479.8	481.4	0	11025	Passeriformes	0.9716913	Parulidae	0.95400536	BZWA	0.9787081	chswar	0.96014553	chswar	0.960145533	2024-08-17	39:59.8	Y
217	218.2	0	11025	Passeriformes	0.9684257	Parulidae	0.9511573	BZWA	0.97075933	comyel	0.99999404	comyel	0.99999404	2024-08-17	35:37.0	Y
526	527.6	0	11025	Passeriformes	0.97203344	Parulidae	0.955321	SBUF	0.9309274	ovenbi1	0.95764303	ovenbi1	0.957643032	2024-08-17	20:46.0	Y
431.4	433.2	0	11025	Passeriformes	0.9690118	Turdidae	0.95297235	THSH	0.93673164	herthr	0.9999987	herthr	0.999998689	2024-08-17	39:11.4	Y
263.2	265	0	11025	Passeriformes	0.9602762	Passerellidae	0.9925282	SFHS	0.97876143	whtspa	0.99654007	whtspa	0.99654007	2024-08-17	36:23.2	Y
492.4	494.2	0	11025	Passeriformes	0.9602344	Passerellidae	0.98839986	SFHS	0.9804584	whtspa	0.995411	whtspa	0.995410979	2024-08-17	40:12.4	Y
306.8	308.6	0	11025	Passeriformes	0.9720925	Parulidae	0.95439035	MWAR	0.99721956	mouwar	0.8922692	mouwar	0.892269194	2024-08-17	35:06.8	Y
362.2	363.8	0	11025	Passeriformes	0.97202545	Parulidae	0.9555099	BZWA	0.9687685	comyel	0.99995375	comyel	0.999953747	2024-08-18	16:02.2	Y
452	453.8	0	11025	Passeriformes	0.9722101	Parulidae	0.9552277	MWAR	0.99884903	mouwar	0.988187	mouwar	0.988187015	2024-08-18	56:32.0	Y
558.8	560.6	0	11025	Passeriformes	0.97155905	Parulidae	0.95094204	SBUF	0.83065087	ovenbi1	0.8547647	ovenbi1	0.8547647	2024-08-18	58:18.8	Y
366.2	368	0	11025	Passeriformes	0.97219783	Turdidae	0.95940584	THSH	0.9463512	veery	0.99420244	veery	0.994202435	2024-08-20	13:06.2	Y
412	413.4	0	11025	Passeriformes	0.9701076	Parulidae	0.9542788	SBUF	0.9233679	ovenbi1	0.9380131	ovenbi1	0.938013077	2024-08-20	53:52.0	Y
435.4	438.6	0	11025	Passeriformes	0.9714812	Parulidae	0.95506346	SBUF	0.9156523	ovenbi1	0.9766525	ovenbi1	0.976652503	2024-08-20	54:15.4	Y
137.4	139.2	0	11025	Passeriformes	0.9719229	Turdidae	0.9540025	THSH	0.9368293	veery	0.994261	veery	0.994261026	2024-08-21	27:17.4	Y
209.2	211	0	11025	Passeriformes	0.9619757	Parulidae	0.8722323	DEWA	0.999959	norpar	0.9991574	norpar	0.999157429	2024-08-21	08:29.2	Y
411.2	412.8	0	11025	Passeriformes	0.97180814	Parulidae	0.9557114	SBUF	0.9332014	ovenbi1	0.97819257	ovenbi1	0.978192568	2024-08-21	11:51.2	Y
570.6	572	0	11025	Passeriformes	0.9718303	Passerellidae	0.9951891	SFHS	0.98799986	whtspa	0.9841809	whtspa	0.984180927	2024-08-22	53:30.6	Y
420.4	422.2	0	11025	Passeriformes	0.9721993	Parulidae	0.9540321	MWAR	0.9988796	mouwar	0.9915759	mouwar	0.991575897	2024-08-22	09:00.4	Y
224.4	226.2	0	11025	Passeriformes	0.972162	Parulidae	0.955848	SBUF	0.93796015	ovenbi1	0.96670115	ovenbi1	0.96670115	2024-08-22	05:44.4	Y
359	360.8	0	11025	Passeriformes	0.97204775	Parulidae	0.95618904	SBUF	0.94089735	ovenbi1	0.98567176	ovenbi1	0.985671759	2024-08-22	07:59.0	Y
22	23.8	0	11025	Passeriformes	0.97195464	Parulidae	0.9488911	DEWA	0.9999819	norpar	0.9997975	norpar	0.999797523	2024-08-23	42:22.0	Y
288.4	289.8	0	11025	Passeriformes	0.97195935	Parulidae	0.95284355	ZEEP	0.9486432	camwar	0.9987375	camwar	0.998737514	2024-08-23	46:48.4	Y
570.8	572.6	0	11025	Passeriformes	0.9722082	Parulidae	0.9563013			bawwar	0.99999833	bawwar	0.999998331	2024-08-23	11:30.8	Y
582.4	584.2	0	11025	Passeriformes	0.97223264	Parulidae	0.9564226			bawwar	0.9999999	bawwar	0.999999881	2024-08-23	11:42.4	Y
543.4	545	0	11025	Passeriformes	0.96365345	Parulidae	0.9258341	BZWA	0.9747112	comyel	0.9999931	comyel	0.999993086	2024-08-23	11:03.4	Y
482.4	484.2	0	11025	Passeriformes	0.9720724	Parulidae	0.9546847	MWAR	0.9986841	mouwar	0.99579996	mouwar	0.995799959	2024-08-23	50:02.4	Y
84.8	86.6	0	11025	Passeriformes	0.97210264	Parulidae	0.9557356	SBUF	0.93638766	ovenbi1	0.98201305	ovenbi1	0.982013047	2024-08-23	43:24.8	Y
176.6	178	0	11025	Passeriformes	0.97094035	Parulidae	0.935317	MWAR	0.9975298	mouwar	0.8806912	mouwar	0.880691171	2024-08-23	04:56.6	Y
42.2	44	0	11025	Passeriformes	0.9717496	Parulidae	0.9553521	BZWA	0.98204345	chswar	0.9670104	chswar	0.967010379	2024-08-23	00:42.2	Y
520.4	522.2	0	11025	Passeriformes	0.9708816	Parulidae	0.95379025	BZWA	0.9822552	chswar	0.96529436	chswar	0.965294361	2024-08-23	08:40.4	Y
542.2	544	0	11025	Passeriformes	0.97139174	Parulidae	0.95414436	BZWA	0.9819204	chswar	0.9673198	chswar	0.967319787	2024-08-23	09:02.2	Y
557	558.8	0	11025	Passeriformes	0.9712579	Parulidae	0.95265776	BZWA	0.9814239	chswar	0.96556705	chswar	0.965567052	2024-08-23	09:17.0	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
563.8	565.2	0	11025	Passeriformes	0.9686026	Parulidae	0.94909626	SBUF	0.90380186	ovenbi1	0.9308782	ovenbi1	0.930878222	2024-08-23	09:23.8	Y
391.4	393	0	11025	Passeriformes	0.9720559	Parulidae	0.9556719			bawwar	0.99833626	bawwar	0.998336256	2024-08-23	46:31.4	Y
392.8	394.6	0	11025	Passeriformes	0.9721852	Parulidae	0.95641935			amered	0.903252	amered	0.903252006	2024-08-23	26:32.8	Y
144.4	145.8	0	11025	Passeriformes	0.97199655	Parulidae	0.9551654			canwar	0.997542	canwar	0.997542024	2024-08-23	22:24.4	Y
167.6	169.2	0	11025	Passeriformes	0.97219646	Parulidae	0.9562431			canwar	0.9976101	canwar	0.997610092	2024-08-23	22:47.6	Y
378.4	380.2	0	11025	Passeriformes	0.97218287	Parulidae	0.9561293	MWAR	0.9990682	mouwar	0.9971302	mouwar	0.997130215	2024-08-23	26:18.4	Y
585.2	587	0	11025	Passeriformes	0.9719953	Parulidae	0.95262057	SBUF	0.9323677	ovenbi1	0.97094035	ovenbi1	0.970940351	2024-08-24	49:45.2	Y
557.4	559.2	0	11025	Passeriformes	0.9659678	Parulidae	0.94062334	ZEEP	0.9337981	camwar	0.99999785	camwar	0.999997854	2024-08-24	27:17.4	Y
177.2	179	0	11025	Passeriformes	0.97223645	Parulidae	0.9564786			bawwar	0.9999999	bawwar	0.999999881	2024-08-24	40:57.2	Y
92.2	93.8	0	11025	Passeriformes	0.972225	Parulidae	0.955901	MWAR	0.9991786	mouwar	0.99753535	mouwar	0.997535348	2024-08-24	39:32.2	Y
288.2	289.8	0	11025	Passeriformes	0.972024	Parulidae	0.9555821	MWAR	0.99840957	mouwar	0.99284726	mouwar	0.992847264	2024-08-25	02:48.2	Y
427	428.6	0	11025	Passeriformes	0.97222036	Parulidae	0.95646733			bawwar	0.9999999	bawwar	0.999999881	2024-08-26	44:07.0	Y
110.4	111.8	0	11025	Passeriformes	0.9721319	Parulidae	0.955856	MWAR	0.9989945	mouwar	0.99645126	mouwar	0.996451259	2024-08-26	38:50.4	Y
327.6	329	0	11025	Passeriformes	0.97128534	Parulidae	0.92087764	DEWA	0.9999771	norpar	0.9998016	norpar	0.999801576	2024-08-27	38:27.6	Y
167.4	169.2	0	11025	Passeriformes	0.9719406	Parulidae	0.95329183	DEWA	0.9999852	norpar	0.9999255	norpar	0.999925494	2024-08-29	31:47.4	Y
306.6	308.2	0	11025	Passeriformes	0.97219837	Parulidae	0.9562138	BZWA	0.97906095	chswar	0.9660791	chswar	0.966079116	2024-08-29	14:06.6	Y
256.8	258.4	0	11025	Passeriformes	0.9722053	Parulidae	0.95640475			bawwar	0.99998176	bawwar	0.999981761	2024-08-30	13:16.8	Y
89.6	91.4	0	11025	Passeriformes	0.9721248	Passerellidae	0.9953844	DESP	0.99103844	savspa	0.9978435	savspa	0.997843504	2024-08-30	30:29.6	Y
98.4	100.2	0	11025	Passeriformes	0.9699102	Passerellidae	0.9943651	DESP	0.9890782	savspa	0.98398477	savspa	0.983984768	2024-08-30	30:38.4	Y
69.2	71	0	11025	Passeriformes	0.97219986	Parulidae	0.9551994	ZEEP	0.961545	norwat	0.99999857	norwat	0.999998569	2024-08-30	50:09.2	Y
283.6	285.2	0	11025	Passeriformes	0.97221035	Parulidae	0.9557334	ZEEP	0.9623918	norwat	0.9999995	norwat	0.999999523	2024-08-30	53:43.6	Y
528	529.4	0	11025	Passeriformes	0.97215176	Parulidae	0.9529621	ZEEP	0.9592098	norwat	0.9999802	norwat	0.999980211	2024-08-30	57:48.0	Y
85.4	87.2	0	11025	Passeriformes	0.9713327	Parulidae	0.92999756	SBUF	0.9158289	palwar	0.99999976	palwar	0.999999762	2024-08-30	50:25.4	Y
215.8	217.6	0	11025	Passeriformes	0.97196996	Parulidae	0.9553381	BZWA	0.9822329	comyel	0.9999987	comyel	0.999998689	2024-08-30	12:35.8	Y
227.8	229.2	0	11025	Passeriformes	0.970237	Parulidae	0.9503395	BZWA	0.98049396	comyel	0.999998	comyel	0.999997973	2024-08-30	12:47.8	Y
407.8	409.6	0	11025	Passeriformes	0.97220594	Parulidae	0.9560007	BZWA	0.9823568	comyel	0.9999999	comyel	0.999999881	2024-08-30	15:47.8	Y
411.6	413.4	0	11025	Passeriformes	0.96927905	Parulidae	0.9505705	BZWA	0.9804565	comyel	0.99995995	comyel	0.999959946	2024-08-30	15:51.6	Y
420	421.8	0	11025	Passeriformes	0.9721966	Parulidae	0.95620483	BZWA	0.98304474	comyel	0.99999785	comyel	0.999997854	2024-08-30	16:00.0	Y
527.8	529.2	0	11025	Passeriformes	0.97149503	Parulidae	0.9502699			canwar	0.9758153	canwar	0.975815296	2024-08-30	37:47.8	Y
3.6	5.2	0	11025	Passeriformes	0.9702892	Parulidae	0.94832385	BZWA	0.96071774	comyel	0.9999726	comyel	0.999972582	2024-08-30	29:03.6	Y
44.4	45.8	0	11025	Passeriformes	0.9719331	Parulidae	0.9552018	BZWA	0.98184425	comyel	0.99999857	comyel	0.999998569	2024-08-30	29:44.4	Y
452.8	454.4	0	11025	Passeriformes	0.9721461	Parulidae	0.9557762	BZWA	0.9829093	comyel	0.9999999	comyel	0.999999881	2024-08-30	36:32.8	Y
3.8	5.6	0	11025	Passeriformes	0.9719872	Parulidae	0.9553984	BZWA	0.98264474	comyel	0.9999999	comyel	0.999999881	2024-08-30	29:03.8	Y
543.2	545	0	11025	Passeriformes	0.9716277	Parulidae	0.95385087	BZWA	0.98227465	comyel	0.99999976	comyel	0.999999762	2024-08-30	38:03.2	Y
559.2	561	0	11025	Passeriformes	0.9684641	Parulidae	0.9519704	BZWA	0.97836065	comyel	0.9999864	comyel	0.99998641	2024-08-30	38:19.2	Y
377.8	379.6	0	11025	Passeriformes	0.972152	Parulidae	0.9559571	BZWA	0.98288786	chswar	0.9691966	chswar	0.969196618	2024-08-30	34:17.8	Y
412.6	414.2	0	11025	Passeriformes	0.96927375	Parulidae	0.9518083	BZWA	0.97832537	chswar	0.95716715	chswar	0.957167149	2024-08-30	34:52.6	Y
305.8	307.6	0	11025	Passeriformes	0.97217596	Parulidae	0.95507556	DEWA	0.9999918	norpar	0.9999664	norpar	0.999966383	2024-08-30	33:05.8	Y
195.8	197.2	0	11025	Passeriformes	0.9720671	Parulidae	0.95479727			canwar	0.99776673	canwar	0.997766733	2024-08-31	29:15.8	Y
36.2	37.8	0	11025	Passeriformes	0.9706924	Parulidae	0.9504811	BZWA	0.95754254	chswar	0.94965494	chswar	0.949654937	2024-08-31	26:36.2	Y
398.2	399.8	0	11025	Passeriformes	0.92981863	Parulidae	0.8507144	DEWA	0.9998123	norpar	0.9959138	norpar	0.995913804	2024-09-01	32:38.2	Y
401.4	403	0	11025	Passeriformes	0.9663618	Parulidae	0.9104293	DEWA	0.99989116	norpar	0.9986589	norpar	0.998658895	2024-09-01	32:41.4	Y
581.4	583	0	11025	Passeriformes	0.9717934	Parulidae	0.95492214			canwar	0.99442977	canwar	0.994429767	2024-09-01	53:41.4	Y
407.4	409.2	0	11025	Passeriformes	0.97210646	Parulidae	0.9557433	SBUF	0.933095	ovenbi1	0.98199695	ovenbi1	0.981996953	2024-09-02	50:47.4	Y
93.8	95	0	11025	Passeriformes	0.9717638	Passerellidae	0.99439245	CUPS	0.9847376	chispa	0.9413597	chispa	0.941359699	2024-09-02	05:33.8	Y
97	98.8	0	11025	Passeriformes	0.97215116	Passerellidae	0.9954129	CUPS	0.98866886	chispa	0.9560468	chispa	0.95604682	2024-09-02	05:37.0	Y
532.8	534.6	0	11025	Passeriformes	0.97051114	Passerellidae	0.9934528	CUPS	0.974194	chispa	0.91502064	chispa	0.915020645	2024-09-02	12:52.8	Y
205.4	207	0	11025	Passeriformes	0.97217506	Parulidae	0.95605063	BZWA	0.97975355	comyel	0.99999785	comyel	0.999997854	2024-09-02	07:25.4	Y
377.4	379.2	0	11025	Passeriformes	0.9722261	Parulidae	0.95634204	MWAR	0.999092	mouwar	0.99643207	mouwar	0.996432066	2024-09-02	48:17.4	Y
247.6	249.4	0	11025	Passeriformes	0.97219366	Parulidae	0.9563277			bawwar	0.99999094	bawwar	0.99999094	2024-09-03	06:07.6	Y
259.4	261	0	11025	Passeriformes	0.94652534	Parulidae	0.865859	BZWA	0.9739953	comyel	0.9986902	comyel	0.998690188	2024-09-03	06:19.4	Y
422.6	424	0	11025	Passeriformes	0.97186345	Parulidae	0.9553364	BZWA	0.97822464	comyel	0.9998357	comyel	0.99983573	2024-09-03	09:02.6	Y
240.4	241.8	0	11025	Passeriformes	0.97214925	Turdidae	0.9566171	THSH	0.94006866	veery	0.99290645	veery	0.992906451	2024-09-03	06:00.4	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
150.2	151.8	0	11025	Passeriformes	0.97215253	Parulidae	0.9563254			bawwar	0.9999999	bawwar	0.999999881	2024-09-03	44:30.2	Y
451.2	453	0	11025	Passeriformes	0.971714	Parulidae	0.9547512	BZWA	0.98107624	chswar	0.965633	chswar	0.965632975	2024-09-03	49:31.2	Y
460.6	462.2	0	11025	Passeriformes	0.9585245	Parulidae	0.93713415	BZWA	0.9755602	chswar	0.9435893	chswar	0.94358933	2024-09-03	49:40.6	Y
533.2	534.6	0	11025	Passeriformes	0.9714721	Parulidae	0.95353884	BZWA	0.9356059	chswar	0.9451774	chswar	0.945177376	2024-09-03	50:53.2	Y
376.4	378.2	0	11025	Passeriformes	0.9719149	Parulidae	0.95474833	BZWA	0.98202056	comyel	0.9999999	comyel	0.999999881	2024-09-03	48:16.4	Y
205	206.8	0	11025	Passeriformes	0.9715997	Parulidae	0.9505812	MWAR	0.99876785	mouwar	0.9953087	mouwar	0.995308697	2024-09-03	45:25.0	Y
117.2	118.8	0	11025	Passeriformes	0.9718214	Parulidae	0.95501703			bawwar	0.9999989	bawwar	0.999998927	2024-09-03	03:57.2	Y
349.6	351.4	0	11025	Passeriformes	0.97205746	Turdidae	0.9550339	THSH	0.9366555	veery	0.991899	veery	0.991899014	2024-09-03	07:49.6	Y
387.8	389.2	0	11025	Passeriformes	0.9721138	Turdidae	0.9544093	THSH	0.93824434	veery	0.98987037	veery	0.989870369	2024-09-03	08:27.8	Y
480	481.8	0	11025	Passeriformes	0.97214204	Parulidae	0.9561695			bawwar	0.9999993	bawwar	0.999999285	2024-09-03	30:00.0	Y
150.8	152.2	0	11025	Passeriformes	0.97215414	Parulidae	0.95609355	BZWA	0.98146397	comyel	0.9999913	comyel	0.999991298	2024-09-03	24:30.8	Y
494.6	496.4	0	11025	Passeriformes	0.97220755	Parulidae	0.95610905	BZWA	0.98204273	comyel	0.99999917	comyel	0.999999166	2024-09-03	30:14.6	Y
235	236.6	0	11025	Passeriformes	0.96684104	Passerellidae	0.99221706	DESP	0.9847623	savspa	0.96747196	savspa	0.967471957	2024-09-03	25:55.0	Y
274.8	276.4	0	11025	Passeriformes	0.97219884	Parulidae	0.9563631			bawwar	0.99999976	bawwar	0.999999762	2024-09-03	46:34.8	Y
240.6	242	0	11025	Passeriformes	0.97008866	Parulidae	0.95112956	BZWA	0.9789281	chswar	0.96665704	chswar	0.966657043	2024-09-03	46:00.6	Y
68.4	70	0	11025	Passeriformes	0.97142756	Parulidae	0.95215994	BZWA	0.97323674	comyel	0.9999087	comyel	0.999908686	2024-09-03	43:08.4	Y
87.4	88.8	0	11025	Passeriformes	0.97194844	Parulidae	0.95469487	BZWA	0.9824728	comyel	0.9999913	comyel	0.999991298	2024-09-03	43:27.4	Y
89.6	91	0	11025	Passeriformes	0.97197646	Parulidae	0.9551211	BZWA	0.97928965	comyel	0.99999785	comyel	0.999997854	2024-09-03	43:29.6	Y
263.2	265	0	11025	Passeriformes	0.96981794	Parulidae	0.94716495	BZWA	0.97903436	comyel	0.99999976	comyel	0.999999762	2024-09-03	46:23.2	Y
75.8	77.4	0	11025	Passeriformes	0.9715878	Parulidae	0.95433503	MWAR	0.99874264	mouwar	0.9927516	mouwar	0.992751598	2024-09-03	43:15.8	Y
88.4	89.6	0	11025	Passeriformes	0.97214544	Parulidae	0.9556424	MWAR	0.99908733	mouwar	0.9963637	mouwar	0.996363699	2024-09-03	43:28.4	Y
117.2	118.8	0	11025	Passeriformes	0.9721281	Parulidae	0.9530773	ZEEP	0.95835346	norwat	0.99999714	norwat	0.999997139	2024-09-03	43:57.2	Y
137.6	139.4	0	11025	Passeriformes	0.9722116	Parulidae	0.95482486	ZEEP	0.9611741	norwat	0.99999976	norwat	0.999999762	2024-09-03	44:17.6	Y
333.4	334.8	0	11025	Passeriformes	0.97167283	Parulidae	0.9455895	ZEEP	0.9529494	norwat	0.99777114	norwat	0.997771144	2024-09-03	47:33.4	Y
51.2	52.8	0	11025	Passeriformes	0.97214496	Parulidae	0.95634764			bawwar	0.9999572	bawwar	0.999957204	2024-09-03	02:51.2	Y
343	344.8	0	11025	Passeriformes	0.9720415	Parulidae	0.95539033			bawwar	0.99999976	bawwar	0.999999762	2024-09-03	07:43.0	Y
496.2	497.8	0	11025	Passeriformes	0.9717159	Parulidae	0.9550292			bawwar	0.99999857	bawwar	0.999998569	2024-09-03	10:16.2	Y
332.4	334.2	0	11025	Passeriformes	0.9718441	Parulidae	0.9552195	BZWA	0.98187476	comyel	0.9999254	comyel	0.999925375	2024-09-03	07:32.4	Y
564.8	566	0	11025	Passeriformes	0.9715076	Parulidae	0.9492539	ZEEP	0.9580387	norwat	0.9999244	norwat	0.999924421	2024-09-03	51:24.8	Y
284.8	286	0	11025	Passeriformes	0.9722325	Parulidae	0.9564304			bawwar	0.9999989	bawwar	0.999998927	2024-09-03	06:44.8	Y
328.6	330.4	0	11025	Passeriformes	0.9722315	Parulidae	0.956463			bawwar	0.99999976	bawwar	0.999999762	2024-09-03	07:28.6	Y
358.8	360.6	0	11025	Passeriformes	0.97222656	Parulidae	0.9562371	MWAR	0.9991486	mouwar	0.9948368	mouwar	0.994836807	2024-09-03	07:58.8	Y
232.8	234.6	0	11025	Passeriformes	0.9721532	Parulidae	0.9552345	MWAR	0.99910575	mouwar	0.9958116	mouwar	0.995811582	2024-09-03	45:52.8	Y
100.4	102	0	11025	Charadriiformes	0.98026395	Scolopacidae	0.99528545			sposan	0.999181	sposan	0.999180973	2024-09-03	41:40.4	Y
328.4	330	0	11025	Passeriformes	0.97084314	Parulidae	0.9529925	BZWA	0.98052716	chswar	0.9659136	chswar	0.965913594	2024-09-04	25:28.4	Y
556.2	558	0	11025	Passeriformes	0.9712865	Parulidae	0.9442002	DEWA	0.9997887	norpar	0.9968077	norpar	0.996807694	2024-09-04	29:16.2	Y
372	373.4	0	11025	Passeriformes	0.9658866	Parulidae	0.9508836	SBUF	0.9220367	ovenbi1	0.95394677	ovenbi1	0.953946769	2024-09-04	26:12.0	Y
427.6	429	0	11025	Charadriiformes	0.9800689	Scolopacidae	0.994732			leasan	0.99999976	leasan	0.999999762	2024-09-04	07:07.6	Y
497.8	499	0	11025	Charadriiformes	0.9733769	Scolopacidae	0.98947144			leasan	0.9999925	leasan	0.99999249	2024-09-04	08:17.8	Y
124.4	126	0	11025	Passeriformes	0.9717343	Parulidae	0.95471305	ZEEP	0.9579935	camwar	0.9999726	camwar	0.999972582	2024-09-04	40:04.4	Y
557	558.4	0	11025	Passeriformes	0.8979221	Parulidae	0.8892988	BZWA	0.962355	chswar	0.9519777	chswar	0.95197773	2024-09-04	07:17.0	Y
255.4	256.8	0	11025	Passeriformes	0.9712929	Parulidae	0.95297694	BZWA	0.9810322	comyel	0.9999913	comyel	0.999991298	2024-09-04	02:15.4	Y
29.4	31.2	0	11025	Passeriformes	0.97188944	Parulidae	0.9526142	DEWA	0.99999	norpar	0.9999442	norpar	0.99994421	2024-09-04	58:29.4	Y
118.8	120.2	0	11025	Passeriformes	0.97093594	Parulidae	0.953043	BZWA	0.9781674	chswar	0.9646997	chswar	0.964699686	2024-09-04	19:58.8	Y
89.6	91	0	11025	Passeriformes	0.97199744	Parulidae	0.9550786	MWAR	0.9989415	mouwar	0.9905952	mouwar	0.990595222	2024-09-04	19:29.6	Y
81	82.6	0	11025	Passeriformes	0.9722158	Parulidae	0.95517254	ZEEP	0.9597502	norwat	0.9997552	norwat	0.999755204	2024-09-04	19:21.0	Y
547.6	549.4	0	11025	Passeriformes	0.9717505	Parulidae	0.95430446			canwar	0.99690455	canwar	0.996904552	2024-09-04	07:07.6	Y
23	24.4	0	11025	Passeriformes	0.97153646	Parulidae	0.95190734			canwar	0.99400383	canwar	0.994003832	2024-09-04	18:23.0	Y
417.2	418.8	0	11025	Passeriformes	0.97220266	Parulidae	0.95578754	SBUF	0.9381376	ovenbi1	0.9815244	ovenbi1	0.981524408	2024-09-04	24:57.2	Y
143	144.6	0	11025	Passeriformes	0.9721867	Parulidae	0.9555996	MWAR	0.99903846	mouwar	0.995239	mouwar	0.995239019	2024-09-04	20:23.0	Y
166	167.6	0	11025	Passeriformes	0.9721316	Parulidae	0.9533493	ZEEP	0.9611519	norwat	0.99999285	norwat	0.999992847	2024-09-04	20:46.0	Y
392.6	394	0	11025	Passeriformes	0.97190505	Parulidae	0.9532091	MWAR	0.9973647	mouwar	0.9108712	mouwar	0.910871208	2024-09-05	24:32.6	Y
429.6	431.4	0	11025	Passeriformes	0.9720294	Turdidae	0.9526056	THSH	0.9331098	veery	0.99421036	veery	0.994210362	2024-09-05	25:09.6	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
499	500.6	0	11025	Passeriformes	0.97163594	Turdidae	0.95661765	THSH	0.9404542	veery	0.9940069	veery	0.994006872	2024-09-05	26:19.0	Y
290.2	291.6	0	11025	Passeriformes	0.97221506	Passerellidae	0.9955409	DESP	0.99174905	savspa	0.9734759	savspa	0.973475873	2024-09-05	42:50.2	Y
296.2	298	0	11025	Passeriformes	0.97220844	Passerellidae	0.9955236	DESP	0.9917495	savspa	0.98461133	savspa	0.984611332	2024-09-05	42:56.2	Y
202.8	204.6	0	11025	Passeriformes	0.9708037	Parulidae	0.94642526	DEWA	0.999977	norpar	0.9997968	norpar	0.999796808	2024-09-06	19:22.8	Y
48.6	50	0	11025	Passeriformes	0.9719862	Parulidae	0.94271004	DEWA	0.9999784	norpar	0.9996712	norpar	0.999671221	2024-09-06	36:48.6	Y
213.2	214.6	0	11025	Passeriformes	0.97097135	Parulidae	0.93948996	DEWA	0.9999813	norpar	0.99977416	norpar	0.999774158	2024-09-08	34:33.2	Y
288.6	290.2	0	11025	Passeriformes	0.97172844	Parulidae	0.95494074	BZWA	0.97315186	chswar	0.9540583	chswar	0.95405829	2024-09-09	13:48.6	Y
521.4	522.8	0	11025	Passeriformes	0.97106916	Parulidae	0.9478145	DEWA	0.99933773	norpar	0.9750533	norpar	0.97505331	2024-09-09	17:41.4	Y
62.8	64.4	0	11025	Passeriformes	0.947909	Parulidae	0.94255674	BZWA	0.95722175	chswar	0.945018	chswar	0.945017993	2024-09-09	30:02.8	Y
528	529.6	0	11025	Passeriformes	0.96956146	Parulidae	0.952756	BZWA	0.9642864	chswar	0.9519757	chswar	0.951975703	2024-09-09	37:48.0	Y
31.8	33.6	0	11025	Passeriformes	0.9722109	Parulidae	0.955167	DEWA	0.9999895	norpar	0.999912	norpar	0.999912024	2024-09-09	29:31.8	Y
0	1.6	0	11025	Passeriformes	0.97222316	Parulidae	0.9558237	MWAR	0.99919206	mouwar	0.9980141	mouwar	0.998014092	2024-09-09	09:00.0	Y
447	448.8	0	11025	Passeriformes	0.97129154	Parulidae	0.94280547	DEWA	0.9999852	norpar	0.9999161	norpar	0.999916077	2024-09-09	56:27.0	Y
351.4	353.2	0	11025	Passeriformes	0.9711147	Passerellidae	0.99397284	DESP	0.98772556	savspa	0.99599373	savspa	0.995993733	2024-09-09	54:51.4	Y
365.6	367.4	0	11025	Passeriformes	0.97199166	Passerellidae	0.99539894	DESP	0.9916795	savspa	0.9982608	savspa	0.998260796	2024-09-09	55:05.6	Y
18.8	20.4	0	11025	Passeriformes	0.9667353	Parulidae	0.93540406	ZEEP	0.9416964	camwar	0.9999981	camwar	0.999998093	2024-09-09	09:18.8	Y
326.4	328.2	0	11025	Passeriformes	0.97220314	Parulidae	0.9562363	BZWA	0.9829882	comyel	0.9999995	comyel	0.999999523	2024-09-09	14:26.4	Y
367.4	369.2	0	11025	Passeriformes	0.97203505	Parulidae	0.95549154	BZWA	0.98289144	comyel	0.99999785	comyel	0.999997854	2024-09-09	15:07.4	Y
383.4	384.8	0	11025	Passeriformes	0.9696881	Parulidae	0.95165753	BZWA	0.9666078	comyel	0.99999547	comyel	0.99999547	2024-09-09	15:23.4	Y
197.6	198.8	0	11025	Passeriformes	0.9700922	Parulidae	0.9163488	DEWA	0.9999589	norpar	0.9991104	norpar	0.999110401	2024-09-09	52:17.6	Y
173	174.2	0	11025	Passeriformes	0.9718678	Parulidae	0.9502788	DEWA	0.99994814	norpar	0.99867225	norpar	0.998672247	2024-09-10	11:53.0	Y
81.4	83.2	0	11025	Passeriformes	0.9721994	Parulidae	0.95587945	DEWA	0.9999902	norpar	0.9999324	norpar	0.999932408	2024-09-10	10:21.4	Y
532	533.8	0	11025	Passeriformes	0.97213846	Parulidae	0.95203125	DEWA	0.9999902	norpar	0.9999403	norpar	0.999940276	2024-09-10	17:52.0	Y
567.6	569.4	0	11025	Passeriformes	0.9712477	Parulidae	0.95084614	DEWA	0.9999714	norpar	0.99972695	norpar	0.999726951	2024-09-10	18:27.6	Y
266.8	268.6	0	11025	Passeriformes	0.97219783	Parulidae	0.95517415	DEWA	0.999992	norpar	0.9999678	norpar	0.999967813	2024-09-10	33:26.8	Y
108.8	110.4	0	11025	Passeriformes	0.9717809	Parulidae	0.9536178	MWAR	0.9985	mouwar	0.8987478	mouwar	0.898747802	2024-09-10	30:48.8	Y
584.6	586	0	11025	Passeriformes	0.9708561	Parulidae	0.939883	SBUF	0.9165184	palwar	0.9999995	palwar	0.999999523	2024-09-10	38:44.6	Y
519	520.6	0	11025	Passeriformes	0.97188765	Parulidae	0.9537744	MWAR	0.998872	mouwar	0.9934402	mouwar	0.993440211	2024-09-10	17:39.0	Y
470.6	472	0	11025	Passeriformes	0.97201824	Parulidae	0.95213753	DEWA	0.9999902	norpar	0.9999553	norpar	0.999955297	2024-09-11	52:50.6	Y
8.6	10.4	0	11025	Passeriformes	0.97210824	Parulidae	0.9507681	BZWA	0.97863585	chswar	0.9439551	chswar	0.943955123	2024-09-11	25:08.6	Y
570.2	572	0	11025	Passeriformes	0.97210205	Parulidae	0.9529358	MWAR	0.998939	mouwar	0.99087864	mouwar	0.990878642	2024-09-11	34:30.2	Y
410.6	412	0	11025	Passeriformes	0.97168106	Parulidae	0.8371012	DEWA	0.9967077	norpar	0.96417326	norpar	0.964173257	2024-09-11	31:50.6	Y
182.2	183.6	0	11025	Passeriformes	0.9719145	Parulidae	0.9551276	BZWA	0.98036903	comyel	0.99999917	comyel	0.999999166	2024-09-11	48:02.2	Y
65.6	67.2	0	11025	Passeriformes	0.95883876	Parulidae	0.8387448	SBUF	0.8484485	palwar	0.99999547	palwar	0.99999547	2024-09-11	06:05.6	Y
214.6	215.8	0	11025	Passeriformes	0.97214633	Parulidae	0.9544659	ZEEP	0.9612693	norwat	0.9910273	norwat	0.991027296	2024-09-11	48:34.6	Y
269.4	270.8	0	11025	Passeriformes	0.9721253	Parulidae	0.95469415	DEWA	0.99998975	norpar	0.9999423	norpar	0.999942303	2024-09-12	09:29.4	Y
302.6	304	0	11025	Passeriformes	0.97050405	Parulidae	0.8862047	DEWA	0.9998416	norpar	0.997471	norpar	0.997470975	2024-09-12	10:02.6	Y
110.8	112.4	0	11025	Passeriformes	0.9719141	Parulidae	0.95400673	SBUF	0.90934545	palwar	0.99999845	palwar	0.99999845	2024-09-12	06:50.8	Y
33.6	35.2	0	11025	Passeriformes	0.9669875	Parulidae	0.8247591	DEWA	0.9998369	norpar	0.99450374	norpar	0.994503736	2024-09-12	25:33.6	Y
437.4	439	0	11025	Charadriiformes	0.9814679	Scolopacidae	0.99570554			solsan	0.9754564	solsan	0.975456417	2024-09-12	32:17.4	Y
23.6	25	0	11025	Passeriformes	0.97210836	Parulidae	0.9549149	ZEEP	0.9590872	norwat	0.9937243	norwat	0.993724287	2024-09-12	23:23.6	Y
178.6	180.4	0	11025	Passeriformes	0.9671738	Parulidae	0.93943536	ZEEP	0.9299611	norwat	0.9998216	norwat	0.999821603	2024-09-12	25:58.6	Y
182	183.6	0	11025	Passeriformes	0.97049654	Parulidae	0.93862563	ZEEP	0.9438767	norwat	0.9997009	norwat	0.999700904	2024-09-12	26:02.0	Y
72	73.8	0	11025	Passeriformes	0.9720747	Passerellidae	0.9954596	DESP	0.991548	savspa	0.9963336	savspa	0.996333599	2024-09-12	24:12.0	Y
372.4	374.2	0	11025	Passeriformes	0.9703884	Cardinalidae	0.99170715	GROS	0.99819165	robgro	0.9992811	robgro	0.999281108	2024-09-12	09:12.4	Y
575.6	577	0	11025	Passeriformes	0.9717818	Parulidae	0.94966257	SBUF	0.9329987	palwar	0.99999976	palwar	0.999999762	2024-09-12	32:35.6	Y
169.4	171.2	0	11025	Passeriformes	0.9721801	Passerellidae	0.9955563	DESP	0.99194664	savspa	0.99850947	savspa	0.998509467	2024-09-13	05:49.4	Y
237.4	239	0	11025	Passeriformes	0.97003144	Parulidae	0.94103265	SBUF	0.9252136	palwar	0.9999999	palwar	0.999999881	2024-09-13	06:57.4	Y
313.8	315.2	0	11025	Passeriformes	0.97213846	Parulidae	0.9556348	MWAR	0.99872535	mouwar	0.98946255	mouwar	0.989462554	2024-09-13	28:13.8	Y
537	538.8	0	11025	Charadriiformes	0.9814874	Scolopacidae	0.9957249			solsan	0.9732597	solsan	0.973259687	2024-09-14	29:57.0	Y
7.6	9.2	0	11025	Passeriformes	0.952807	Passerellidae	0.9923078	SFHS	0.977781	whtspa	0.99076146	whtspa	0.990761459	2024-09-14	59:07.6	Y
189.8	191	0	11025	Passeriformes	0.9693161	Passerellidae	0.995154	SFHS	0.98724246	whtspa	0.9970337	whtspa	0.997033715	2024-09-15	02:09.8	Y
225.8	227.6	0	11025	Passeriformes	0.9720562	Parulidae	0.95548785	MWAR	0.9989047	mouwar	0.9936365	mouwar	0.993636489	2024-09-15	02:45.8	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Project # 24-11145

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
498.4	499.8	0	11025	Passeriformes	0.97169095	Passerellidae	0.98987633	DESP	0.97783774	savspa	0.9883144	savspa	0.98831439	2024-09-15	07:18.4	Y
10.4	12.2	0	11025	Passeriformes	0.9721042	Passerellidae	0.9953361	DESP	0.9909349	savspa	0.9977164	savspa	0.997716427	2024-09-15	39:10.4	Y
21.2	23	0	11025	Passeriformes	0.9720571	Passerellidae	0.9953845	DESP	0.9913235	savspa	0.99797124	savspa	0.997971237	2024-09-15	39:21.2	Y
99	100.8	0	11025	Passeriformes	0.97212404	Passerellidae	0.99546623	DESP	0.9917897	savspa	0.9984566	savspa	0.998456597	2024-09-15	40:39.0	Y
138.4	140.2	0	11025	Passeriformes	0.9720019	Passerellidae	0.9954111	DESP	0.9914711	savspa	0.9979132	savspa	0.997913182	2024-09-15	41:18.4	Y
584	585.8	0	11025	Passeriformes	0.9720809	Passerellidae	0.99526155	DESP	0.9905455	savspa	0.9980108	savspa	0.998010814	2024-09-15	48:44.0	Y
113	114.4	0	11025	Passeriformes	0.97079426	Passerellidae	0.9947643	DESP	0.9891676	savspa	0.9955798	savspa	0.995579779	2024-09-15	20:53.0	Y
246	247.4	0	11025	Passeriformes	0.8997973	Passerellidae	0.9916648	DESP	0.9578304	savspa	0.93830466	savspa	0.938304663	2024-09-15	23:06.0	Y
227.8	229.6	0	11025	Passeriformes	0.9721244	Parulidae	0.9547726	SBUF	0.9350852	palwar	0.9999999	palwar	0.999999881	2024-09-15	20:47.8	Y
580.2	581.8	0	11025	Passeriformes	0.93684536	Turdidae	0.90103054	THSH	0.86301726	herthr	0.9999949	herthr	0.999994874	2024-09-16	06:40.2	Y
590.4	592	0	11025	Passeriformes	0.96220046	Turdidae	0.9480094	THSH	0.9297094	herthr	0.9999981	herthr	0.999998093	2024-09-16	06:50.4	Y
288.2	290	0	11025	Passeriformes	0.97055715	Passerellidae	0.9948584	DESP	0.9906076	savspa	0.9978581	savspa	0.997858107	2024-09-18	57:48.2	Y
559	560.8	0	11025	Passeriformes	0.9721833	Parulidae	0.9558053	SBUF	0.939812	palwar	0.9999999	palwar	0.999999881	2024-09-18	42:19.0	Y
353.4	355.2	0	11025	Passeriformes	0.9708273	Passerellidae	0.99400616	DESP	0.98899406	savspa	0.99681854	savspa	0.996818542	2024-09-20	14:53.4	Y
168	169.8	0	11025	Passeriformes	0.972153	Parulidae	0.95487005	MWAR	0.99910444	mouwar	0.9959551	mouwar	0.99595511	2024-09-20	29:48.0	Y
429.6	431	0	11025	Passeriformes	0.96778023	Turdidae	0.94963676	THSH	0.926694	herthr	0.99323446	herthr	0.993234456	2024-09-21	54:09.6	Y
449.6	451.4	0	11025	Passeriformes	0.9691139	Turdidae	0.95283103	THSH	0.9340286	herthr	0.9999951	herthr	0.999995112	2024-09-21	54:29.6	Y
456.8	458.2	0	11025	Passeriformes	0.96921825	Turdidae	0.9534805	THSH	0.9353185	herthr	0.999987	herthr	0.999987006	2024-09-21	54:36.8	Y
145.6	147.4	0	11025	Passeriformes	0.9720427	Parulidae	0.94171935	SBUF	0.92660224	palwar	0.9999988	palwar	0.999998808	2024-09-23	24:25.6	Y
238.4	240	0	11025	Passeriformes	0.9715037	Parulidae	0.9517935	SBUF	0.9321961	palwar	0.9999999	palwar	0.999999881	2024-09-28	15:58.4	Y
357.4	359	0	11025	Passeriformes	0.9697241	Parulidae	0.9379244	SBUF	0.9251955	palwar	0.9999951	palwar	0.999995112	2024-09-29	37:57.4	Y
54.4	55.6	0	11025	Passeriformes	0.9624882	Turdidae	0.8869411	THSH	0.8367324	herthr	0.9999943	herthr	0.999994278	2024-09-29	12:54.4	Y
438.6	440.2	0	11025	Passeriformes	0.9697911	Parulidae	0.92280203	SBUF	0.9192796	palwar	0.9999999	palwar	0.999999881	2024-09-29	37:18.6	Y
87.2	88.6	0	11025	Passeriformes	0.94875735	Turdidae	0.9167874	THSH	0.8811795	herthr	0.9999956	herthr	0.999995589	2024-09-30	11:27.2	Y
209.6	210.8	0	11025	Passeriformes	0.9499507	Passerellidae	0.99083894			daejun	0.993769	daejun	0.99376899	2024-10-02	49:29.6	Y
227.8	229.6	0	11025	Passeriformes	0.97222024	Passerellidae	0.9954697			daejun	0.9969199	daejun	0.99691987	2024-10-02	49:47.8	Y
568	569.2	0	11025	Passeriformes	0.96646816	Passerellidae	0.98833245	DESP	0.93396837	savspa	0.9701971	savspa	0.970197082	2024-10-04	31:28.0	Y
499.8	501.2	0	11025	Passeriformes	0.96562415	Turdidae	0.948482	THSH	0.9324368	herthr	0.99999857	herthr	0.999998569	2024-10-04	50:19.8	Y
278.2	279.8	0	11025	Passeriformes	0.9720105	Parulidae	0.94454694	SBUF	0.9265309	palwar	0.9999994	palwar	0.999999404	2024-10-04	25:38.2	Y
463.4	465.2	0	11025	Passeriformes	0.97218937	Parulidae	0.9556251	SBUF	0.93970114	palwar	0.9999999	palwar	0.999999881	2024-10-05	48:43.4	Y
127.2	129	0	11025	Passeriformes	0.96323085	Turdidae	0.9491239	THSH	0.928189	herthr	0.9999987	herthr	0.999998689	2024-10-07	39:07.2	Y
132	133.6	0	11025	Passeriformes	0.96261626	Turdidae	0.93016404	THSH	0.8940368	herthr	0.99999714	herthr	0.999997139	2024-10-07	39:12.0	Y
116	117.4	0	11025	Passeriformes	0.97215694	Turdidae	0.859387	THSH	0.8081119	herthr	0.9999162	herthr	0.999916196	2024-10-16	01:56.0	Y
411.2	412.8	0	11025	Passeriformes	0.9715427	Passerellidae	0.99506074			daejun	0.9966383	daejun	0.996638298	2024-10-18	03:51.2	Y
431.2	434.6	0	11025	Passeriformes	0.9722316	Passerellidae	0.99559116			daejun	0.9970124	daejun	0.997012377	2024-10-18	04:11.2	Y
435	436.2	0	11025	Passeriformes	0.96311265	Passerellidae	0.9903634			daejun	0.99360377	daejun	0.993603766	2024-10-18	04:15.0	Y
439.8	441.4	0	11025	Passeriformes	0.96973664	Passerellidae	0.9951709			daejun	0.99673885	daejun	0.996738851	2024-10-18	04:19.8	Y
516.6	519.8	0	11025	Passeriformes	0.9707032	Passerellidae	0.9942835			daejun	0.9965209	daejun	0.996520877	2024-10-18	05:36.6	Y
525.4	527.2	0	11025	Passeriformes	0.97222364	Passerellidae	0.9955882			daejun	0.9970091	daejun	0.997009099	2024-10-18	05:45.4	Y
530.6	532.4	0	11025	Passeriformes	0.97221	Passerellidae	0.9955831			daejun	0.99700683	daejun	0.997006834	2024-10-18	05:50.6	Y
548.6	550.4	0	11025	Passeriformes	0.97223806	Passerellidae	0.99559265			daejun	0.99701154	daejun	0.997011542	2024-10-18	06:08.6	Y
551.2	553	0	11025	Passeriformes	0.9722072	Passerellidae	0.99558914			daejun	0.99686384	daejun	0.996863842	2024-10-18	06:11.2	Y
555.4	557.2	0	11025	Passeriformes	0.9721244	Passerellidae	0.9955552			daejun	0.9969921	daejun	0.996992111	2024-10-18	06:15.4	Y
560.2	561.4	0	11025	Passeriformes	0.9677306	Passerellidae	0.9947568			daejun	0.9962741	daejun	0.996274114	2024-10-18	06:20.2	Y
11	12.4	0	11025	Passeriformes	0.9647038	Turdidae	0.944725	THSH	0.9288607	herthr	0.99999785	herthr	0.999997854	2024-10-18	57:11.0	Y
173.8	175.2	0	11025	Passeriformes	0.97052664	Turdidae	0.95396835	THSH	0.9390513	herthr	0.9999987	herthr	0.999998689	2024-10-18	59:53.8	Y
542.6	544	0	11025	Passeriformes	0.94288176	Turdidae	0.8547386	THSH	0.8001888	herthr	0.9609689	herthr	0.960968912	2024-10-18	06:02.6	Y
411.8	413.4	0	11025	Passeriformes	0.97223353	Turdidae	0.9598403			amerob	0.9999999	amerob	0.999999881	2024-10-18	41:51.8	Y
0	1.4	0	11025	Passeriformes	0.9714631	Passerellidae	0.995388			daejun	0.9968534	daejun	0.996853411	2024-10-18	35:00.0	Y
1.8	3.4	0	11025	Passeriformes	0.84700346	Passerellidae	0.9686366			daejun	0.9476748	daejun	0.947674811	2024-10-18	35:01.8	Y
33	36.2	0	11025	Passeriformes	0.9722139	Passerellidae	0.9955831			daejun	0.99700636	daejun	0.997006357	2024-10-18	35:33.0	Y
396.8	398	0	11025	Passeriformes	0.92952335	Passerellidae	0.9880575			daejun	0.99336445	daejun	0.993364453	2024-10-18	41:36.8	Y
4.4	5.8	0	11025	Passeriformes	0.97116417	Passerellidae	0.9933187	DESP	0.9875657	savspa	0.9955915	savspa	0.995591521	2024-10-19	35:04.4	Y

Table 4: 2024 Fall Acoustic Monitoring Period Nighthawk Results - Upper Afton Wind Project

Begin Time (s)	End Time (s)	Low Freq (Hz)	High Freq (Hz)	Order	Prob_Order	Family	Prob_Family	Group	Prob_Group	Species	Prob_Species	Predicted_Category	Prob	Date	Time	Annotation
15.2	17	0	11025	Passeriformes	0.97203344	Passerellidae	0.995468	DESP	0.99153477	savspa	0.9857598	savspa	0.985759795	2024-10-19	35:15.2	Y
18.8	20.6	0	11025	Passeriformes	0.9720273	Passerellidae	0.9953205	DESP	0.99142784	savspa	0.99588376	savspa	0.995883763	2024-10-19	35:18.8	Y
372.4	373.6	0	11025	Passeriformes	0.9721726	Turdidae	0.9593688			amerob	0.99999976	amerob	0.999999762	2024-10-19	01:12.4	Y
532.6	536.2	0	11025	Passeriformes	0.9722048	Passerellidae	0.9955871			daejun	0.99701154	daejun	0.997011542	2024-10-22	18:52.6	Y
551.6	555.6	0	11025	Passeriformes	0.97222203	Passerellidae	0.99558794			daejun	0.99701035	daejun	0.99701035	2024-10-22	19:11.6	Y
563.2	567.2	0	11025	Passeriformes	0.97190386	Passerellidae	0.99550617			daejun	0.99697495	daejun	0.996974945	2024-10-22	19:23.2	Y
571.6	575.6	0	11025	Passeriformes	0.97223747	Passerellidae	0.9955922			daejun	0.9970126	daejun	0.997012615	2024-10-22	19:31.6	Y
580.8	583.6	0	11025	Passeriformes	0.9722366	Passerellidae	0.99559253			daejun	0.9970114	daejun	0.997011423	2024-10-22	19:40.8	Y
584.6	586.4	0	11025	Passeriformes	0.97212344	Passerellidae	0.99552566			daejun	0.99693704	daejun	0.996937037	2024-10-22	19:44.6	Y
595.2	599.6	0	11025	Passeriformes	0.9722373	Passerellidae	0.99559194			daejun	0.9970124	daejun	0.997012377	2024-10-22	19:55.2	Y
536	537.6	0	11025	Passeriformes	0.95544714	Passerellidae	0.992081			daejun	0.9929906	daejun	0.992990613	2024-10-22	17:56.0	Y
539.6	541	0	11025	Passeriformes	0.92944974	Passerellidae	0.9900122			daejun	0.9943152	daejun	0.994315207	2024-10-22	17:59.6	Y
78.6	79.8	0	11025	Passeriformes	0.95819914	Turdidae	0.9329887	THSH	0.9098062	herthr	0.99998367	herthr	0.999983668	2024-10-22	10:18.6	Y
85.8	87.4	0	11025	Passeriformes	0.96827054	Turdidae	0.9525379	THSH	0.9350091	herthr	0.9999981	herthr	0.999998093	2024-10-22	10:25.8	Y
90.2	91.6	0	11025	Passeriformes	0.94830775	Turdidae	0.92447823	THSH	0.8988475	herthr	0.9999962	herthr	0.999996185	2024-10-22	10:30.2	Y
259.8	261.6	0	11025	Passeriformes	0.97149235	Passerellidae	0.99353397	DESP	0.9866471	savspa	0.9968137	savspa	0.996813715	2024-10-22	13:19.8	Y
546	547.8	0	11025	Passeriformes	0.9718684	Passerellidae	0.9952691	DESP	0.99161035	savspa	0.9980698	savspa	0.998069823	2024-10-22	18:06.0	Y
477.8	479	0	11025	Passeriformes	0.9721805	Turdidae	0.9574328			amerob	0.999995	amerob	0.999994993	2024-10-27	09:57.8	Y
51.6	53	0	11025	Passeriformes	0.9648272	Turdidae	0.95578593			amerob	0.9999665	amerob	0.999966502	2024-10-27	20:51.6	Y
227.8	229.4	0	11025	Passeriformes	0.97076124	Turdidae	0.9482851			amerob	0.99369824	amerob	0.993698239	2024-10-27	23:47.8	Y
304	305.6	0	11025	Passeriformes	0.9721405	Turdidae	0.9591737			amerob	0.99999785	amerob	0.999997854	2024-10-27	25:04.0	Y
116.8	118.6	0	11025	Passeriformes	0.97223717	Passerellidae	0.9955917			daejun	0.9970086	daejun	0.997008622	2024-10-28	21:56.8	Y
174.4	176.2	0	11025	Passeriformes	0.97208256	Passerellidae	0.99556476			daejun	0.99700314	daejun	0.997003138	2024-10-28	22:54.4	Y
191.2	194.8	0	11025	Passeriformes	0.97218823	Passerellidae	0.9955778			daejun	0.99699914	daejun	0.996999145	2024-10-28	23:11.2	Y
196.6	198.6	0	11025	Passeriformes	0.97215694	Passerellidae	0.9955681			daejun	0.9970036	daejun	0.997003615	2024-10-28	23:16.6	Y
200.4	202.4	0	11025	Passeriformes	0.96690726	Passerellidae	0.9946519			daejun	0.9959234	daejun	0.9959234	2024-10-28	23:20.4	Y
212.8	214.6	0	11025	Passeriformes	0.9721839	Passerellidae	0.99556655			daejun	0.9969915	daejun	0.996991515	2024-10-28	23:32.8	Y
217.4	218.6	0	11025	Passeriformes	0.9680319	Passerellidae	0.9946977			daejun	0.99629635	daejun	0.996296346	2024-10-28	23:37.4	Y
222	225.2	0	11025	Passeriformes	0.9719768	Passerellidae	0.9955136			daejun	0.9969506	daejun	0.996950626	2024-10-28	23:42.0	Y
427.4	429.2	0	11025	Passeriformes	0.9720862	Passerellidae	0.99553716			daejun	0.99696475	daejun	0.996964753	2024-10-28	27:07.4	Y
274.2	276	0	11025	Passeriformes	0.9721158	Turdidae	0.9598033			amerob	0.9999999	amerob	0.999999881	2024-10-28	23:34.2	Y

Table 5: Spring 2023 Manual Listening Results - Upper Afton Wind Project

Project #24-11145

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank	Total Count
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	3
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	2
American Redstart	<i>Setophaga ruticilla</i>	Not Listed	Not Listed	Not Listed	S5B	5
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	29
American Woodcock	<i>Scolopax minor</i>	Not Listed	Not Listed	Not Listed	S5	2
Barred Owl	<i>Strix varia</i>	Not Listed	Not Listed	Not Listed	S5	1
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	14
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Black-capped Chickadee	<i>Poecile atricapillus</i>	Not Listed	Not Listed	Not Listed	S5	6
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	Not Listed	Not Listed	Not Listed	S5B	1
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5B	14
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	2
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	5
Boreal Chickadee	<i>Poecile hudsonicus</i>	Not Listed	Not Listed	Not Listed	S3	1
Broad-winged Hawk	<i>Buteo platypterus</i>	Not Listed	Not Listed	Not Listed	S5B	1
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	1
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	2
Common Loon	<i>Gavia immer</i>	Not at Risk	Not Listed	Not Listed	S4B	1
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	1
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	11
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	6
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	6
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	2
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	26
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	14
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Northern Parula	<i>Setophaga americana</i>	Not Listed	Not Listed	Not Listed	S5B	2
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	Not Listed	Not Listed	Not Listed	S4B,SUM	1
Northern Waterthrush	<i>Parkesia noveboracensis</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	14
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	3
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	1
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	10
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Not Listed	Not Listed	Not Listed	S4S5	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	1

Table 5: Spring 2023 Manual Listening Results - Upper Afton Wind Project

Project #24-11145

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank	Total Count
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Not Listed	Not Listed	Not Listed	S5B	1
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	3
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	8
Swamp Sparrow	<i>Melospiza georgiana</i>	Not Listed	Not Listed	Not Listed	S5B	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	50
Wilson's Snipe	<i>Gallinago delicata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	1
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	6
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Not Listed	Not Listed	Not Listed	S5B	5
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	18

Table 6: Fall 2024 Manual Listening Results - Upper Afton Wind Power Project

Project #24-11145

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank	Total Count
American Crow	<i>Corvus brachyrhynchos</i>	Not Listed	Not Listed	Not Listed	S5	13
American Goldfinch	<i>Spinus tristis</i>	Not Listed	Not Listed	Not Listed	S5	1
American Goshawk	<i>Astur atricapillus</i>	Not Listed	Not Listed	Not Listed	S3S4	1
American Herring Gull	<i>Larus smithsonianus</i>	Not Listed	Not Listed	Not Listed	S5	1
American Robin	<i>Turdus migratorius</i>	Not Listed	Not Listed	Not Listed	S5B,S3N	8
Black-and-white Warbler	<i>Mniotilta varia</i>	Not Listed	Not Listed	Not Listed	S5B	10
Blackburnian Warbler	<i>Setophaga fusca</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Black-capped Chickadee	<i>Poecile atricapillus</i>	Not Listed	Not Listed	Not Listed	S5	2
Black-throated Green Warbler	<i>Setophaga virens</i>	Not Listed	Not Listed	Not Listed	S5B	5
Blackpoll Warbler	<i>Setophaga striata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	8
Blue Jay	<i>Cyanocitta cristata</i>	Not Listed	Not Listed	Not Listed	S5	20
Blue-headed Vireo	<i>Vireo solitarius</i>	Not Listed	Not Listed	Not Listed	S5B	1
Brown Creeper	<i>Certhia americana</i>	Not Listed	Not Listed	Not Listed	S5	1
Canada Jay	<i>Perisoreus canadensis</i>	Not Listed	Not Listed	Not Listed	S3	3
Cape May Warbler	<i>Setophaga tigrina</i>	Not Listed	Not Listed	Not Listed	S3B,SUM	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Not Listed	Not Listed	Not Listed	S5B	18
Chipping Sparrow	<i>Spizella passerina</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
Common Grackle	<i>Quiscalus quiscula</i>	Not Listed	Not Listed	Not Listed	S5B	27
Common Loon	<i>Gavia immer</i>	Not Listed	Not Listed	Not Listed	S4B	1
Common Raven	<i>Corvus corax</i>	Not Listed	Not Listed	Not Listed	S5	1
Common Yellowthroat	<i>Geothlypis trichas</i>	Not Listed	Not Listed	Not Listed	S5B	1
Dark-eyed Junco	<i>Junco hyemalis</i>	Not Listed	Not Listed	Not Listed	S4S5	3
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Not Listed	Not Listed	Not Listed	S5	7
Hairy Woodpecker	<i>Dryobates villosus</i>	Not Listed	Not Listed	Not Listed	S5	1
Hermit Thrush	<i>Catharus guttatus</i>	Not Listed	Not Listed	Not Listed	S5B	12
Magnolia Warbler	<i>Setophaga magnolia</i>	Not Listed	Not Listed	Not Listed	S5B	6
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Threatened	Threatened	Threatened	S3B	1
Northern Flicker	<i>Colaptes auratus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Ovenbird	<i>Seiurus aurocapilla</i>	Not Listed	Not Listed	Not Listed	S5B	2
Palm Warbler	<i>Setophaga palmarum</i>	Not Listed	Not Listed	Not Listed	S5B	3
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Not Listed	Not Listed	Not Listed	S5	3
Pine Siskin	<i>Spinus pinus</i>	Not Listed	Not Listed	Not Listed	S3	1
Purple Finch	<i>Haemorhous purpureus</i>	Not Listed	Not Listed	Not Listed	S4S5B,S3S4N,S5M	1
Red-eyed Vireo	<i>Vireo olivaceus</i>	Not Listed	Not Listed	Not Listed	S5B	3
Song Sparrow	<i>Melospiza melodia</i>	Not Listed	Not Listed	Not Listed	S5B	1

Table 6: Fall 2024 Manual Listening Results - Upper Afton Wind Power Project

Project #24-11145

Common Name	Scientific Name	COSEWIC	SARA	ESA	S-Rank	Total Count
Swainson's Thrush	<i>Catharus ustulatus</i>	Not Listed	Not Listed	Not Listed	S4B,S5M	1
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Not Listed	Not Listed	Not Listed	S4S5	1
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Not Listed	Not Listed	Not Listed	S4S5B,S5M	23
Wilson's Snipe	<i>Gallinago delicata</i>	Not Listed	Not Listed	Not Listed	S3B,S5M	1
Winter Wren	<i>Troglodytes hiemalis</i>	Not Listed	Not Listed	Not Listed	S5B	1
Yellow-rumped Warbler	<i>Setophaga coronata</i>	Not Listed	Not Listed	Not Listed	S5B	12