

Cottonwood Flats Monitoring Project

2024 Activity Report & Assessment Data



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Reference as: TFN 2024 CFMP Activity Report

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INTRODUCTION

PROJECT OVERVIEW

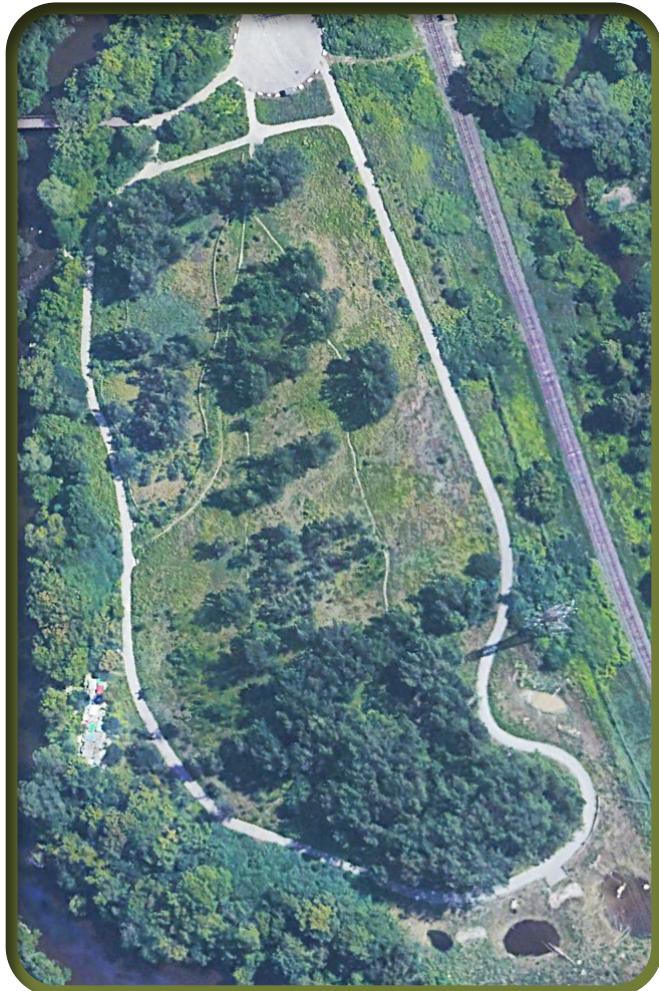
The Cottonwood Flats Monitoring Project (CFMP) is a partnership between the City of Toronto's Natural Environment and Community Programs (NECP) section of Urban Forestry and the Toronto Field Naturalists (TFN). Founded in 2017, its primary goal is to create and curate an inventory of animal and vegetation biodiversity at Cottonwood Flats (see "Study Area") which, over time, will be used to assess overall trends in species richness and abundance. A secondary objective for the project is to facilitate community engagement and outreach.

STUDY AREA

Cottonwood Flats is an approximately 4-hectare parcel of floodplain, elevated by an anthropogenic fill base, that is located on a post-industrial site along the eastern banks of the Lower Don River near Crothers Woods. The site was once home to a rockwool factory, was used as a disposal site for concrete debris, and once served as a primary site for dumping snow plowed from city streets.

Between 2009 and 2014, the City of Toronto, Toronto and Region Conservation Authority (TRCA), Task Force to Bring Back the Don, and Schollen and Company created and executed a restoration plan intended primarily to provide habitat for ground-nesting birds. A key feature of this plan was an approximately one-acre songbird meadow, fully enclosed by permanent fencing, meant to help secure the area from trampling, off-leash dogs, and other potential threats.

In 2020 the City of Toronto completed construction on Phase 2 of improvements at Cottonwood Flats, including the creation of an extensive ephemeral wetland complex designed to improve habitat diversity and ecological services on the site. The project also included a wetland lookout area, and a new entrance feature which aims to improve access, wayfinding and the visitor experience.



METHODOLOGY & PROTOCOLS

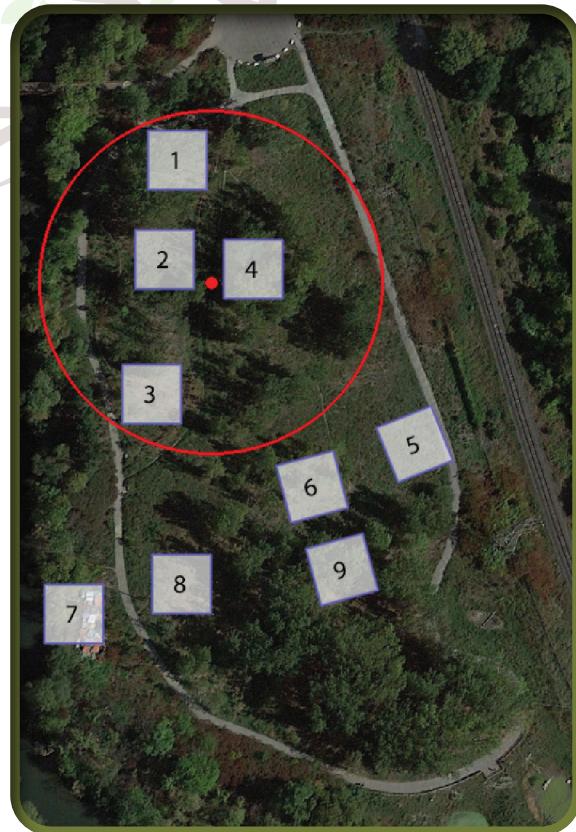
Cottonwood Flats is too large an area to monitor and assess in its entirety. Instead, nine 20m x 20m permanent plots have been defined that are the focus of monitoring and assessment efforts. The corners of each plot have been demarcated by an approximately 1.2m t-bar in the north-eastern-most corner and a pin flag in each of the remaining corners to aid on-site discovery. The exception is Plot 4 where remnant underground debris prevented placement of a t-bar, so a pin flag was used instead. Plot locations were selected based on existing natural features, human traffic patterns, and the post-industrial legacy of the site. Site activities abide by specific protocols developed by TFN in consultation with NECP, and modelled on similar protocols used by organizations like TRCA and the Ecological Monitoring and Assessment Network (EMAN) so as to maximize compatibility with other standard data collection methods.

Annually, volunteers conduct five Monitoring Sessions, the purpose of which is to identify animal species (primarily birds), and flora in bloom or seed. Each session begins with a ten minute “Bird Circle” observation, during which one to three stationary observers log all animal activity within a 50m circle encompassing plots 1,2,3, & 4, and the entirety of the fenced-in Songbird Meadow. Following this, one to four volunteers devote a minimum of five minutes of continuous observation time to logging all animal activity in each plot. An additional observer visits all plots independently to document flora in bloom or seed.

Further, one Vegetation Assessment is conducted each year, during which the emphasis is on flora identification. During these assessments there is no Bird Circle observation period, but at least one volunteer continues to devote five minutes of continuous observation time to each plot for the purpose of logging animal activity. Meanwhile, two to five volunteers devote several hours each to flora identification, working alone or in co-operation with one another, as proven most effective.

During all six sessions and assessments, a volunteer photographer is responsible for documenting interesting discoveries, general activities, and attending to routine photo monitoring as prescribed by the City of Toronto.

Concurrently, a CFMP Site Ambassador, situated by the trail that connects the Lower Don Recreational Trail to nearby Sun Valley/Crothers Woods, engages with any members of the public curious about project activities. The Site Ambassador answers questions, distributes TFN and City of Toronto brochures, and keeps records on human visitation and use of Cottonwood Flats.



SUMMARY OF RESULTS

FLORA SPECIES AT COTTONWOOD FLATS

The study area is dominated by Exotic Cool-season Grass Graminoid Meadow (CUM1-b) and Exotic Forb Meadow (CUM1-c). A portion of the site is successional semi-woody habitat, which includes the riparian zone along the Don River. Since CFMP was founded in 2017, the developing vegetation structure at the Flats was headed towards a vegetation community typical of the Lower Don Valley: Fresh-Moist Cottonwood Tall Treed Woodland (CUW1-A4). Recent & continued stewardship/treatment interventions have, and will likely continue to have, notable impact on this trajectory.

Plot observations identified a total of 97 species of vascular plants during the 2024 season (see Appendix A). These include 34 native species (both naturally-occurring and planted) and 63 exotic species (64.94%). 3 additional plants remain identified only to the level of Genus, and 13 species catalogued (6 native, 7 exotic) are not present in *Beechwood Wetland and Cottonwood Flats Terrestrial Biological Inventory and Assessment* (TRCA, 2010). These totals differ from those described in the 2023 report thanks to the following:

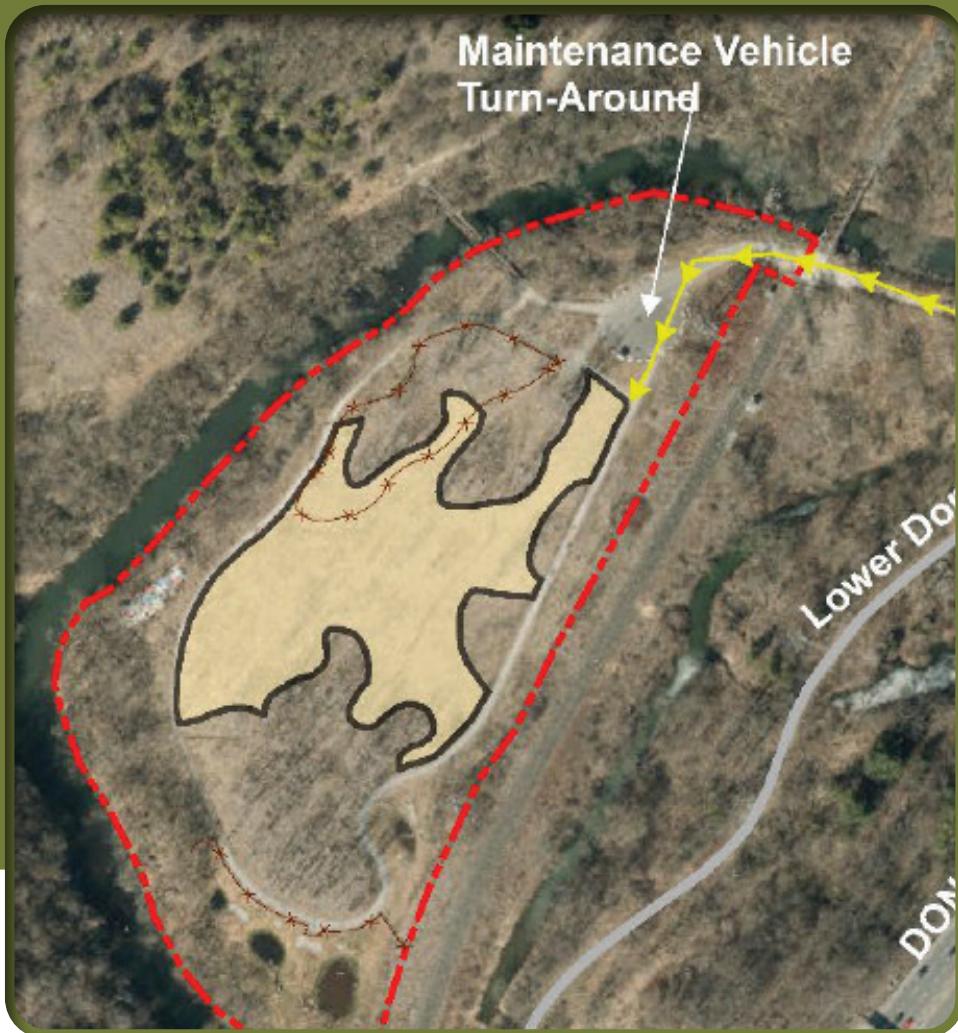
- *agrimonia gryposepala* (agrimony) now present
- *arenaria serpyllifolia* var. *serpyllifolia* (thyme-leaved sandwort) no longer present
- *avena sativa* (oats) no longer present
- *barbarea vulgaris* (winter cress) no longer present
- *bromus tectorum* (downy chess) no longer present
- *capsella bursa-pastoris* (shepherd's purse) no longer present
- *carduus nutans* ssp. *nutans* (nodding thistle) now present
- *carex blanda* (common wood sedge) now present
- *chenopodium album* (lamb's quarters) no longer present
- *cornus racemosa* (grey dogwood) now present
- *euonymus atropurpureus* (burning bush) no longer present
- *hesperis matronalis* (dame's rocket) no longer present
- *oxalis stricta* (common yellow wood-sorrel) no longer present
- *parietaria pensylvanica* (pennsylvania pellitory) now present
- *plantago rugelii* (red-stemmed plantain) no longer present
- *rosa multiflora* (multiflora rose) now present
- *rumex crispus* (curly dock) no longer present
- *stellaria media* (common chickweed) now present
- *tragopogon spp.* (goat's beard spp.) no longer present

Eastern cottonwoods (*Populus deltoides*) and red ash (*Fraxinus pennsylvanica*) remain the dominant native tree cover in our plots. As in previous years, symptoms of leaf spot fungus (*Mycosphaerella* spp.) were noted on red ash in plot 3 (Veg, Stephen Smith).

Exotic tree health & propagation continues to be greatly impacted by ongoing stewardship & herbicide interventions. That said, European buckthorn (*Rhamnus cathartica*) and black locust (*Robinia pseudoacacia*) regrowth was evident across most plots, illustrating the need for continued management next year.

At the herbaceous layer, tall goldenrod (*Solidago altissima*) remains the dominant native in CFMP plots and across the entire Study Area. Similarly, tansy (*Tanacetum vulgare*) remains the most populous herbaceous invasive in both CFMP plots and across the Flats in its entirety. DSV (*Vincetoxicum rossicum*) populations showed notable bounce-back from the existing seedbank, which may require aggressive management in 2025.

At the end of April, the Toronto and Region Conservation Authority (TRCA), under contract by the City of Toronto, completed a “maintenance mow” designed to help improve meadow habitat at the Flats. This intervention had a significant impact on many woody and grove-producing species in plots 3, 4, 5, 6, & 8, most notably European buckthorn (*Rhamnus cathartica*) and red ash (*Fraxinus pennsylvanica*). The uptick in staghorn sumac (*Rhus typhina*) and sandbar willow (*Salix interior*) noted in the 2024 data is indicative of an increase in stems and seedlings - overall biomass of both species was significantly reduced by the maintenance mow.



FAUNA SPECIES AT COTTONWOOD FLATS

Birds delivered a spectacular show this year with some 28 species cataloged during the season, breaking the previous record set in 2022. Of these, 4 species had not been observed in any previous year: Tennessee warbler (*Leiothlypis peregrina*), great crested flycatcher (*Myiarchus crinitus*), golden-crowned kinglet (*Regulus satrapa*) & blue-winged warbler (*Vermivora cyanoptera*). American goldfinch (*Spinus tristis*) were the most often sighted birds this year.

No nests were discovered in any of our plots.

5 species of butterflies were identified this year, with cabbage whites (*Pieris rapae*) maintaining their position as the most-often sighted species. Red admirals (*Vanessa atalanta*) were also plentiful, although the data collected lacked sufficient precision to confidently rank this species.



No mammals were sighted this year. The only amphibian was an American toad (*Anaxyrus americanus*) discovered in plot 7 during our Aug 24 session (MS4, Charles Bruce-Thompson). The only reptiles spotted were 2 snakes in plot 1 and another in plot 5 during our April 28 session (MS1, Donata Frank, Shahebina Samji). These sightings have not been included in the 2024 data as volunteers were unable to make a positive identification, though they were most likely garter snakes (*Thamnophis sirtalis*). No obvious signs of wildlife having over-wintered in the Study Area was discovered during our pre-season plot inspection and maintenance visit (April 26, Jason Ramsay-Brown).

HUMAN USE AT COTTONWOOD FLATS

Human visitation this year peaked with 141 visitors on foot and an additional 12 on bikes recorded at our two-hour monitoring session on April 28th (MS1, Niki Lawrence). Visitation by dogs peaked during that same session with 44 off-leash and an additional 18 on-leash recorded.

Vandalism and abusive human use escalated notably this year, affecting all plots except those within the fenced-in area. A large section of plot 4 was clear cut and trampled by rave participants, who were also responsible for large volumes of human excrement and garbage deposited throughout the Study Area. Fire pits in or near both plots 7 & 9 showed signs of considerable use throughout the year. Excessive trampling damage was noted in plots 5, 6, and 8, particularly during the summer.

The removal, relocation, and/or destruction of pin flags & t-bars continues to plague CFMP plots. Plot 10 was particularly hard hit, with all corner markers simultaneously disappearing on more than one occasion. As noted in previous CFMP Activity Reports, TFN was already considering decommissioning plot 10 for various reasons and after the final act of vandalism in 2024 the decision was made not to rebuild the plot. While some data was collected in plot 10 in early 2024 it has not been included in this report.

RECOMMENDATIONS

The following adjustments/enhancements should be considered in 2025 in order to help improve the quality of collected data and make better use of volunteer time:

- TFN will produce custom, branded pin flags & t-bar toppers featuring URL & QR codes leading to online project information.
- TFN requests that the City of Toronto approve installation of concrete footings for all tbars.
- TFN requests that the City of Toronto design and install permanent signage at Cottonwood Flats meant to educate the public on the purpose & benefit of CFMP and its plots.



APPENDICES

APPENDIX A: COMPILED FLORA DATA

Data presented in this section has been compiled from all flora logs submitted during the 2024 season. Where cover-abundance estimates differed, those recorded during the Vegetation Assessment in July were considered authoritative.

LEGEND

DG	Dominant groundcover with no precise estimate of population or distribution
ND	Species noted, but no population or distribution data recorded
SD	Sparingly distributed throughout plot, making exact estimate impractical but certainly less than 3%
Blue Text	Exotic species
Red Text	Species identified to level of Genus only.
Green Text	Species does not appear in <i>Beechwood Wetland and Cottonwood Flats Terrestrial Biological Inventory and Assessment</i> (TRCA, 2010).
**	Not recorded in previous year
↑	Population increase from previous year
↓	Population decrease from previous year



PLOT 1



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	2 saplings↓	Leafing: MS1,MS2,MS3,Veg
<i>achillea millefolium</i>	european yarrow	2 plants	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seedling: Veg
<i>agrostis gigantea</i>	redtop	SD	
<i>alliaria petiolata</i>	garlic mustard	NONE↓	
<i>ambrosia artemisiifolia</i>	common ragweed	3 plants↑	Flowering: MS4,MS5
<i>centaurea stoebe</i> ssp. <i>micranthos</i>	spotted knapweed	1 plant**	Leafing: MS1; Flowering: MS4
<i>cichorium intybus</i>	chicory	3 plants	
<i>cornus racemosa</i>	grey dogwood	9 seedlings**	Leafing: Veg
<i>dactylis glomerata</i>	orchard grass	SD	Flowering: Veg
<i>daucus carota</i>	queen anne's lace	5%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seedling: MS5
<i>echium vulgare</i>	viper's bugloss	2 plants↓	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	SD	Leafing: Veg; Flowering: MS4; Fruit/seedling: MS4
<i>erigeron strigosus</i>	rough fleabane	6 plants↓	Leafing: MS3; Flowering: Veg
<i>erysimum hieracifolium</i>	hawkweed-leaved mustard	20+ plants↑	Leafing: MS3
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	10%↑	Leafing: MS2; Flowering: MS2,MS4
<i>fraxinus pennsylvanica</i>	red ash	2 trees	Leafing: MS2,MS3; Fruit/seedling: Veg
<i>hieracium</i> spp.	hawkweed spp.	17 plants↑	
<i>hypericum perforatum</i> ssp. <i>perforatum</i>	common st. john's-wort	1 plant	Leafing: Veg; Flowering: Veg; MS4
<i>juglans nigra</i>	black walnut	1 sapling	Leafing: Veg
<i>juniperus virginiana</i> var. <i>virginiana</i>	red cedar	1 sapling	Leafing: MS2,Veg
<i>linaria vulgaris</i>	butter-and-eggs	SD	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lolium perenne</i>	perennial rye	SD	
<i>medicago lupulina</i>	black medick	SD	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	<1%↑	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	5 plants↑	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>poa compressa</i>	flat-stemmed blue grass	SD	
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	SD	Leafing: Veg; Fruit/seedling: Veg
<i>poa</i> spp.	grass		
<i>populus deltoides</i> ssp. <i>deltoides</i>		cottonwood	40.00% Leafing: MS3
<i>potentilla recta</i>	sulphur cinquefoil	2 plants↓	Leafing: Veg; Flowering: MS3; Fruit/seedling: Veg,MS4
<i>rhamnus cathartica</i>	common buckthorn	2 seedlings↓	Leafing: MS2,MS3,Veg; Fruit/seedling: Veg
<i>rhus typhina</i>	staghorn sumach	14 plants↑	Leafing: MS2,Veg; Fruit/seedling: MS4

PLOT 1 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>securigera varia</i>	crown vetch	1%↓	Leafing: MS1,MS2,MS3; Flowering: MS3,Veg,MS4; Fruit/seedling: MS4
<i>solanum dulcamara</i>	bittersweet nightshade	1 plant**	
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	8%↓	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seedling: MS5
<i>tanacetum vulgare</i>	tansy	3%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seedling: Veg,MS5
<i>taraxacum officinale</i>	dandelion	SD	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>ulmus pumila</i>	siberian elm	3 saplings	Leafing: Veg
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	10 plants**	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seedling: MS4,MS5
<i>vicia cracca</i>	cow vetch	1 plant↓	Leafing: MS1,MS2
<i>vincetoxicum rossicum</i>	dog-strangling vine	3%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/ seedling: MS4,MS5
<i>vitis riparia</i>	riverbank grape	21 plants↑	Leafing: MS2,Veg

PLOT 2



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	6 seedlings	Leafing: MS1,MS2,MS3,Veg
<i>achillea millefolium</i>	european yarrow	SD	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>agrostis gigantea</i>	redtop	SD	
<i>alliaria petiolata</i>	garlic mustard	4 plants↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS1,MS2
<i>ambrosia artemisiifolia</i>	common ragweed	1 plant	Flowering: MS4,MS5
<i>arctium minus</i>	common burdock	NONE↓	
<i>artemisia vulgaris</i>	common mugwort	1 plant	Leafing: MS1,MS2,MS3, Veg; Flowering: MS4
<i>asclepias syriaca</i>	common milkweed	26 plants↑	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>cardamine impatiens</i>	balsam bitter cress	1 patch**	Leafing: MS3; Fruit/seeding: Veg;
<i>cichorium intybus</i>	chicory	1 plant**	
<i>cirsium arvense</i>	creeping thistle	<1%↓	Leafing: MS3; Flowering: Veg
<i>cirsium vulgare</i>	bull thistle	1 plant	Leafing: Veg
<i>daucus carota</i>	queen anne's lace	5 plants	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>dipsacus fullonum</i>	teasel	ND**	Leafing: MS2,MS3; Fruit/seeding: MS5
<i>echium vulgare</i>	viper's bugloss	<1%↓	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	SD	Leafing: Veg; Flowering: MS4; Fruit/seeding: MS4
<i>erigeron annuus</i>	daisy fleabane	41 plants**	Leafing: MS3; Flowering: Veg,MS4,MS5
<i>erigeron canadensis</i>	horse-weed	ND**	
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	30%	Leafing: MS2; Flowering: MS2,MS4
<i>hieracium</i> spp.	hawkweed spp.	<1%	
<i>hypericum perforatum</i> ssp. <i>perforatum</i>	common st. john's-wort	3 plants↑	Leafing: Veg; Flowering: Veg; MS4
<i>juglans nigra</i>	black walnut	1 sapling**	Leafing: Veg
<i>lactuca serriola</i>	prickly lettuce	5 plants**	Leafing: MS3; Fruit/seeding: Veg
<i>linaria vulgaris</i>	butter-and-eggs	8 plants↑	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lolium perenne</i>	perennial rye	SD	
<i>lotus corniculatus</i>	bird's foot trefoil	14 plants↓	Flowering: MS4
<i>medicago lupulina</i>	black medick	1 plant	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4

PLOT 2 – Cont.



<i>melilotus albus</i>	white sweet clover	SD↑	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	3 plants	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>parthenocissus quinquefolia</i>	virginia creeper	ND**	
<i>phalaris arundinacea</i>	reed canary grass	<1%	
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	SD	Leafing: Veg; Fruit/seedling: Veg
<i>populus deltoides</i> ssp. <i>deltoides</i>	cottonwood	6.50%	Leafing: MS3
<i>potentilla recta</i>	sulphur cinquefoil	4 plants↑	Leafing: Veg; Flowering: MS3; Fruit/seedling: Veg,MS4
<i>rhus typhina</i>	staghorn sumach	ND**	Leafing: MS2,Veg; Fruit/seedling: MS4
<i>securigera varia</i>	crown vetch	30.00%	Leafing: MS1,MS2,MS3; Flowering: MS3,Veg,MS4; Fruit/seedling: MS4
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	30.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seedling: MS5
<i>symphytum ericoides</i> var. <i>ericoides</i>	heath aster	NONE↓	
<i>symphytum novae-angliae</i>	new england aster	10 stems	
<i>tanacetum vulgare</i>	tansy	20 stems↓	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seedling: Veg,MS5
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	4 plants	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seedling: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	5.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seedling: MS4,MS5
<i>vitis riparia</i>	riverbank grape	1 plant	Leafing: MS2,Veg

PLOT 3



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	ND**	Leafing: MS1,MS2,MS3,Veg
<i>achillea millefolium</i>	european yarrow	16 plants↑	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>alliaria petiolata</i>	garlic mustard	10 plants**	Leafing: MS1,MS2,MS3,Veg; Flowering: MS1,MS2
<i>ambrosia artemisiifolia</i>	common ragweed	NONE↓	
<i>apocynum cannabinum</i> var. <i>cannabinum</i>	hemp dogbane	ND	
<i>artemisia vulgaris</i>	common mugwort	1%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS4
<i>asclepias syriaca</i>	common milkweed	30 plants↑	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>barbarea vulgaris</i>	winter cress	NONE↓	
<i>cardamine impatiens</i>	balsam bitter cress	15 plants	Leafing: MS3; Fruit/seeding: Veg;
<i>centaurea stoebe</i> ssp. <i>micranthos</i>	spotted knapweed	1 plant	Leafing: MS1; Flowering: MS4
<i>cirsium arvense</i>	creeping thistle	1.00%	Leafing: MS3; Flowering: Veg
<i>cirsium vulgare</i>	bull thistle	6 plants↓	Leafing: Veg
<i>cornus sericea</i>	red-osier dogwood	ND**	Leafing: Veg
<i>daucus carota</i>	queen anne's lace	10 plants↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>dipsacus fullonum</i>	teasel	1.00%	Leafing: MS2,MS3; Fruit/seeding: MS5
<i>echium vulgare</i>	viper's bugloss	6 plants↑	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	<1%	Leafing: Veg; Flowering: MS4; Fruit/seeding: MS4
<i>erigeron canadensis</i>	horse-weed	ND**	
<i>erigeron strigosus</i>	rough fleabane	26 plants↑	Leafing: MS3; Flowering: Veg
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	SD	Leafing: MS2; Flowering: MS2,MS4
<i>fraxinus pennsylvanica</i>	red ash	60%↓	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>hieracium</i> spp.	hawkweed spp.	10 plants	
<i>hypericum perforatum</i> ssp. <i>perforatum</i>	common st. john's-wort	5 plants↑	Leafing: Veg; Flowering: Veg; MS4
<i>lactuca serriola</i>	prickly lettuce	7 plants↓	Leafing: MS3; Fruit/seeding: Veg
<i>linaria vulgaris</i>	butter-and-eggs	1%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lotus corniculatus</i>	bird's foot trefoil	8 plants	Flowering: MS4
<i>medicago lupulina</i>	black medick	SD	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4

PLOT 3 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>melilotus albus</i>	white sweet clover	1%↓	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	7 plants↓	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	SD	Leafing: Veg; Fruit/seeding: Veg
<i>populus deltoides</i> ssp. <i>deltoides</i>	cottonwood	15.00%	Leafing: MS3
<i>potentilla recta</i>	sulphur cinquefoil	ND**	Leafing: Veg; Flowering: MS3; Fruit/seeding: Veg,MS4
<i>pulmonaria</i> spp.	lung-wort	4%	Flowering: MS4
<i>rhamnus cathartica</i>	common buckthorn	2 plants**	Leafing: MS2,MS3,Veg; Fruit/seeding: Veg
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	10.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>solidago nemoralis</i> ssp. <i>nemoralis</i>	gray goldenrod	3 plants	Leafing: MS1; Flowering: MS4
<i>tanacetum vulgare</i>	tansy	1.00%	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seeding: Veg,MS5
<i>taraxacum officinale</i>	dandelion	4 plants	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>thlaspi arvense</i>	penny-cress	3 plants	Leafing: MS3
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	9 plants↑	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seeding: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	1.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seeding: MS4,MS5

PLOT 4



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	1 stem**	Leafing: MS1,MS2,MS3,Veg
<i>achillea millefolium</i>	european yarrow	NONE↓	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>arctium minus</i>	common burdock	ND**	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg,MS4; Fruit/seeding: MS1, MS5
<i>artemisia vulgaris</i>	common mugwort	4 plants	Leafing: MS1,MS2,MS3,Veg; Flowering: MS4
<i>asclepias syriaca</i>	common milkweed	2 plants↑	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>cornus sericea</i>	red-osier dogwood	2 plants↓	Leafing: Veg
<i>dactylis glomerata</i>	orchard grass	ND	Flowering: Veg
<i>daucus carota</i>	queen anne's lace	<1%↓	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>dianthus armeria</i> ssp. <i>armeria</i>	deptford pink	2 plants	Flowering: Veg
<i>echium vulgare</i>	viper's bugloss	SD	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>erigeron strigosus</i>	rough fleabane	3 plants↓	Leafing: MS3; Flowering: Veg
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	SD	Leafing: MS2; Flowering: MS2,MS4
<i>juglans nigra</i>	black walnut	1 sapling↓	Leafing: Veg
<i>linaria vulgaris</i>	butter-and-eggs	10 plants	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lonicera tatarica</i>	tatarian honeysuckle	2 plants**	Leafing: MS1,MS2; Flowering: MS2; Fruit/seeding: Veg
<i>lotus corniculatus</i>	bird's foot trefoil	8 plants	Flowering: MS4
<i>medicago lupulina</i>	black medick	<1%	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	SD↓	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>phleum pratense</i> ssp. <i>pratense</i>	timothy grass	ND	Leafing: Veg; Fruit/seeding: Veg
<i>plantago lanceolata</i>	english plantain	SD	
<i>poa compressa</i>	flat-stemmed blue grass	16 plants	
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	DG	Leafing: Veg; Fruit/seeding: Veg
<i>populus deltoides</i> ssp. <i>deltoides</i>	cottonwood	40.00%	Leafing: MS3
<i>rhamnus cathartica</i>	common buckthorn	6 stems↓	Leafing: MS2,MS3,Veg; Fruit/seeding: Veg
<i>rhus typhina</i>	staghorn sumach	10.00%	Leafing: MS2,Veg; Fruit/seeding: MS4

PLOT 4 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>robinia pseudoacacia</i>	black locust	47 stems↑	Leafing: MS2,Veg;
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	25.00%	Leafing: MS1,MS2,MS3, Veg; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>symphytum ericoides</i> var. <i>ericoides</i>	heath aster	NONE↓	
<i>tanacetum vulgare</i>	tansy	SD↓	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seeding: Veg,MS5
<i>taraxacum officinale</i>	dandelion	10 plants↑	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>torilis japonica</i>	hedge parsley	ND**	Leafing: Veg; Flowering: Veg
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	7 plants↑	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seeding: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	SD↓	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/ seeding: MS4,MS5
<i>vitis riparia</i>	riverbank grape	NONE↓	

PLOT 5



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>achillea millefolium</i>	european yarrow	<1%↑	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>alliaria petiolata</i>	garlic mustard	NONE↓	
<i>ambrosia artemisiifolia</i>	common ragweed	5 plants	Flowering: MS4,MS5
<i>arenaria serpyllifolia</i> var. <i>serpyllifolia</i>	thyme-leaved sandwort	NONE↓	
<i>asclepias syriaca</i>	common milkweed	ND	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>avena sativa</i>	oats	NONE↓	
<i>capsella bursa-pastoris</i>	shepherd's purse	NONE↓	
<i>chenopodium album</i>	lamb's quarters	NONE↓	
<i>daucus carota</i>	queen anne's lace	<1%↓	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>dipsacus fullonum</i>	teasel	12 plants	Leafing: MS2,MS3; Fruit/seeding: MS5
<i>drymocallis arguta</i>	tall cinquefoil	20 plants	Leafing: Veg; Flowering: Veg
<i>echium vulgare</i>	viper's bugloss	10.00%	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	NONE↓	
<i>erigeron annuus</i>	daisy fleabane	5%↑	Leafing: MS3; Flowering: Veg,MS4,MS5
<i>erigeron canadensis</i>	horse-weed	2 stems	
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	15.00%	Leafing: MS2; Flowering: MS2,MS4
<i>fraxinus pennsylvanica</i>	red ash	1 sapling↓	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>hieracium</i> spp.	hawkweed spp.	SD**	
<i>juglans nigra</i>	black walnut	3 seedlings↑	Leafing: Veg
<i>lactuca serriola</i>	prickly lettuce	1 plant↓	Leafing: MS3; Fruit/seeding: Veg
<i>lepidium campestre</i>	field pepper-grass	1%	Leafing: MS2; Flowering: MS2
<i>linaria vulgaris</i>	butter-and-eggs	SD	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lotus corniculatus</i>	bird's foot trefoil	ND	Flowering: MS4
<i>malus pumila</i>	apple	1 stems↓	
<i>medicago lupulina</i>	black medick	ND**	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	20%↓	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>nepeta cataria</i>	catnip	<1%	Leafing: MS1,Veg; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	10 plants	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>poa compressa</i>	flat-stemmed blue grass	NONE↓	
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	DG	Leafing: Veg; Fruit/seeding: Veg
<i>poa</i> spp.	grass	SD	

PLOT 5 – Cont.



<i>potentilla recta</i>	sulphur cinquefoil	ND	Leafing: Veg; Flowering: MS3; Fruit/seedling: Veg,MS4
<i>rhamnus cathartica</i>	common buckthorn	2 clumps↓	Leafing: MS2,MS3,Veg; Fruit/seedling: Veg
<i>rhus typhina</i>	staghorn sumach	26 plants↑	Leafing: MS2,Veg; Fruit/seedling: MS4
<i>salix interior</i>	sandbar willow	63 stems↑	Leafing: Veg; Fruit/seedling: Veg
<i>silene latifolia</i>	evening lychnis (white campion)	4 plants↑	Leafing: MS3; Flowering: Veg,MS4
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	40%↑	Leafing: MS1,MS2,MS3, Veg; Flowering: Veg,MS4,MS5; Fruit/seedling: MS5
<i>tanacetum vulgare</i>	tansy	25%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seedling: Veg,MS5
<i>taraxacum officinale</i>	dandelion	5 plants	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>torilis japonica</i>	hedge parsley	2 plants**	Leafing: Veg; Flowering: Veg
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	15 plants↓	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seedling: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	10%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seedling: MS4,MS5

PLOT 6



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>achillea millefolium</i>	european yarrow	2 plants↓	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>agrostis gigantea</i>	redtop	2 patches**	
<i>ambrosia artemisiifolia</i>	common ragweed	1 plant↓	Flowering: MS4,MS5
<i>arctium minus</i>	common burdock	ND	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg,MS4; Fruit/seeding: MS1, MS5
<i>artemisia vulgaris</i>	common mugwort	15%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS4
<i>asclepias syriaca</i>	common milkweed	1 plant**	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>dactylis glomerata</i>	orchard grass	ND	Flowering: Veg
<i>daucus carota</i>	queen anne's lace	10 plants↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>echium vulgare</i>	viper's bugloss	1 clump	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	ND**	Leafing: Veg; Flowering: MS4; Fruit/seeding: MS4
<i>erigeron annuus</i>	daisy fleabane	3 plants**	Leafing: MS3; Flowering: Veg,MS4,MS5
<i>eryngium planum</i>	flat sea-holly	2 plants↓	Leafing: Veg; Flowering: Veg; Fruit/seeding: MS4
<i>festuca rubra</i> ssp. <i>rubra</i>	red fescue	NONE↓	
<i>fraxinus pennsylvanica</i>	red ash	20.00%	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>hesperis matronalis</i>	dame's rocket	NONE↓	
<i>juglans nigra</i>	black walnut	3 stems**	Leafing: Veg
<i>lepidium campestre</i>	field pepper-grass	4 plants**	Leafing: MS2; Flowering: MS2
<i>linaria vulgaris</i>	butter-and-eggs	SD↑	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lotus corniculatus</i>	bird's foot trefoil	1 clump**	Flowering: MS4
<i>medicago lupulina</i>	black medick	1%	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	15%↓	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>nepeta cataria</i>	catnip	ND**	Leafing: MS1,Veg; Flowering: Veg
<i>poa pratensis</i> ssp. <i>pratensis</i>	kentucky blue grass	DG	Leafing: Veg; Fruit/seeding: Veg
<i>populus deltoides</i> ssp. <i>deltoides</i>	cottonwood	50%↑	Leafing: MS3
<i>potentilla recta</i>	sulphur cinquefoil	3 plants	Leafing: Veg; Flowering: MS3; Fruit/seeding: Veg,MS4

PLOT 6 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>rhamnus cathartica</i>	common buckthorn	4 stems↓	Leafing: MS2,MS3,Veg; Fruit/seeding: Veg
<i>rhus typhina</i>	staghorn sumach	3%↑	Leafing: MS2,Veg; Fruit/seeding: MS4
<i>salix interior</i>	sandbar willow	1 plant↓	Leafing: Veg; Fruit/seeding: Veg
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	10.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>tanacetum vulgare</i>	tansy	20%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seeding: Veg,MS5
<i>taraxacum officinale</i>	dandelion	4 plants	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>thlaspi arvense</i>	penny-cress	NONE↓	
<i>tragopogon</i> spp.	goat's beard spp.	NONE↓	
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	ND	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seeding: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	SD↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/ seeding: MS4,MS5
<i>vitis riparia</i>	riverbank grape	1 plant**	Leafing: MS2,Veg

PLOT 7



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	15.00%	Leafing: MS1,MS2,MS3,Veg
<i>ageratina altissima</i> var. <i>altissima</i>	white snakeroot	5%	Leafing; MS3
<i>agrimonia gryposepala</i>	agrimony	ND**	
<i>ailanthus altissima</i>	tree-of-heaven	1 tree↓	
<i>alliaria petiolata</i>	garlic mustard	NONE↓	
<i>ambrosia artemisiifolia</i>	common ragweed	NONE↓	
<i>arctium minus</i>	common burdock	1 plant↓	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg,MS4; Fruit/seeding: MS1, MS5
<i>artemisia vulgaris</i>	common mugwort	NONE↓	
<i>bromus tectorum</i>	downy chess	NONE↓	
<i>cardamine impatiens</i>	balsam bitter cress	ND	Leafing: MS3; Fruit/seeding: Veg;
<i>carduus nutans</i> ssp. <i>nutans</i>	nodding thistle	ND**	
<i>carex blanda</i>	common wood sedge	1 clump**	
<i>celastrus orbiculatus</i>	asian bittersweet	ND↑	Leafing: Veg
<i>cirsium vulgare</i>	bull thistle	NONE↓	Leafing: Veg
<i>cornus alternifolia</i>	alternate-leaved dogwood	1 plant	
<i>dactylis glomerata</i>	orchard grass	2 clumps	Flowering: Veg
<i>daucus carota</i>	queen anne's lace	5%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>echium vulgare</i>	viper's bugloss	NONE↓	
<i>elymus repens</i>	quack grass	ND↑	Leafing: Veg; Flowering: MS4; Fruit/seeding: MS4
<i>elymus riparius</i>	riverbank wild rye	ND**	
<i>erigeron annuus</i>	daisy fleabane	5 plants↑	Leafing: MS3; Flowering: Veg,MS4,MS5
<i>erigeron strigosus</i>	rough fleabane	3 plants	Leafing: MS3; Flowering: Veg
<i>fraxinus pennsylvanica</i>	red ash	1 tree, ~3 seedlings	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>geum urbanum</i>	urban avens	1 plant↓	Leafing: Veg; Fruit/seeding: Veg
<i>hypericum perforatum</i> ssp. <i>perforatum</i>	common st. john's-wort	2 plants↑	Leafing: Veg; Flowering: Veg; MS4
<i>linaria vulgaris</i>	butter-and-eggs	NONE↓	
<i>lolium perenne</i>	perennial rye	NONE↓	
<i>lonicera tatarica</i>	tatarian honeysuckle	1 plant	Leafing: MS1,MS2; Flowering: MS2; Fruit/seeding: Veg

PLOT 7 – Cont.



ME COMMON NAME	COVER	NOTES
<i>medicago lupulina</i>	black medick	SD Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	SD Leafing: MS1,MS2,MS3; Flowering: Veg
<i>morus alba</i>	white mulberry	5 stems
<i>nepeta cataria</i>	catnip	7 plants↓ Leafing: MS1,Veg; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	3 plants** Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>oxalis stricta</i>	common yellow wood-sorrel	NONE↓
<i>parthenocissus quinquefolia</i>	virginia creeper	3 plants
<i>persicaria maculosa</i>	lady's thumb	20 stems
<i>phalaris arundinacea</i>	reed canary grass	NONE↓
<i>phleum pratense ssp. pratense</i>	timothy grass	SD Leafing: Veg; Fruit/seeding: Veg
<i>plantago rugelii</i>	red-stemmed plantain	NONE↓
<i>poa compressa</i>	flat-stemmed blue grass	SD
<i>poa pratensis ssp. pratensis</i>	kentucky blue grass	SD Leafing: Veg; Fruit/seeding: Veg
<i>poa spp.</i>	grass	SD
<i>potentilla recta</i>	sulphur cinquefoil	1 plant Leafing: Veg; Flowering: MS3; Fruit/seeding: Veg,MS4
<i>prunus virginiana</i> var. <i>virginiana</i>	choke cherry	SD Leafing: Veg
<i>reynoutria japonica</i> var. <i>japonica</i>	japanese knotweed	8 stems↓ Leafing: MS1,MS2,Veg
<i>rhamnus cathartica</i>	common buckthorn	3 stems Leafing: MS2,MS3,Veg; Fruit/seeding: Veg
<i>rhus typhina</i>	staghorn sumach	15%↑ Leafing: MS2,Veg; Fruit/seeding: MS4
<i>ribes rubrum</i>	garden red currant	1 plant
<i>rosa multiflora</i>	multiflora rose	1 stem**
<i>rubus occidentalis</i>	wild black raspberry	3 plants
<i>rubus odoratus</i>	purple-flowering raspberry	3 plants Leafing: Veg; Flowering: Veg
<i>rumex crispus</i>	curly dock	NONE↓
<i>silene latifolia</i>	evening lychnis (white campion)	5 plants↓ Leafing: MS3; Flowering: Veg,MS4
<i>solanum dulcamara</i>	bittersweet nightshade	NONE↓
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	15.00% Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>solidago flexicaulis</i>	zig-zag goldenrod	1 plant Flowering: MS4
<i>sonchus oleraceus</i>	annual sow-thistle	ND↑ Leafing: Veg
<i>stellaria media</i>	common chickweed	ND**

PLOT 7 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>symphyotrichum ericoides</i> var. <i>ericoides</i>	heath aster	1 plant**	
<i>tanacetum vulgare</i>	tansy	10%↑	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seeding: Veg,MS5
<i>taraxacum officinale</i>	dandelion	7 plants↓	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>thlaspi arvense</i>	penny-cress	NONE↓	
<i>torilis japonica</i>	hedge parsley	2%↑	Leafing: Veg; Flowering: Veg
<i>toxicodendron radicans</i> var. <i>radicans</i>	climbing poison ivy	4 plants	
<i>trifolium repens</i>	white clover	ND	
<i>tussilago farfara</i>	coltsfoot	1 plant	
<i>ulmus pumila</i>	siberian elm	1 seedling**	Leafing: Veg
<i>urtica dioica</i> ssp. <i>dioica</i>	european stinging nettle	6 plants↑	Flowering: Veg
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	2 plants	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seeding: MS4,MS5
<i>verbena urticifolia</i>	white vervain	ND	Flowering: MS4
<i>vincetoxicum rossicum</i>	dog-strangling vine	2%↑	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seeding: MS4,MS5
<i>vitis riparia</i>	riverbank grape	2%↑	Leafing: MS2,Veg

PLOT 8



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>achillea millefolium</i>	european yarrow	3.00%	Leafing: MS2,MS3; Flowering: MS3,Veg; Fruit/seeding: Veg
<i>alliaria petiolata</i>	garlic mustard	1 plant**	Leafing: MS1,MS2,MS3, Veg; Flowering: MS1,MS2
<i>ambrosia artemisiifolia</i>	common ragweed	1 plant	Flowering: MS4,MS5
<i>artemisia vulgaris</i>	common mugwort	1 plant	Leafing: MS1,MS2,MS3, Veg; Flowering: MS4
<i>asclepias syriaca</i>	common milkweed	1 plant	Leafing: MS2,MS3,Veg; Fruit/seeding: MS4,MS5
<i>bassia scoparia</i>	summer-cypress	3 plants	
<i>centaurea stoebe</i> ssp. <i>micranthos</i>	spotted knapweed	1.00%	Leafing: MS1; Flowering: MS4
<i>cichorium intybus</i>	chicory	NONE↓	
<i>dactylis glomerata</i>	orchard grass	ND	Flowering: Veg
<i>daucus carota</i>	queen anne's lace	ND	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>echium vulgare</i>	viper's bugloss	1%	Leafing: MS3; Flowering: Veg, MS4,MS5
<i>elymus repens</i>	quack grass	3 plants	Leafing: Veg; Flowering: MS4; Fruit/seeding: MS4
<i>erigeron annuus</i>	daisy fleabane	SD	Leafing: MS3; Flowering: Veg,MS4,MS5
<i>eryngium planum</i>	flat sea-holly	NONE↓	
<i>fraxinus pennsylvanica</i>	red ash	20%↓	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>juglans nigra</i>	black walnut	NONE↓	
<i>lactuca serriola</i>	prickly lettuce	1 plant	Leafing: MS3; Fruit/seeding: Veg
<i>linaria vulgaris</i>	butter-and-eggs	2 plants	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>lotus corniculatus</i>	bird's foot trefoil	10 plants	Flowering: MS4
<i>medicago lupulina</i>	black medick	1 plant	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	1.00%	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	ND**	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>phalaris arundinacea</i>	reed canary grass	3.00%	
<i>phleum pratense</i> ssp. <i>pratense</i>	timothy grass	ND	Leafing: Veg; Fruit/seeding: Veg
<i>poa</i> spp.	grass	DG	
<i>potentilla recta</i>	sulphur cinquefoil	20 plants	Leafing: Veg; Flowering: MS3; Fruit/seeding: Veg,MS4

PLOT 8 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>rhamnus cathartica</i>	common buckthorn	NONE↓	
<i>rhus typhina</i>	staghorn sumach	15.00%	Leafing: MS2,Veg; Fruit/seedling: MS4
<i>schizachyrium scoparium</i> var. <i>scoparium</i>	little bluestem	1 patch	
<i>securigera varia</i>	crown vetch	ND	Leafing: MS1,MS2,MS3; Flowering: MS3,Veg,MS4; Fruit/seedling: MS4
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	10.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5; Fruit/seedling: MS5
<i>tanacetum vulgare</i>	tansy	15.00%	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seedling: Veg,MS5
<i>thlaspi arvense</i>	penny-cress	NONE↓	
<i>ulmus pumila</i>	siberian elm	1 seedling	Leafing: Veg
<i>verbascum thapsus</i> ssp. <i>thapsus</i>	common mullein	2 plants	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seedling: MS4,MS5
<i>vicia cracca</i>	cow vetch	ND	Leafing: MS1,MS2
<i>vincetoxicum rossicum</i>	dog-strangling vine	<1%↓	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seedling: MS4,MS5

PLOT 9



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>acer negundo</i>	manitoba maple	6 seedlings↓	Leafing: MS1,MS2,MS3,Veg
<i>ambrosia artemisiifolia</i>	common ragweed	2 plants↓	Flowering: MS4,MS5
<i>arctium minus</i>	common burdock	1 plant**	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg,MS4; Fruit/seeding: MS1, MS5
<i>cornus racemosa</i>	grey dogwood	3 stems**	Leafing: Veg
<i>cornus sericea</i>	red-osier dogwood	2 plants**	Leafing: Veg
<i>dactylis glomerata</i>	orchard grass	NONE↓	
<i>daucus carota</i>	queen anne's lace	<1%↓	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>euonymus atropurpureus</i>	burning bush	NONE↓	
<i>fraxinus pennsylvanica</i>	red ash	2.00%	Leafing: MS2,MS3; Fruit/seeding: Veg
<i>geum urbanum</i>	urban avens	ND**	Leafing: Veg; Fruit/seeding: Veg
<i>juglans nigra</i>	black walnut	1 sapling	Leafing: Veg
<i>juniperus virginiana</i> var. <i>virginiana</i>	red cedar	1 tree	Leafing: MS2,Veg
<i>linaria vulgaris</i>	butter-and-eggs	20+ plants↑	Leafing: MS1,MS2,MS3,Veg; Flowering: Veg,MS4,MS5
<i>medicago lupulina</i>	black medick	2%↓	Leafing: MS3,Veg; Flowering: MS3,Veg,MS4
<i>melilotus albus</i>	white sweet clover	2 plants↓	Leafing: MS1,MS2,MS3; Flowering: Veg
<i>nepeta cataria</i>	catnip	3 plants**	Leafing: MS1,Veg; Flowering: Veg
<i>oenothera biennis</i>	common evening-primrose	3 plants↓	Leafing: MS3,Veg; Flowering: Veg,MS4,MS5
<i>parietaria pensylvanica</i>	<i>pennsylvania pellitory</i>	ND**	Leafing: Veg
<i>poa spp.</i>	grass	5%↓	
<i>populus deltoides</i> ssp. <i>deltoides</i>	cottonwood	60.00%	Leafing: MS3
<i>potentilla recta</i>	sulphur cinquefoil	1 plant	Leafing: Veg; Flowering: MS3; Fruit/seeding: Veg,MS4
<i>rhamnus cathartica</i>	common buckthorn	6 plants↓	Leafing: MS2,MS3,Veg; Fruit/seeding: Veg
<i>rhus typhina</i>	staghorn sumach	15.00%	Leafing: MS2,Veg; Fruit/seeding: MS4
<i>robinia pseudoacacia</i>	black locust	6 stems↑	Leafing: MS2,Veg;

PLOT 9 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>solidago altissima</i> var. <i>altissima</i>	tall goldenrod	40.00%	Leafing: MS1,MS2,MS3, Veg; Flowering: Veg,MS4,MS5; Fruit/seeding: MS5
<i>tanacetum vulgare</i>	tansy	2.00%	Leafing: MS1,MS2,MS3; Flowering: Veg,MS4; MS5; Fruit/seeding: Veg,MS5
<i>taraxacum officinale</i>	dandelion	ND	Leafing: MS1,MS2,Veg; Flowering: MS1,MS2,Veg
<i>thlaspi arvense</i>	penny-cress	ND	Leafing: MS3
<i>ulmus pumila</i>	siberian elm	1 tree	Leafing: Veg
<i>verbasum thapsus</i> ssp. <i>thapsus</i>	common mullein	2 plants	Leafing: MS1,MS2,MS3; Flowering: Veg; Fruit/seeding: MS4,MS5
<i>vincetoxicum rossicum</i>	dog-strangling vine	10.00%	Leafing: MS1,MS2,MS3,Veg; Flowering: MS2,MS3; Fruit/seeding: MS4,MS5
<i>vitis riparia</i>	riverbank grape	1 plant**	Leafing: MS2,Veg

COMPLETE DATA SET (ALL PLOTS)

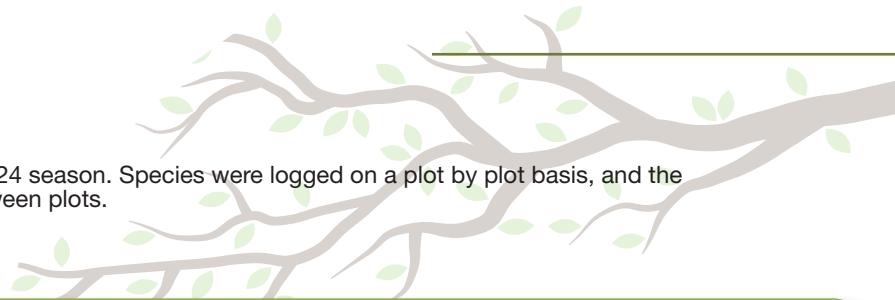
To facilitate robust use of data, a spreadsheet of all observations (flora & fauna) was delivered to NECP along with this report. For ease of use, this data set is maintained by Toronto Field Naturalists at the following URL:

<https://tfngo.to/cfmp-2024-data>

Should readers require a copy of this spreadsheet please contact cfmp@torontofieldnaturalists.org.

APPENDIX B: COMPILED FAUNA DATA

Data presented in this section has been compiled from all fauna logs submitted during the 2024 season. Species were logged on a plot by plot basis, and the possibility exists that the same animal may have been logged multiple times as it moved between plots.



COMPLETE DATA SET (ALL PLOTS)

SCIENTIFIC NAME	COMMON NAME	PLOT 1	PLOT 2	PLOT 3	PLOT 4	PLOT 5	PLOT 6	PLOT 7	PLOT 8	PLOT 9	PLOT 10	CIRCLE
<i>Agelaius phoeniceus</i>	Red-winged Blackbird			2			3			1		10
<i>Anaxyrus americanus</i>	American toad							1				
<i>Archilochus colubris</i>	Ruby-throated Hummingbird	1										
<i>Bombus</i> spp.	Bumblebee		1						1			
<i>Bombycilla cedrorum</i> **	Cedar Waxwing	1										
<i>Cardinalis cardinalis</i>	Northern Cardinal	2	1		1			2	1			1
<i>Colaptes auratus</i>	Northern Flicker							1	1			
<i>Corvus brachyrhynchos</i>	American Crow											2
<i>Cyanocitta cristata</i> **	Blue Jay			1				1				
<i>Danaus plexippus</i>	Monarch											1
<i>Dryobates pubescens</i> **	Downy Woodpecker			1				1				
<i>Dumetella carolinensis</i>	Grey Catbird			1				2				
<i>Empidonax minimus</i> **	Least Flycatcher									2		
<i>Erynnis baptisiae</i>	Wild Indigo Duskywing		1									
<i>Icterus galbula</i>	Baltimore Oriole											2
<i>Leiothlypis peregrina</i> **	Tennessee Warbler			1								
<i>Melospiza melodia</i>	Song Sparrow	1	1	2			1	3				10
<i>Molothrus ater</i>	Brown-headed Cowbird						1		3			
<i>Myiarchus crinitus</i> **	Great Crested Flycatcher							1				
<i>Picoides villosus</i> **	Hairy Woodpecker									1		
<i>Pieris rapae</i>	Cabbage white		4						2			2
<i>Polioptila caerulea</i> **	Blue-gray Gnatcatcher			2								
<i>Polyommatus icarus</i> **	European Common Blue							2				
<i>Poecile atricapillus</i> **	Black-capped Chickadee									1	1	
<i>Regulus satrapa</i> **	Golden-crowned Kinglet							1				
<i>Sayornis phoebe</i>	Eastern Phoebe			1			3					
<i>Setophaga coronata</i>	Yellow-rumped Warbler			2		1						2
<i>Setophaga petechia</i>	Yellow Warbler	1	3	2	2	1		1	1			2

COMPLETE DATA SET (ALL PLOTS) Cont.



SCIENTIFIC NAME	COMMON NAME	PLOT 1	PLOT 2	PLOT 3	PLOT 4	PLOT 5	PLOT 6	PLOT 7	PLOT 8	PLOT 9	PLOT 10	CIRCLE
<i>Spinus tristis</i>	American Goldfinch	3		3	7		2	1	2	2		6
<i>Tachycineta bicolor**</i>	Tree Swallow									6		
<i>Turdus migratorius</i>	American Robin		2	1			2	2	2	2		5
<i>Tyrannus tyrannus</i>	Eastern Kingbird					1				1		
<i>Vanessa atalanta**</i>	Red Admiral											many
<i>Vermivora cyanoptera**</i>	Blue-winged Warbler						1					
<i>Vireo gilvus</i>	Warbling Vireo	2										1
	Cicada									3		

APPENDIX B: COMPILED FAUNA DATA CONTINUED

COMPLETE DATA SET (BY DATE)

SCIENTIFIC NAME	COMMON NAME	MS1	MS2	MS3	VEG	MS4	MS5
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	11	4	1			
<i>Anaxyrus americanus</i>	American toad				1		
<i>Archilochus colubris</i>	Ruby-throated Hummingbird			1			
<i>Bombus</i> spp.	Bumblebee				1		
<i>Bombycilla cedrorum</i> **	Cedar Waxwing		1				
<i>Cardinalis cardinalis</i>	Northern Cardinal	2		3		3	
<i>Colaptes auratus</i>	Northern Flicker	2					
<i>Corvus brachyrhynchos</i>	American Crow				2		
<i>Cyanocitta cristata</i> **	Blue Jay	1			1		
<i>Danaus plexippus</i>	Monarch				1		
<i>Dryobates pubescens</i> **	Downy Woodpecker	1	1				
<i>Dumetella carolinensis</i>	Grey Catbird			2		1	
<i>Empidonax minimus</i> **	Least Flycatcher		2				
<i>Erynnis baptisiae</i>	Wild Indigo Duskywing			1			
<i>Icterus galbula</i>	Baltimore Oriole		1	1			
<i>Leiothlypis peregrina</i> **	Tennessee Warbler				1		
<i>Melospiza melodia</i>	Song Sparrow	7	7	3	1		
<i>Molothrus ater</i>	Brown-headed Cowbird	3	1				
<i>Myiarchus crinitus</i> **	Great Crested Flycatcher				1		
<i>Picoides villosus</i> **	Hairy Woodpecker				1		
<i>Pieris rapae</i>	Cabbage white			3	5		
<i>Polioptila caerulea</i> **	Blue-gray Gnatcatcher	2					
<i>Polyommatus icarus</i> **	European common blue				1	1	
<i>Poecile atricapillus</i> **	Black-capped Chickadee	1			1		
<i>Regulus satrapa</i> **	Golden-crowned Kinglet					1	
<i>Sayornis phoebe</i>	Eastern Phoebe				4		
<i>Setophaga coronata</i>	Yellow-rumped Warbler					4	
<i>Setophaga petechia</i>	Yellow Warbler	1	10	2			
<i>Spinus tristis</i>	American Goldfinch	3	5	7	4	7	
<i>Tachycineta bicolor</i> **	Tree Swallow			6			
<i>Turdus migratorius</i>	American Robin	9	3	2	1	1	
<i>Tyrannus tyrannus</i>	Eastern Kingbird		1	1			
<i>Vanessa atalanta</i> **	Red Admiral	many					
<i>Vermivora cyanoptera</i> **	Blue-winged Warbler				1		
<i>Vireo gilvus</i>	Warbling Vireo		1	1	1		
Cicada				3			

APPENDIX C: HUMAN USE DATA

Human use data was collected by the CFMP Site Ambassador and reflects observations recorded along the trail that connects the Lower Don Recreational Trail to Sun Valley / Crothers Woods. Individuals and/or dogs may have been counted more than once if they made a return journey and the Site Ambassador did not recognize them.

SIGHTING	MS1	MS2	MS3	VEG2	MS4	MS5
Person, on foot	141	47	75	138	102	94
Person, on bike	12	39	30	49	71	19
Dog, on leash	18	7	3	17	15	11
Dog, off-leash	44	12	30	14	21	18

* Data not collected (no ambassador)

APPENDIX D: ASSESSMENT AND SESSION NOTES

MS1: MONITORING SESSION #1

Date	Apr 28, 10:00am – noon
Temperature	21°C
Beaufort Sky Code	2 (continuous cloud)
Beaufort Wind Code	Not recorded
Flora ID	Donata Frank, Shahebina Samji
Fauna ID	Susan Blayney; Charles Bruce-Thompson
Photographer	Rosemary Warren
Site Ambassador	Niki Lawrence
Other participants	Lillian Natalizio; Charles Bruce-Thompson
Administrator	Anna Waldvogel

MS2: MONITORING SESSION #2

Date	May 16, 6:00pm – 8:00pm
Temperature	25°C
Beaufort Sky Code	1 (partly cloudy)
Beaufort Wind Code	2 (light breeze)
Flora ID	Ellen Schwartzel, Shahebina Samji
Fauna ID	Charles Bruce-Thompson, Robert Wilson
Photographer	Rosemary Warren
Site Ambassador	Niall Whelan; Niki Lawrence
Other participants	
Administrator	Anna Waldvogel

MS3: MONITORING SESSION #3

Date	Jun 9, 10:00am – noon
Temperature	18°C
Beaufort Sky Code	1 (partly cloudy)
Beaufort Wind Code	1 (light)
Flora ID	Danielle Pellatt-Hall, Kate Banks
Fauna ID	Charles Bruce-Thompson; Sunita Lall
Photographer	Jason Ramsay-Brown
Site Ambassador	Rosemary Warren
Other participants	Niki Lawrence
Administrator	Anna Waldvogel

VEG: VEGETATION ASSESSMENT

Date	July 27, 10:00am – 2:00pm
Temperature	25°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	Not recorded
Flora ID	Steven Smith, Jason Ramsay-Brown, Niki Lawrence, Shahebina Samji, Jane Cluver
Fauna ID	Susan Blayney
Photographer	Zunaid Khan
Site Ambassador	Niall Whelan; Rosemary Warren
Other participants	Lillian Natalizio
Administrator	Anna Waldvogel

MS4: MONITORING SESSION #4

Date	Aug 24, 10:00am – noon
Temperature	22°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	0 (calm)
Flora ID	Danielle Pellatt-Hall; Christian Nakla; Kate Banks
Fauna ID	Susan Blayney
Photographer	Lillian Natalizio; Dave Barr
Site Ambassador	Donata Frank
Other participants	Jane Cluver, Charles Bruce-Thompson
Administrator	Anna Waldvogel

MS5: MONITORING SESSION #5



Date	October 12, 10:00am – noon
Temperature	17°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	2 (light breeze)
Flora ID	Donata Frank; Kate Banks
Fauna ID	Susan Blayney; Christian Nakla
Photographer	Dale Butterill; Lachtin Poon
Site Ambassador	Danielle Pellatt-Hall
Other participants	Charles Bruce-Thompson
Administrator	Anna Waldvogel