

# Cottonwood Flats

## Monitoring Project

2022 Activity Report & Assessment Data



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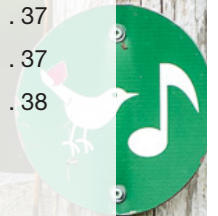
Reference as: TFN 2022 CFMP Activity Report

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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, 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.

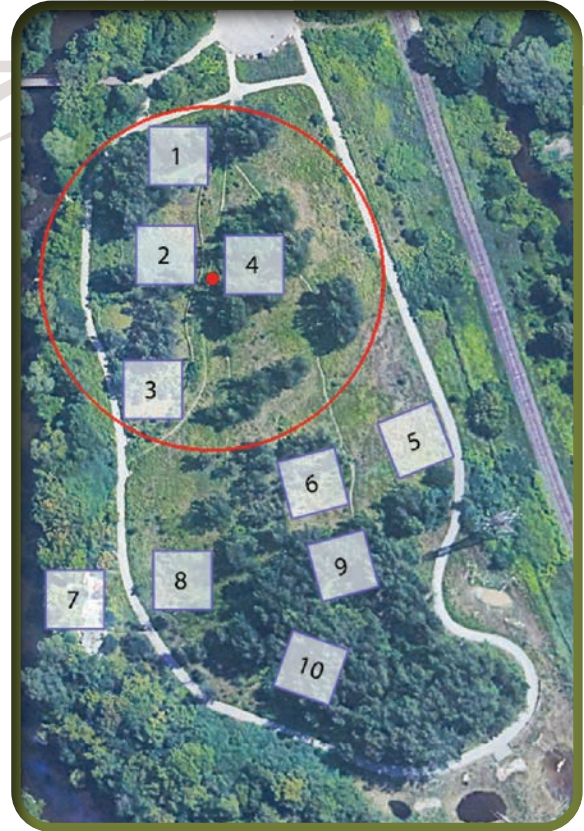
In 2020 the City of Toronto completed construction on Phase 2 of improvements at Cottonwood Flats, including the creation of an extensive ephemeral wetland complex designed to improve habitat diversity and ecological services on the site. The project also included a wetland lookout area, and a new entrance 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, ten 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 (installed on Sat Apr 3, 2021) 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 EMAN so as to maximize compatibility with other standard data collection methods.

Annually, volunteers conduct five site 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 proves 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 has been headed towards a vegetation community typical of the Lower Don Valley: Fresh-Moist Cottonwood Tall Treed Woodland (CUW1-A4). Recent & continued stewardship/treatment interventions (see sidebar) are likely to have an impact on this trajectory.

Plot observations identified a total of 97 species of vascular plants during the 2022 season (see Appendix A). These include 32 native species (both naturally-occurring and planted) and 65 exotic species (67.01%). 4 additional plants remain identified only to the level of Genus, and 13 species catalogued (1 native, 12 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 2021 report thanks to the following:

- *Ageratina altissima* (white snakeroot) returned to inventory
- *Avena Sativa* (oats) now present
- *Euonymus alatus* (burning bush) now present
- *Geum urbanum* (wood avens) now present
- *Lactuca serriola* (prickly lettuce) returned to inventory
- *Malva moschata* (musk mallow) no longer present
- *Parthenocissus quinquefolia* (Virginia creeper) now present
- *Pulmonaria spp.* (lungwort) now present

Eastern cottonwoods (*Populus deltoides*) and green ash (*Fraxinus pennsylvanica*) remain the dominant native tree cover in our plots. Damage from poplar vagabond aphids (*Mordwilkoja vagabunda*) was again evident on Eastern cottonwoods this year (Veg, Jason Ramsay-Brown). Mature green ash in plots 3 & 8 show signs of continued assault by emerald ash borer (*Agrilus planipennis*), but no live adult specimen of this invasive insect have been spotted since 2019 (Veg, Jason Ramsay-Brown). Symptoms of leaf spot fungus (*Mycosphaerella spp.*) were also noted on green ash in these plots (Veg, Stephen Smith).

Exotic tree health & propagation has been greatly impacted by recent stewardship & herbicide interventions. In particular, European buckthorn (*Rhamnus cathartica*) and black locust (*Robinia pseudoacacia*) populations in all plots demonstrated radical declines both in terms of population health and seedling/sapling presence.

## CSP TEAM AT COTTONWOOD FLATS:



In March, 2022, TFN enthusiastically agreed to serve as Team Leaders for a new City of Toronto Community Steward Program (CSP) site at Cottonwood Flats. We firmly believe this partnership, coupled with continued application of herbicidal treatments for select invasive species by Forest and Natural Area Management (City of Toronto, Urban Forestry) will have a significant and positive impact on improving local habitat and altering the ecological trajectory of the Flats.

The combined influence of hands-on stewardship and herbicidal treatments was already producing dramatic results by October 2022. In particular, a severe reduction in mature/seed-bearing specimens of dog-strangling vine (*Vincetoxicum rossicum*), European buckthorn (*Rhamnus cathartica*), tree of heaven (*Ailanthus altissima*) and Manitoba maple (*Acer negundo*) was clearly obvious to all CFMP participants. Due primarily to the impact of seedbank resprout on coverage estimates, these improvements may not be as obvious in the data tables present in this document. TFN has no doubt the positive benefits of these interventions will be increasingly notable in subsequent reports.

At the herbaceous layer, tall goldenrod (*Solidago altissima*) remains the dominant native while tansy (*Tanacetum vulgare*) remains the most populous herbaceous invasive across the Flats in its entirety. The population of mature specimens of dog-strangling vine (*Vincetoxicum rossicum*) has been radically impacted by stewardship & herbicide interventions, although significant resprout from seedbank, particularly in Plot 1 (Veg, Stephen Smith), indicates that aggressive interventions must continue next year.

## MECHANICAL CONTROL OF JAPANESE KNOTWEED

In response to the alarming spread of Japanese knotweed (*Fallopia japonica*) noted in *TFN 2021 CFMP Activity Report*, TFN/CSP stewards began an experiment this year aimed at suppressing the existing population by cutting all plants down to soil level during each & every stewardship session. Both CFMP & CSP volunteers are following a TFN-developed monitoring protocol to determine the long-term effectiveness of this approach on managing the population.

Results of this experiment are expected to be included in future CFMP Activity Reports. However, positive benefits from this approach were immediately realized during the 2022 season with the emergence of white snakeroot (*Ageratina altissima*) from Plot 7's seedbank, and notable improvements to the health and/or population of nearby black raspberry (*Rubus occidentalis*) and staghorn sumac (*Rhus typhina*).

Further, weakening of the Japanese knotweed population was deemed substantial enough to prompt a CSP planting event on October 4th, 2022. Species introduced included white cedar (*Thuja occidentalis*), round-leaved dogwood (*Cornus rugosa*), Bebb's willow (*Salix bebbiana*), snowberry (*Symphoricarpos albus albus*), nannyberry (*Viburnum lentago*), Bebb's sedge (*Carex bebbii*), long-stalked sedge (*Carex pedunculata*), bottlebrush grass (*Elymus hystrix*) and blue vervain (*Verbena hastata*). Those species planted within Plot 7 have not been included in this report but will appear in future CFMP reports should they endure over-wintering.



## FAUNA SPECIES AT COTTONWOOD FLATS

It was a wonderful year for birds at the Flats! 26 species of birds were cataloged, including 9 species not recorded in previous years: hermit thrush (*Catharus guttatus*); least flycatcher (*Empidonax minimus*); indigo bunting (*Passerina cyanea*); scarlet tanager (*Piranga olivacea*); blue-gray gnatcatcher (*Polioptila caerulea*); ruby-crowned kinglets (*Regulus calendula*); white-breasted nuthatch (*Sitta carolinensis*); red-eyed vireo (*Vireo olivaceus*); and blue headed vireo (*Vireo solitarius*).

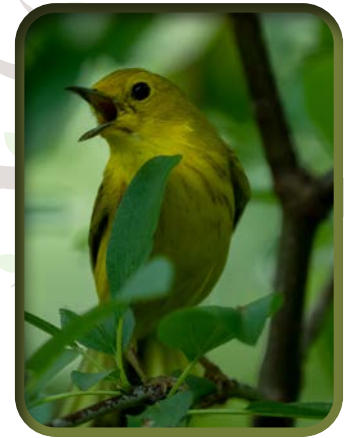
Red-winged blackbirds (*Agelaius phoeniceus*) were the species most often sighted, a stark contrast to the singular sighting of this species reported in *TFN 2021 CFMP Activity Report*. Yellow warblers (*Setophaga petechia*) came in second place but may have enjoyed a better year overall. Volunteers noted abundant sightings of yellow warblers outside of our plots, particularly during MS1 (April 26) where members of the Ontario Field Ornithologists (who just so happened to be visiting the Flats at the same time) noted great activity by the wetland, and during MS2 (May 15), with TFN volunteers remarking they were “all over the place!”

After seven years of CFMP, mallard ducks (*Anas platyrhynchos*) finally decided to cross in to the confines of Plot 7 instead of drifting by on its outskirts (MS1, Ken Morin)! This allowed TFN volunteers to record our very first official observation of wildlife directly interacting with the Don River since project inception.

Butterflies proved most uncooperative this year, with virtually all sightings either outside our plots or too far away for accurate identification. In general, there did appear to be a notable lack of diversity and abundance, even for those species quite commonplace in previous years: monarchs (*Danaus plexippus*) and cabbage whites (*Pieris rapae*).

Only a single mammal was logged this year – an Eastern grey squirrel (black morph, of course). Amusingly, this was also the first squirrel recorded in this project’s history! Like last year, indirect evidence of mammal visitation (eg: deer beds, vole or rabbit browsing) was notably diminished compared to years prior. No obvious signs of wildlife having over-wintered in the study area were discovered during our pre-season plot inspection and maintenance visit (April 18, Jason Ramsay-Brown, Charles Bruce-Thompson).

No amphibian or reptiles were sighted in our plots this year, although midland painted turtles (*Chrysemys picta marginata*) were noted in the wetland cells at the southern end of the Flats on occasion.



## HUMAN USE AT COTTONWOOD FLATS

Cottonwood Flats continued to experience heavy human visitation this year, peaking with 132 visitors on foot and an additional 32 on bikes recorded at our two-hour monitoring session on October 16th (MS5). Visitation by dogs was slightly depressed this year, peaking at 32 off-leash and an additional 15 on-leash recorded at our two-hour monitoring session on April 26th (MS1).

The focal point of human impact at the Flats remains Plot 7. The fire pit here, previously decommissioned by City Staff, has been rebuilt and showed evidence of recent use during our Vegetation Assessment on July 24th.



# RECOMMENDATIONS

## PROTOCOL ADJUSTMENTS

The following adjustments/enhancements to CFMP protocols will be considered in 2023 in order to help improve the quality of collected data and make better use of volunteer time:

- Changes to data collection methods that would allow differentiation of species discovered outside the post and paddle fencing that intersects Plot 3 vs. those discovered within the fenced-in area.
- TFN & City to continue discussions about potentially discontinuing Plot 10. Its boundaries are difficult for most observers to visualize, frequently leading to observations that need to be validated/verified in subsequent sessions.
- The “Restoration & Stewardship” section will no longer appear in future CFMP Activity Reports. These recommendations will now be brought to the attention of TFN’s CSP Team Leaders to help inform future stewardship plans.

## MONITORING ACTIVITIES

TFN intends to include the following activities during 2023 Monitoring Sessions and/or Vegetation Assessments.

- Identify exact species for flora identified only to the level of Genus in this report
- Increase fidelity of flora observations marked as ND, SD or <10 plants in this report

## COMMUNITY ENGAGEMENT

No new recommendations.



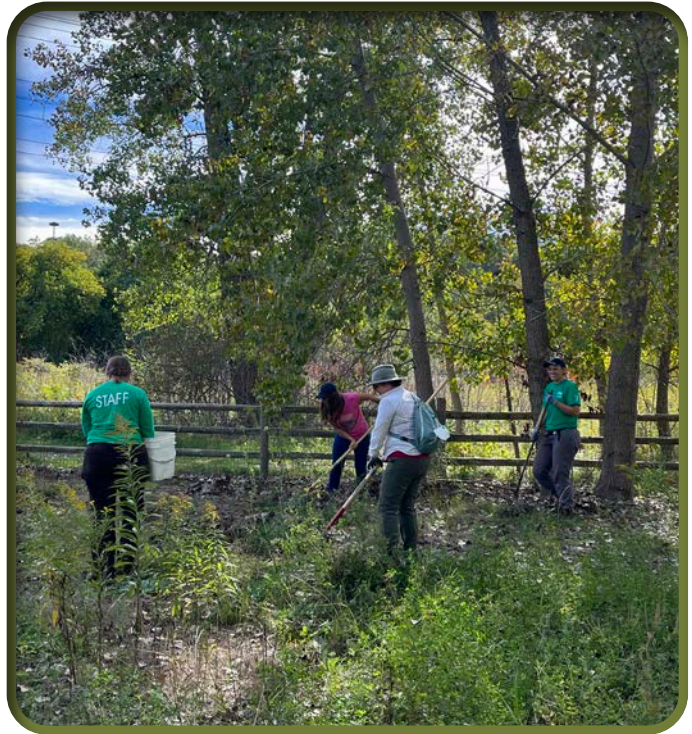


## RESTORATION & STEWARDSHIP

TFN believes that the combination of the new CSP team at Cottonwood Flats and continued efforts by Forest and Natural Area Management (City of Toronto, Urban Forestry) to manage select invasive species through herbicidal treatments, represent a significant turning point for the health of local habitat and the ecological trajectory of the Flats. We are both thankful for, and thrilled by, this growing partnership and the positive impacts it is most certain to have.

By way of the recommendations below, TFN strongly encourages continued interventions meant to reduce invasive species, further the expansion and diversity of native species, and return the Study Area to at least the same ratio of meadow to woodland as was present in 2017. As these recommendations originate from an analysis of CFMP data, they should be considered mutually exclusive from recommendations put forth by TFN's CSP Team Leaders.

- In addition to those species targeted in 2022, herbicidal treatments should be arranged for crownvetch (*Securigera varia*), particularly within and around the fenced-in area .
- CSP stewardship plans should put a particular emphasis on eliminating Asian bittersweet (*Celastrus orbiculatus*) wherever it is found. CFMP reports suggest Plot 7 as a primary location of interest but stewards should survey the all riparian zones at the Flats for outliers.
- Additional seed casting should be skipped in 2023 to allow the impact of this activity in 2022 to be properly assessed by CFMP volunteers.
- Both a spring & fall native planting event would be desirable in 2023. TFN recommends that at least one of these events serve to found a native plant community where the large patch of European buckthorn was treated and removed in Plot 10. Please consider how the species planted here may affect line of sight and plot recognition.
- Efforts to reduce or at least limit the spread of trees and/or rhizomatous, grove-producing species in or near meadowland should be considered to help preserve that habitat. Of most immediate concern here is green ash (*Fraxinus pennsylvanica*), staghorn sumac (*Rhus typhina*), sandbar willow (*Salix exigua*), and black walnut (*Juglans nigra*).
- Decommission all existing firepits.
- Encourage increased visitation from by-law officers to help reduce routine damage by off-leash dogs and inappropriate human use.



# APPENDICES



## APPENDIX A: COMPILED FLORA DATA

Data presented in this section has been compiled from all flora logs submitted during the 2022 season. Where cover-abundance estimates differed, those recorded during the Vegetation Assessment in July were considered authoritative.

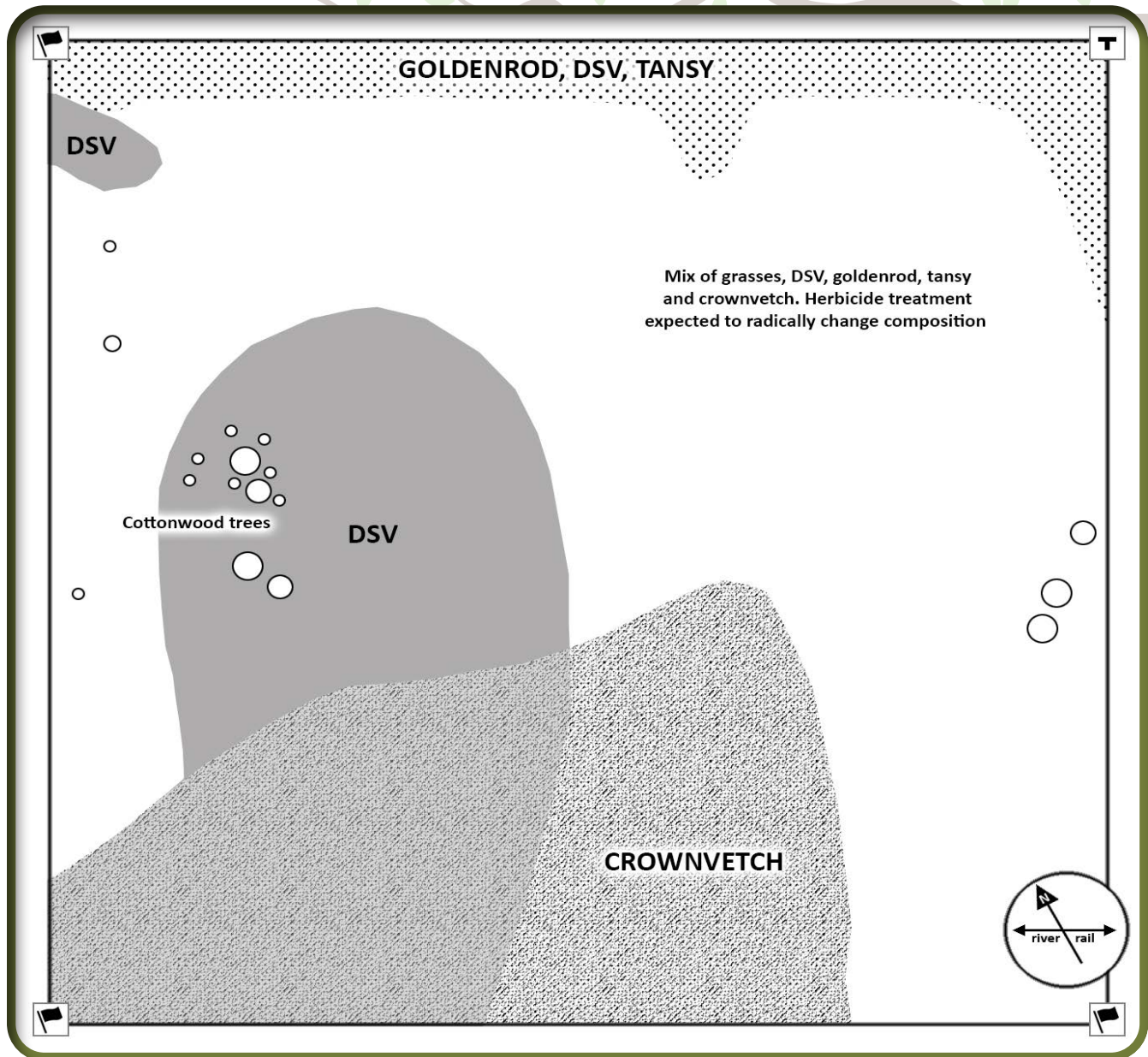
### LEGEND

DG	Dominant groundcover with no precise estimate of population or distribution
ND	Species noted, but no population or distribution data recorded
SD	Sparsely 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



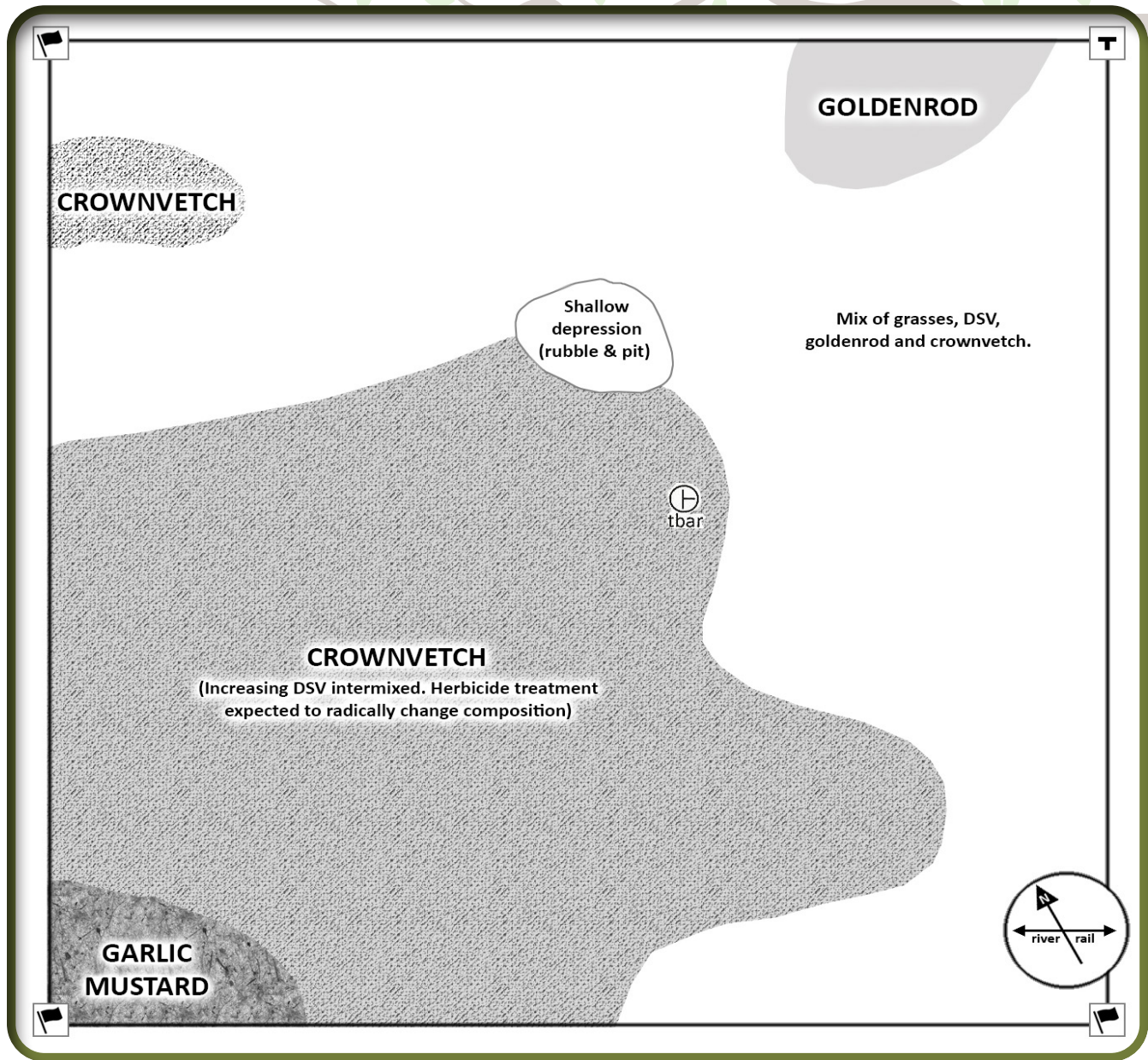
# PLOT 1



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Acer negundo</i>	Manitoba Maple	1 sapling↓	
<i>Achillea millefolium</i>	Common yarrow	SD	Flowering: Veg, MS5
<i>Agrostis gigantea</i>	Redtop grass	SD	
<i>Ambrosia artemisiifolia</i>	Common Ragweed	1 plant**	Flowering: Veg
<i>Dactylis glomerata</i>	Orchard grass	SD	Flowering: Veg
<i>Daucus carota</i>	Queen Anne's Lace	5 plants	Flowering: Veg, MS5
<i>Echium vulgare</i>	Viper's bugloss	1 plant	Flowering: MS3, Veg, Fruit/seeding: Veg
<i>Elymus repens</i>	Quack grass	SD	Fruit/seeding: Veg
<i>Erigeron strigosus</i>	Rough fleabane	<1%↓	Flowering: Veg, MS5;
<i>Festuca rubra</i>	Red fescue	SD	Fruit/seeding: Veg
<i>Fraxinus pennsylvanica</i>	Green ash	2 trees	Fruit/seeding: Veg
<i>Hieracium spp.</i>	Hawkweed	4 seedlings**	
<i>Juniperus virginiana</i>	Eastern red cedar	1 sapling	
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	SD	Flowering: Veg
<i>Lolium perenne</i>	Perennial rye	SD	Flowering: Veg
<i>Medicago lupulina</i>	Black medick	SD	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	SD	Flowering: Veg; Fruit/seeding: Veg
<i>Morus alba</i>	White mulberry	2 trees	
<i>Poa compressa</i>	Flat-stemmed blue grass	SD	Fruit/seeding: Veg
<i>Poa pratensis</i>	Kentucky bluegrass	SD	Fruit/seeding: Veg, MS5
<i>Populus deltoides</i>	Eastern cottonwood	40.00%	Fruit/seeding: MS3
<i>Potentilla recta</i>	Sulphur cinquefoil	NONE↓	Fruit/seeding: Veg, MS5
<i>Rhamnus cathartica</i>	European buckthorn	NONE↓	
<i>Rhus typhina</i>	Staghorn sumac	2 plants	Fruiting: Veg, MS5
<i>Securigera varia</i>	Crownvetch	15%↓	Flowering: Veg 2, MS5
<i>Solidago altissima</i>	Tall goldenrod	6%↓	Flowering: MS5
<i>Tanacetum vulgare</i>	Tansy	3%↓	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Ulmus pumila</i>	Siberian elm	2 saplings	
<i>Vicia cracca</i>	Cow vetch	2 plants↓	Flowering: Veg
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	2%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	20 plants	



# PLOT 2



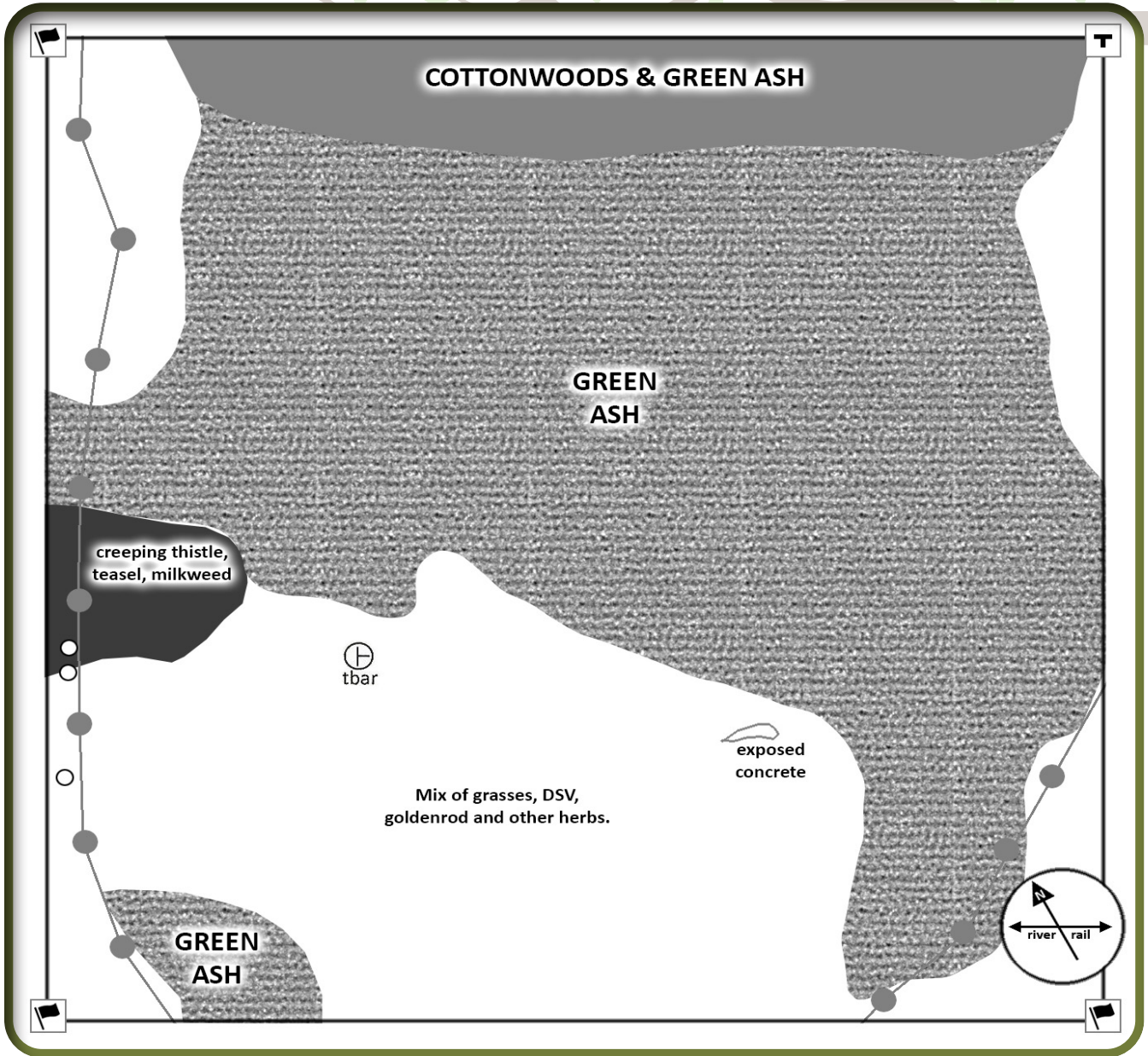
## PLOT 2



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Acer negundo</i>	Manitoba Maple	6 seedlings**	
<i>Achillea millefolium</i>	Common yarrow	SD	Flowering: Veg, MS5
<i>Agrostis gigantea</i>	Redtop grass	SD	
<i>Alliaria petiolata</i>	Garlic mustard	3 plants↓	Flowering: Veg
<i>Ambrosia artemisiifolia</i>	Common Ragweed	1 plant**	Flowering: Veg
<i>Artemisia vulgaris</i>	Mugwort	1 plant**	
<i>Asclepias syriaca</i>	Common milkweed	3 plants↓	Fruit/seeding: Veg, MS5
<i>Cirsium arvense</i>	Creeping thistle	3%↓	Flowering: Veg, Fruit/seeding: Veg, MS5
<i>Elymus repens</i>	Quack grass	SD	Fruit/seeding: Veg
<i>Festuca rubra</i>	Red fescue	30%	Fruit/seeding: Veg
<i>Hieracium spp.</i>	Hawkweed	<1%	
<i>Hypericum perforatum</i>	St. John's wort	NONE↓	Flowering: Veg
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	1 plant	Flowering: Veg
<i>Lolium perenne</i>	Perennial rye	SD	Flowering: Veg
<i>Lotus corniculatus</i>	Birdsfoot trefoil	<1%	Flowering: Veg, MS5
<i>Lythrum salicaria</i>	Purple loosestrife	1 plant	
<i>Medicago lupulina</i>	Black medick	1 plant	Flowering: Veg
<i>Morus alba</i>	White mulberry	1 sapling**	
<i>Oenothera biennis</i>	Common evening primrose	2 plants↑	Flowering: Veg
<i>Phalaris arundinacea</i>	Reed canary grass	<1%	
<i>Poa pratensis</i>	Kentucky bluegrass	SD	Fruit/seeding: Veg, MS5
<i>Populus deltoides</i>	Eastern cottonwood	6.50%	Fruit/seeding: MS3
<i>Potentilla recta</i>	Sulphur cinquefoil	3 plants**	Fruit/seeding: Veg, MS5
<i>Rhamnus cathartica</i>	European buckthorn	1 sapling	
<i>Securigera varia</i>	Crownvetch	40%↓	Flowering: Veg 2, MS5
<i>Solidago altissima</i>	Tall goldenrod	20.00%	Flowering: MS5
<i>Symphotrichum ericoides</i>	Heath aster	6 stems	
<i>Symphotrichum novae-angliae</i>	New England aster	10 stems↑	
<i>Tanacetum vulgare</i>	Tansy	<1%	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	5%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	1 plant**	



# PLOT 3



## PLOT 3

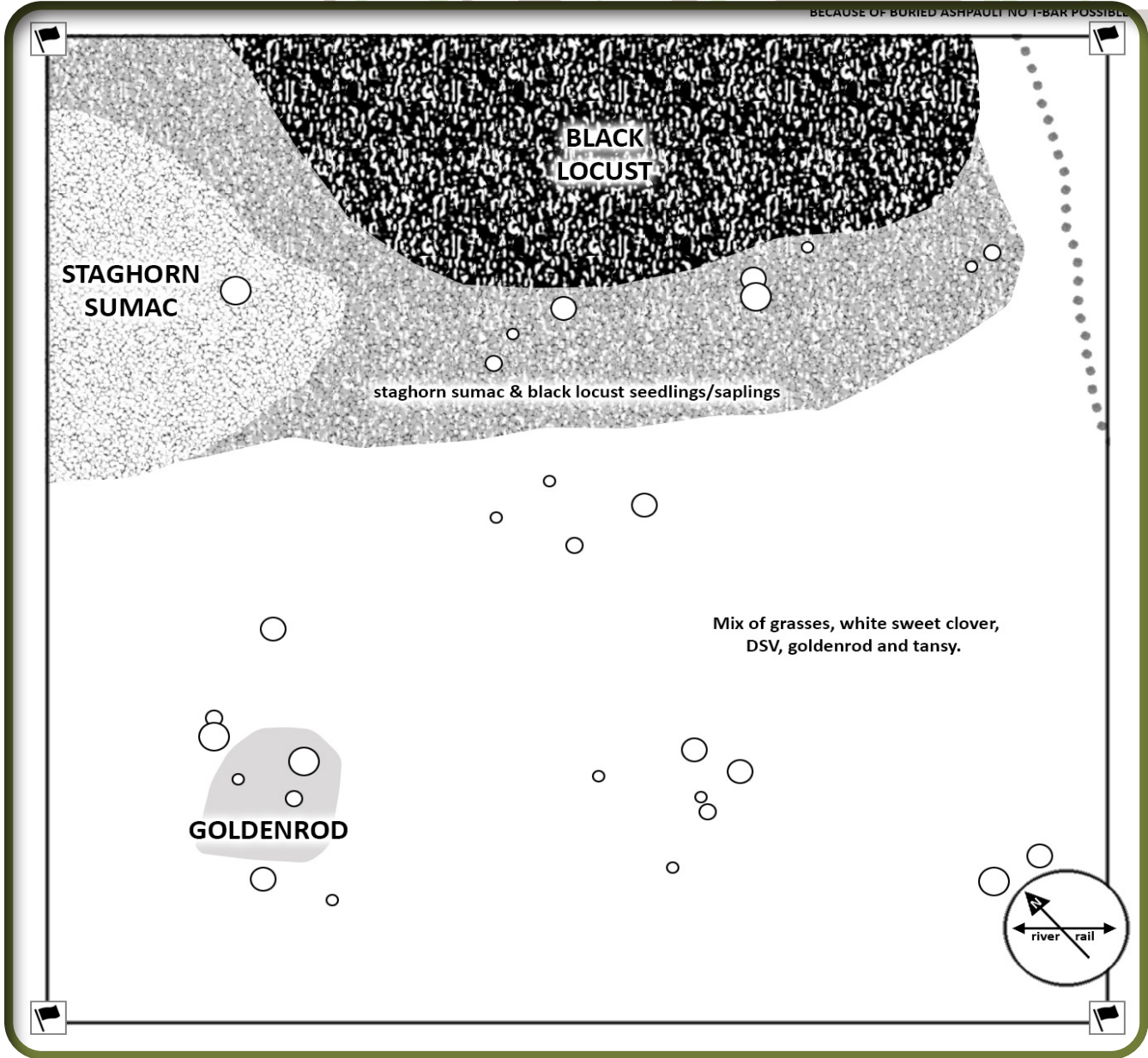


SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Acer negundo</i>	Manitoba Maple	14 saplings**	
<i>Achillea millefolium</i>	Common yarrow	ND	Flowering: Veg, MS5
<i>Ambrosia artemisiifolia</i>	Common Ragweed	10 plants↑	Flowering: Veg
<i>Artemisia vulgaris</i>	Mugwort	20 plants↑	
<i>Asclepias syriaca</i>	Common milkweed	15 plants↓	Fruit/seeding: Veg, MS5
<i>Barbarea vulgaris</i>	Yellow rocket/cress	1 plant	
<i>Bromus inermis</i>	Smooth brome grass	SD	
<i>Cardamine impatiens</i>	Balsam bitter/cress	15 plants	Fruit/seeding: Veg
<i>Centaurea maculosa</i>	Spotted knapweed	<1%	Flowering: Veg, MS5
<i>Cirsium arvense</i>	Creeping thistle	1%↓	Flowering: Veg, Fruit/seeding: Veg, MS5
<i>Cirsium vulgare</i>	Bull thistle	2 plants	
<i>Daucus carota</i>	Queen Anne's Lace	SD	Flowering: Veg, MS5
<i>Dipsacus sylvestris</i>	Fuller's teasel	10 plants	Flowering: Veg
<i>Echium vulgare</i>	Viper's bugloss	5 plants**	Flowering: MS3, Veg, Fruit/seeding: Veg
<i>Elymus repens</i>	Quack grass	<1%	Fruit/seeding: Veg
<i>Erigeron strigosus</i>	Rough fleabane	1 plant**	Flowering: Veg, MS5;
<i>Festuca rubra</i>	Red fescue	DG	Fruit/seeding: Veg
<i>Fraxinus pennsylvanica</i>	Green ash	70.00%	Fruit/seeding: Veg
<i>Hieracium spp.</i>	Hawkweed	10 plants**	
<i>Hypericum perforatum</i>	St. John's wort	2 plants	Flowering: Veg
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	25 plants↑	Flowering: Veg
<i>Lotus corniculatus</i>	Birdsfoot trefoil	3 plants↓	Flowering: Veg, MS5
<i>Medicago lupulina</i>	Black medick	SD↑	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	5%↑	Flowering: Veg; Fruit/seeding: Veg
<i>Oenothera biennis</i>	Common evening primrose	15 plants↑	Flowering: Veg
<i>Poa pratensis</i>	Kentucky bluegrass	DG	Fruit/seeding: Veg, MS5
<i>Populus deltoides</i>	Eastern cottonwood	15.00%	Fruit/seeding: MS3
<i>Pulmonaria spp.</i>	Lungwort	4%**	
<i>Solidago altissima</i>	Tall goldenrod	10.00%	Flowering: MS5
<i>Solidago nemoralis</i>	Gray goldenrod	3 plants↑	
<i>Tanacetum vulgare</i>	Tansy	<1%	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Taraxacum officinale</i>	Common dandelion	4 plants	
<i>Thlaspi arvense</i>	Field penny-cress	3 plants**	
<i>Verbascum thapsus</i>	Common mullein	NONE↓	Flowering: Veg
<i>Vicia cracca</i>	Cow vetch	3 plants	Flowering: Veg
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	2%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5

# PLOT 4



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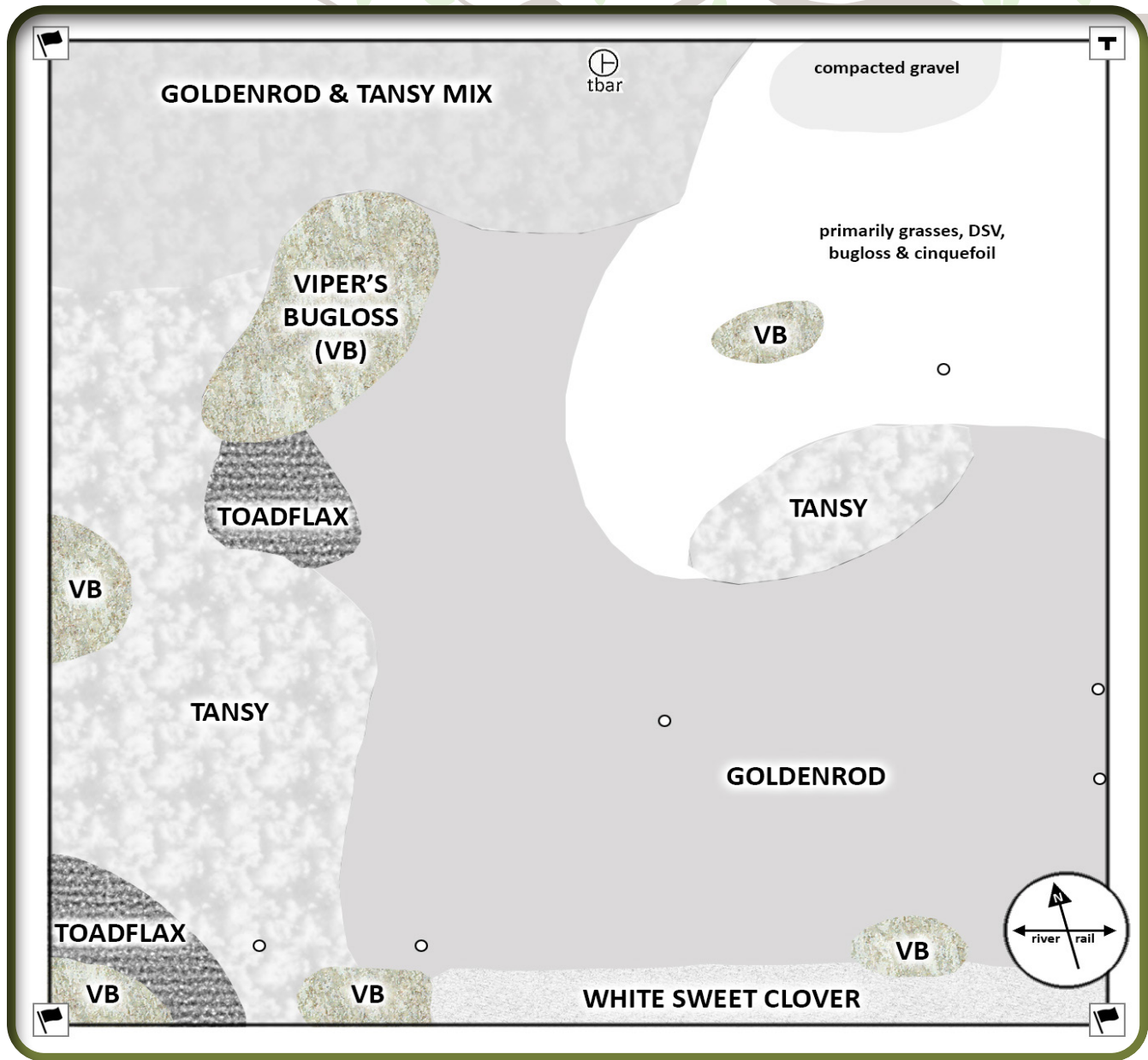


## PLOT 4



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Achillea millefolium</i>	Common yarrow	15 plants**	Flowering: Veg, MS5
<i>Asclepias syriaca</i>	Common milkweed	12 plants↑	Fruit/seeding: Veg, MS5
<i>Cichorium intybus</i>	Chicory	1 plant↓	Flowering: Veg, MS5
<i>Cornus sericea</i>	Red osier dogwood	3 plants↑	
<i>Dactylis glomerata</i>	Orchard grass	NONE↓	Flowering: Veg
<i>Daucus carota</i>	Queen Anne's Lace	SD↓	Flowering: Veg, MS5
<i>Dianthus armeria</i>	Deptford Pink	2 plants	Flowering: Veg
<i>Echium vulgare</i>	Viper's bugloss	SD	Flowering: MS3, Veg, F ruit/seeding: Veg
<i>Erigeron strigosus</i>	Rough fleabane	8 plants	Flowering: Veg, MS5;
<i>Festuca rubra</i>	Red fescue	DG	Fruit/seeding: Veg
<i>Hypericum perforatum</i>	St. John's wort	1 plant↓	Flowering: Veg
<i>Juglans nigra</i>	Black walnut	4 stems↓	
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	10 plants	Flowering: Veg
<i>Lotus corniculatus</i>	Birdsfoot trefoil	5 stems	Flowering: Veg, MS5
<i>Medicago lupulina</i>	Black medick	<1%↓	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	25.00%	Flowering: Veg; Fruit/seeding: Veg
<i>Phleum pratense</i>	Timothy-grass	ND	
<i>Plantago lanceolata</i>	English plantain	SD	
<i>Poa compressa</i>	Flat-stemmed blue grass	16 plants	Fruit/seeding: Veg
<i>Poa pratensis</i>	Kentucky bluegrass	DG	Fruit/seeding: Veg, MS5
<i>Populus deltoides</i>	Eastern cottonwood	50.00%	Fruit/seeding: MS3
<i>Rhamnus cathartica</i>	European buckthorn	5 stems↓	
<i>Rhus typhina</i>	Staghorn sumac	10.00%	Fruiting: Veg, MS5
<i>Robinia pseudoacacia</i>	Black locust	2 trees w/suckers↓	
<i>Solidago altissima</i>	Tall goldenrod	30.00%	Flowering: MS5
<i>Symphotrichum ericoides</i>	Heath aster	1 plant	
<i>Tanacetum vulgare</i>	Tansy	3%↓	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Taraxacum officinale</i>	Common dandelion	5 plants↓	
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	<1%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	1 plant	

# PLOT 5



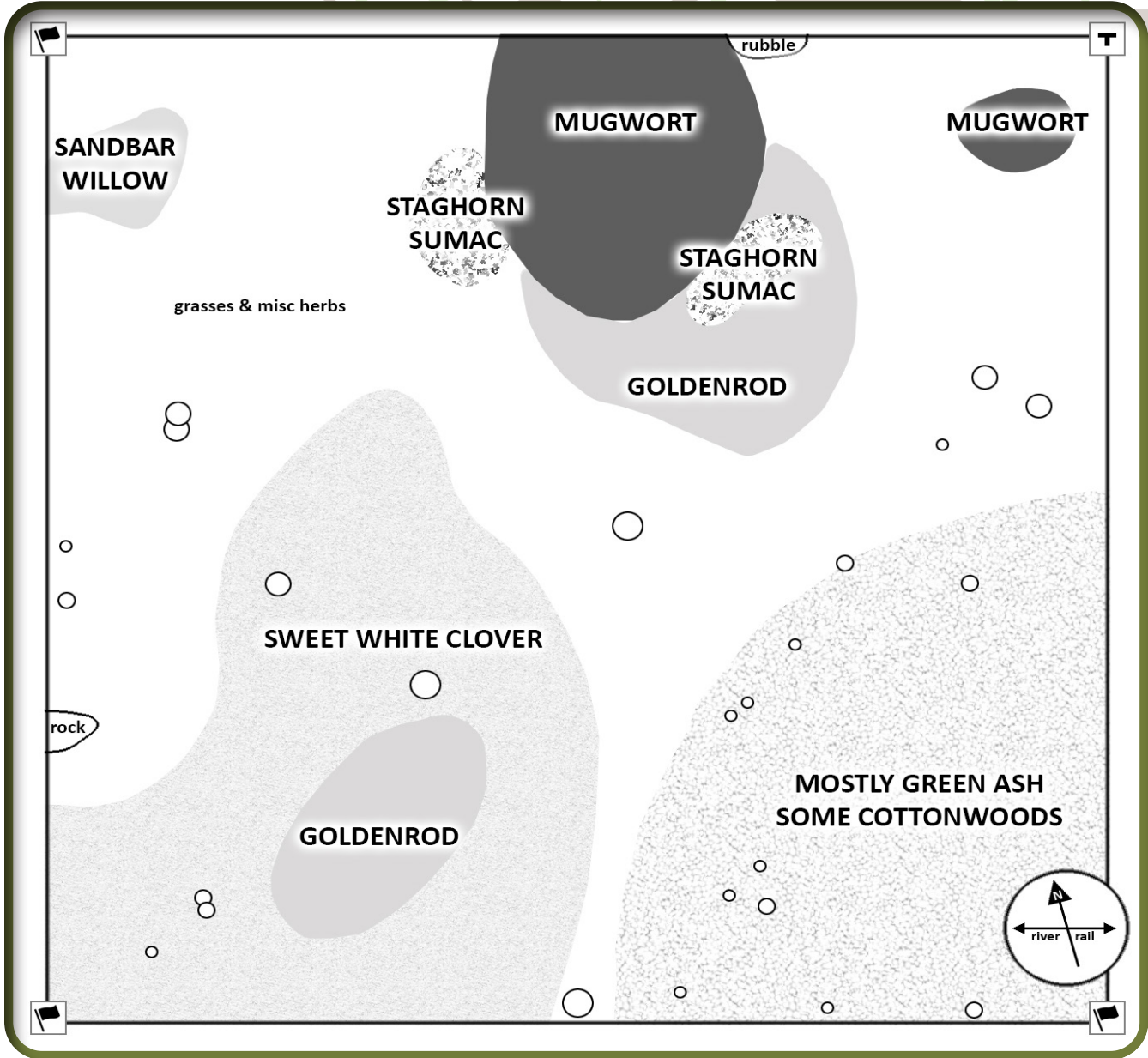
# PLOT 5



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<a href="#">Acer negundo</a>	Manitoba Maple	3 seedlings↑	
<a href="#">Achillea millefolium</a>	Common yarrow	1 clump↓	Flowering: Veg, MS5
<a href="#">Agrostis gigantea</a>	Redtop grass	NONE↓	
<a href="#">Ambrosia artemisiifolia</a>	Common Ragweed	5 plants**	Flowering: Veg
<a href="#">Arenaria serpyllifolia</a>	Thyme-leaved sandwort	SD	
<a href="#">Asclepias syriaca</a>	Common milkweed	NONE↓	Fruit/seeding: Veg, MS5
<a href="#">Avena Sativa</a>	Oats	1 clump**	Fruit/seeding: Veg
<a href="#">Chenopodium album</a>	Lamb's quarters	~10 plants**	
<a href="#">Daucus carota</a>	Queen Anne's Lace	1 plant↓	Flowering: Veg, MS5
<a href="#">Echium vulgare</a>	Viper's bugloss	10%↓	Flowering: MS3, Veg, Fruit/seeding: Veg
<a href="#">Elymus repens</a>	Quack grass	1 plant↓	Fruit/seeding: Veg
<a href="#">Erigeron annuus</a>	Daisy fleabane	NONE↓	Flowering: MS3, Veg; Fruit/seeding: Veg
<a href="#">Festuca rubra</a>	Red fescue	15%↑	Fruit/seeding: Veg
<a href="#">Fraxinus pennsylvanica</a>	Green ash	2 saplings	Fruit/seeding: Veg
<a href="#">Hieracium spp.</a>	Hawkweed	NONE↓	
<a href="#">Juglans nigra</a>	Black walnut	1	
<a href="#">Lactuca serriola</a>	Prickly lettuce	2 plants**	Flowering: Veg
<a href="#">Lepidium campestre</a>	Field pepperwort	1%↑	
<a href="#">Linaria vulgaris</a>	Common toadflax (butter-and-eggs)	SD	Flowering: Veg
<a href="#">Malus pumila</a>	Apple tree	3 stems	
<a href="#">Medicago lupulina</a>	Black medick	NONE↓	Flowering: Veg
<a href="#">Melilotus albus</a>	White sweet clover	25%↑	Flowering: Veg; Fruit/seeding: Veg
<a href="#">Morus alba</a>	White mulberry	NONE↓	
<a href="#">Plantago lanceolata</a>	English plantain	NONE↓	
<a href="#">Poa compressa</a>	Flat-stemmed blue grass	SD	Fruit/seeding: Veg
<a href="#">Poa pratensis</a>	Kentucky bluegrass	DG	Fruit/seeding: Veg, MS5
<a href="#">Poa spp.</a>	Grass	SD	Fruit/seeding: Veg
<a href="#">Potentilla arguta</a>	Tall cinquefoil	20 plants	Flowering: Veg
<a href="#">Potentilla recta</a>	Sulphur cinquefoil	NONE↓	Fruit/seeding: Veg, MS5
<a href="#">Rhamnus cathartica</a>	European buckthorn	5 stems↓	
<a href="#">Rhus typhina</a>	Staghorn sumac	6 plants↑	Fruiting: Veg, MS5
<a href="#">Salix exigua</a>	Sandbar willow	13 stems↓	
<a href="#">Silene latifolia</a>	White campion	1 plant↓	Flowering: Veg 2
<a href="#">Solidago altissima</a>	Tall goldenrod	25%↓	Flowering: MS5
<a href="#">Tanacetum vulgare</a>	Tansy	15%↓	Flowering: Veg, MS5; Fruit/seeding: MS5
<a href="#">Taraxacum officinale</a>	Common dandelion	5 plants	
<a href="#">Tragopogon spp.</a>	Salsify	NONE↓	
<a href="#">Trifolium repens</a>	White Clover	NONE↓	
<a href="#">Verbascum thapsus</a>	Common mullein	2 plants↑	Flowering: Veg
<a href="#">Vincetoxicum rossicum</a>	Dog-strangling vine	6%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<a href="#">Vitis riparia</a>	Riverbank grape	3 plants	



# PLOT 6

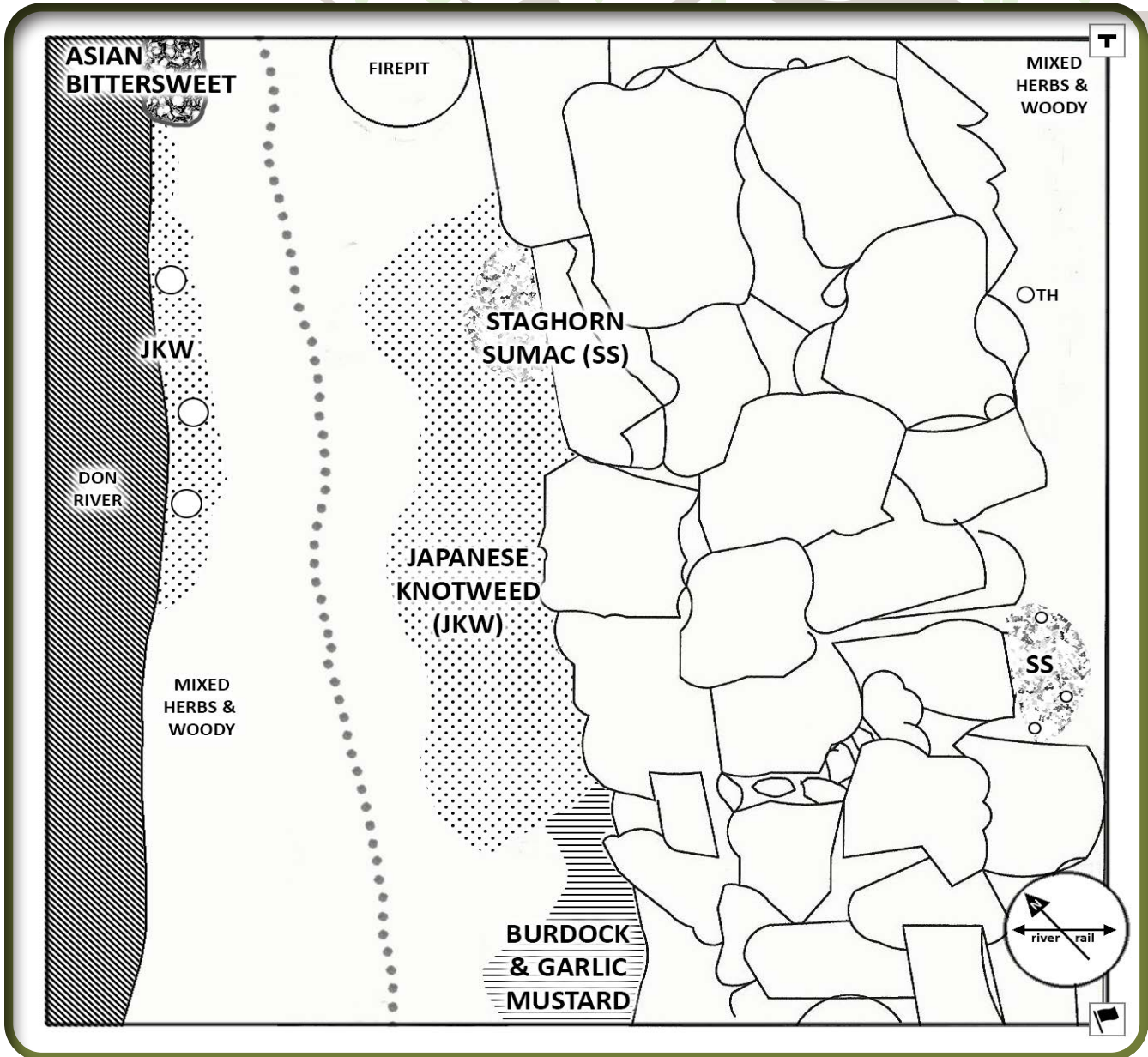


## PLOT 6



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Achillea millefolium</i>	Common yarrow	2 plants **	Flowering: Veg, MS5
<i>Ambrosia artemisiifolia</i>	Common Ragweed	4 plants	Flowering: Veg
<i>Artemisia vulgaris</i>	Mugwort	10%↑	
<i>Daucus carota</i>	Queen Anne's Lace	6 plants	Flowering: Veg, MS5
<i>Echium vulgare</i>	Viper's bugloss	2 plants	Flowering: MS3, Veg, Fruit/seeding: Veg
<i>Elymus repens</i>	Quack grass	NONE↓	Fruit/seeding: Veg
<i>Eryngium planum</i>	Sea holly	3 plants↑	Flowering: Veg, MS5;
<i>Festuca rubra</i>	Red fescue	ND**	Fruit/seeding: Veg
<i>Fraxinus pennsylvanica</i>	Green ash	20.00%	Fruit/seeding: Veg
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	ND	Flowering: Veg
<i>Malva moschata</i>	Musk mallow	NONE↓	
<i>Medicago lupulina</i>	Black medick	1%	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	30%↑	Flowering: Veg; Fruit/seeding: Veg
<i>Poa pratensis</i>	Kentucky bluegrass	DG	Fruit/seeding: Veg, MS5
<i>Populus deltoides</i>	Eastern cottonwood	40.00%	Fruit/seeding: MS3
<i>Potentilla recta</i>	Sulphur cinquefoil	ND	Fruit/seeding: Veg, MS5
<i>Rhamnus cathartica</i>	European buckthorn	5 stems**	
<i>Rhus typhina</i>	Staghorn sumac	5%	Fruiting: Veg, MS5
<i>Salix exigua</i>	Sandbar willow	4 plants↓	
<i>Solidago altissima</i>	Tall goldenrod	10%↓	Flowering: MS5
<i>Tanacetum vulgare</i>	Tansy	10.00%	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Taraxacum officinale</i>	Common dandelion	4 plants	
<i>Vicia cracca</i>	Cow vetch	NONE↓	Flowering: Veg
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	<1%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	NONE↓	

# PLOT 7





# PLOT 7



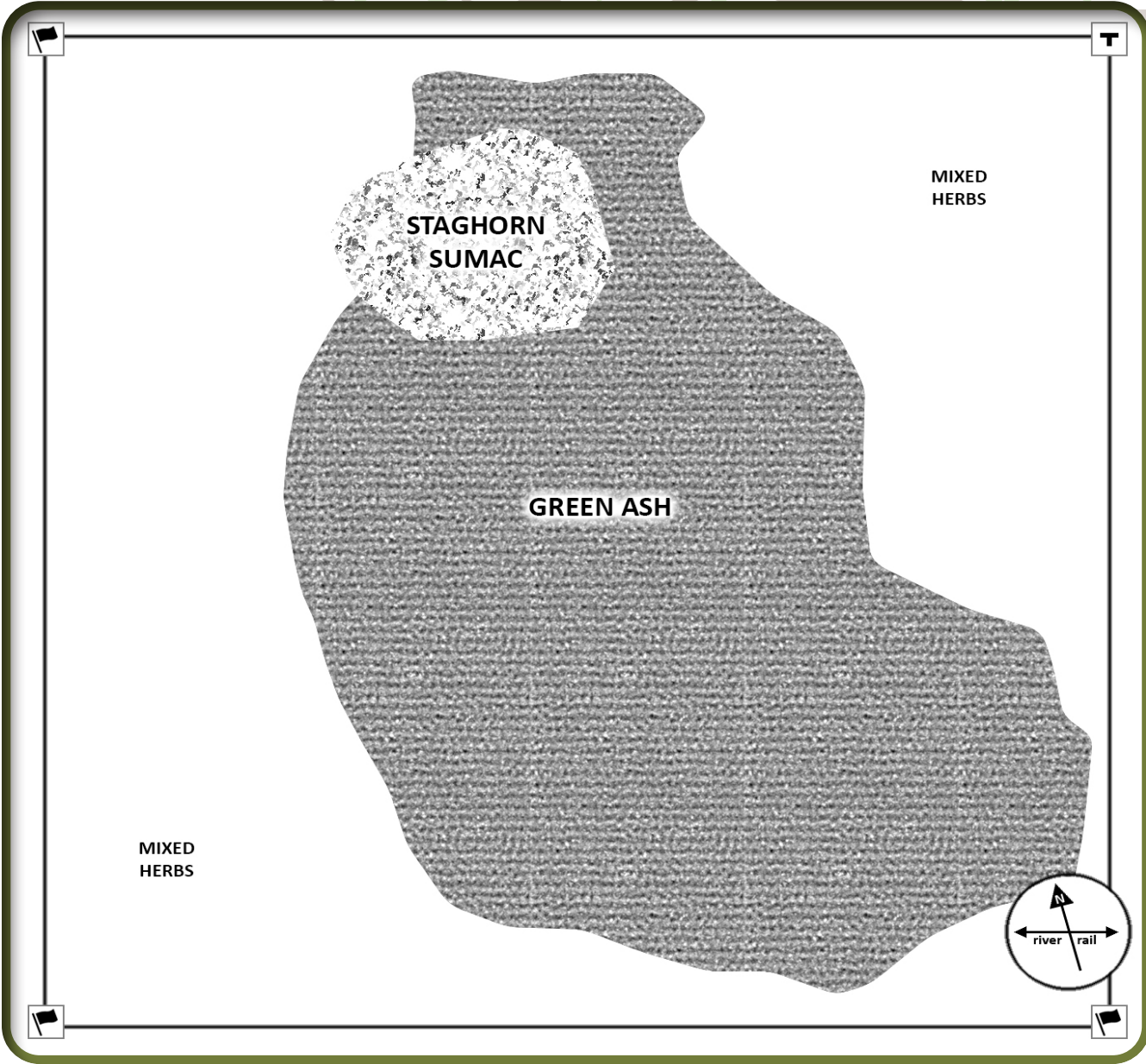
SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Acer negundo</i>	Manitoba Maple	15%↓	
<i>Ailanthus altissima</i>	Tree of heaven	5 trees	
<i>Ageratina altissima</i>	White snakeroot	5 plants↑	
<i>Alliaria petiolata</i>	Garlic mustard	SD↓	Flowering: Veg
<i>Ambrosia artemisiifolia</i>	Common Ragweed	6 plants↓	Flowering: Veg
<i>Arctium minus</i>	Lesser burdock	3 plants↓	
<i>Artemisia vulgaris</i>	Mugwort	1 plant	
<i>Bromus tectorum</i>	Downy chess	SD	
<i>Celastrus orbiculatus</i>	Asian bittersweet	10 seedlings↓	
<i>Chenopodium album</i>	Lamb's quarters	NONE↓	
<i>Cirsium vulgare</i>	Bull thistle	1 plant**	
<i>Cornus alternifolia</i>	Alternate Dogwood	1 plant	
<i>Dactylis glomerata</i>	Orchard grass	ND	Flowering: Veg
<i>Daucus carota</i>	Queen Anne's Lace	SD↓	Flowering: Veg, MS5
<i>Echium vulgare</i>	Viper's bugloss	SD	Flowering: MS3, Veg, Fruit/seeding: Veg
<i>Elymus repens</i>	Quack grass	ND	Fruit/seeding: Veg
<i>Erigeron annuus</i>	Daisy fleabane	1 plant**	Flowering: MS3, Veg; Fruit/seeding: Veg
<i>Erigeron strigosus</i>	Rough fleabane	3 plants**	Flowering: Veg, MS5;
<i>Fallopia japonica</i>	Japanese knotweed	3%↓	
<i>Geum urbanum</i>	Wood avens	~5 plants**	
<i>Hesperis matronalis</i>	Dame's rocket	8 plants**	Flowering: Veg
<i>Hypericum perforatum</i>	St. John's wort	1 plant**	Flowering: Veg
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	SD	Flowering: Veg
<i>Lolium perenne</i>	Perennial rye	SD	Flowering: Veg
<i>Medicago lupulina</i>	Black medick	SD	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	SD	Flowering: Veg; Fruit/seeding: Veg
<i>Morus alba</i>	White mulberry	1 seedling	
<i>Nepeta cataria</i>	Catnip	2.00%	
<i>Oxalis stricta</i>	Yellow wood-sorrel	SD	
<i>Parthenocissus quinquefolia</i>	Virginia creeper	3 plants**	
<i>Phalaris arundinacea</i>	Reed canary grass	SD	
<i>Phleum pratense</i>	Timothy-grass	SD	
<i>Plantago rugelii</i>	Red-stemmed plantain	SD	
<i>Poa compressa</i>	Flat-stemmed blue grass	SD	Fruit/seeding: Veg
<i>Poa pratensis</i>	Kentucky bluegrass	SD	Fruit/seeding: Veg, MS5
<i>Poa spp.</i>	Grass	SD	Fruit/seeding: Veg
<i>Polygonum persicaria</i>	Lady's-thumb	20 stems**	
<i>Potentilla recta</i>	Sulphur cinquefoil	ND	Fruit/seeding: Veg, MS5

## PLOT 7 – Cont.



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Prunus virginiana</i>	Chokecherry	SD	
<i>Ranunculus repens</i>	Creeping buttercup	SD	
<i>Rhamnus cathartica</i>	European buckthorn	3 stems↓	
<i>Rhus typhina</i>	Staghorn sumac	10.00%	Fruiting: Veg, MS5
<i>Ribes rubrum</i>	Red currant	SD	Fruiting: MS5
<i>Rubus occidentalis</i>	Black raspberry	2 plants↑	
<i>Rubus odoratus</i>	Purple-flowering Raspberry	2 plants↑	
<i>Rumex xcrispus</i>	Curly dock	3 plants	
<i>Saponaria officinalis</i>	Bouncing bet	3 stems↑	
<i>Silene latifolia</i>	White campion	25 plants↑	Flowering: Veg 2
<i>Solanum dulcamara</i>	Bittersweet nightshade	6 plants	Flowering: MS5
<i>Solidago altissima</i>	Tall goldenrod	10%↑	Flowering: MS5
<i>Sonchus oleraceus</i>	Annual sow-thistle	ND	
<i>Tanacetum vulgare</i>	Tansy	15%↑	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Taraxacum officinale</i>	Common dandelion	10 plants	
<i>Thlaspi arvense</i>	Field penny-cress	10 plants**	
<i>Torilis japonica</i>	Japanese hedge parsley	15 plants↓	
<i>Trifolium repens</i>	White Clover	ND	
<i>Verbascum thapsus</i>	Common mullein	2 plants↓	Flowering: Veg
<i>Verbena urticifolia</i>	White vervain	NONE↓	
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	<1%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	8 plants↓	

PLOT 8



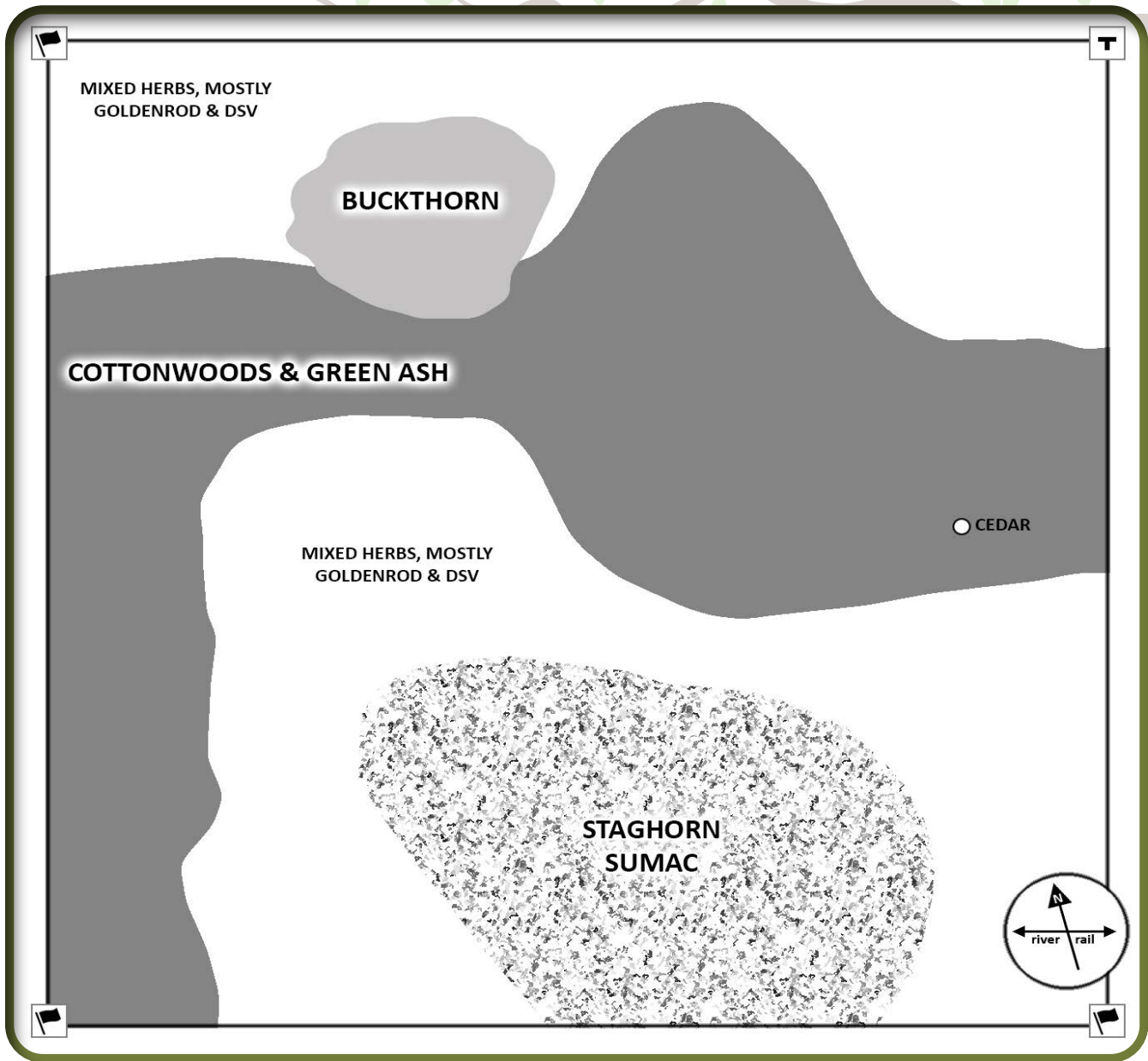


## PLOT 8



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Achillea millefolium</i>	Common yarrow	3% ↑	Flowering: Veg, MS5
<i>Ambrosia artemisiifolia</i>	Common Ragweed	1 plant ↓	Flowering: Veg
<i>Artemisia vulgaris</i>	Mugwort	1 plant**	
<i>Asclepias syriaca</i>	Common milkweed	1 plant	Fruit/seeding: Veg, MS5
<i>Bassia scoparia</i>	Summer cypress	3 plants ↓	
<i>Centaurea maculosa</i>	Spotted knapweed	5.00%	Flowering: Veg, MS5
<i>Cichorium intybus</i>	Chicory	2 plants ↓	Flowering: Veg, MS5
<i>Daucus carota</i>	Queen Anne's Lace	3 plants	Flowering: Veg, MS5
<i>Echium vulgare</i>	Viper's bugloss	1%	Flowering: MS3, Veg, Fruit/seeding: Veg
<i>Elymus repens</i>	Quack grass	3 plants**	Fruit/seeding: Veg
<i>Erigeron annuus</i>	Daisy fleabane	SD	Flowering: MS3, Veg; Fruit/seeding: Veg
<i>Eryngium planum</i>	Sea holly	1 plant	Flowering: Veg, MS5;
<i>Fraxinus pennsylvanica</i>	Green ash	35% ↑	Fruit/seeding: Veg
<i>Juglans nigra</i>	Black walnut	2 seedlings ↓	
<i>Lactuca serriola</i>	Prickly lettuce	1 plant**	Flowering: Veg
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	2 plants	Flowering: Veg
<i>Lotus corniculatus</i>	Birdsfoot trefoil	10 plants	Flowering: Veg, MS5
<i>Medicago lupulina</i>	Black medick	1 plant	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	1.00%	Flowering: Veg; Fruit/seeding: Veg
<i>Phalaris arundinacea</i>	Reed canary grass	2% ↑	
<i>Poa spp.</i>	Grass	DG	Fruit/seeding: Veg
<i>Potentilla recta</i>	Sulphur cinquefoil	20 plants	Fruit/seeding: Veg, MS5
<i>Quercus rubra</i>	Red oak	NONE ↓	
<i>Rhamnus cathartica</i>	European buckthorn	1 stem	
<i>Rhus typhina</i>	Staghorn sumac	15% ↑	Fruiting: Veg, MS5
<i>Schizachyrium scoparium</i>	Little bluestem	8 plants ↑	
<i>Solidago altissima</i>	Tall goldenrod	20.00%	Flowering: MS5
<i>Tanacetum vulgare</i>	Tansy	15.00%	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Ulmus pumila</i>	Siberian elm	1 seedling**	
<i>Verbascum thapsus</i>	Common mullein	1 plant ↓	Flowering: Veg
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	8% ↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5

# PLOT 9



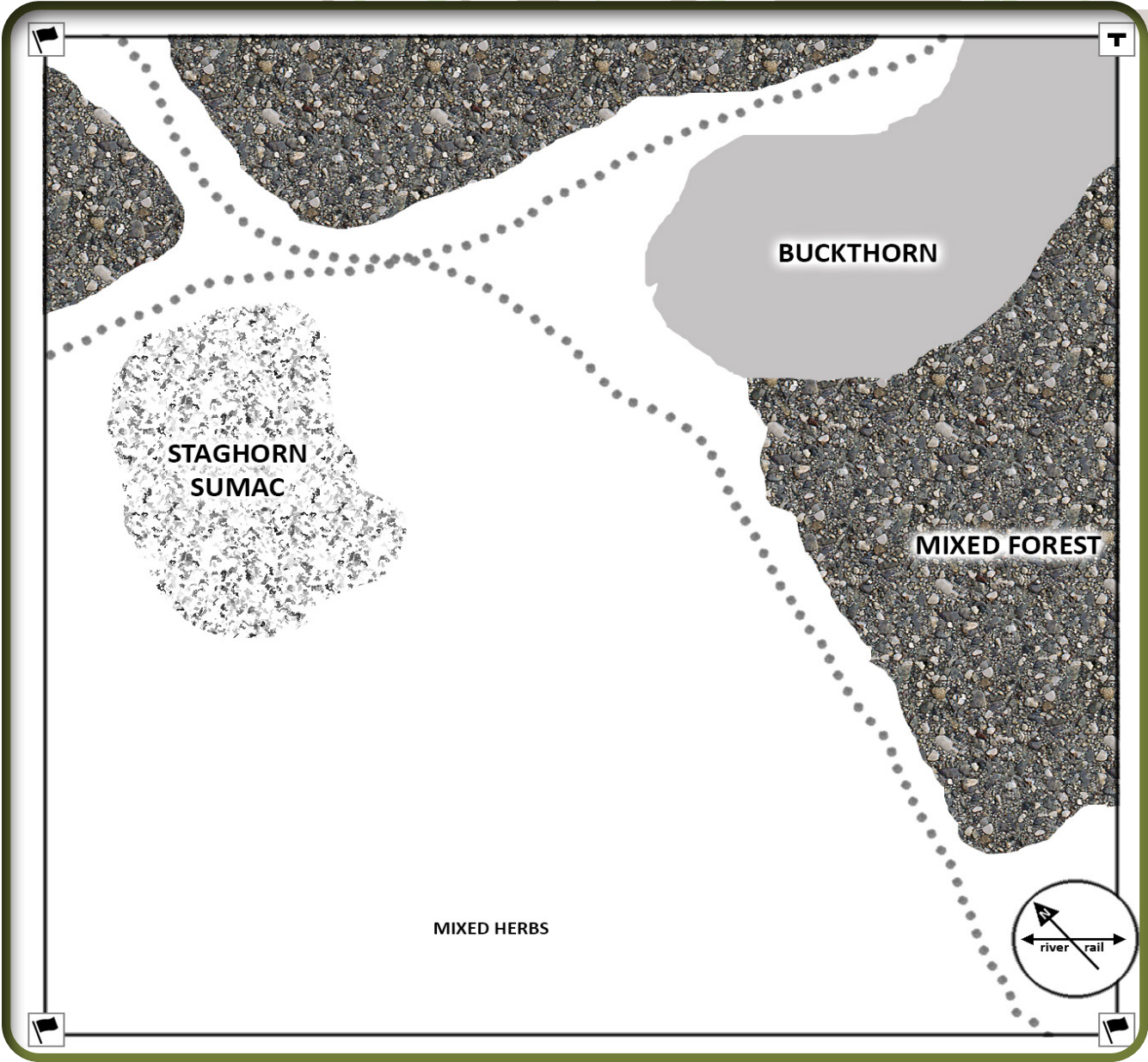
## PLOT 9



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<i>Acer negundo</i>	Manitoba Maple	1 tree, 6 seedlings↑	
<i>Ambrosia artemisiifolia</i>	Common Ragweed	6 plants↑	Flowering: Veg
<i>Asclepias syriaca</i>	Common milkweed	NONE↓	Fruit/seeding: Veg, MS5
<i>Daucus carota</i>	Queen Anne's Lace	<1%↓	Flowering: Veg, MS5
<i>Euonymus alatus</i>	Burning Bush	1 shrub**	
<i>Fraxinus pennsylvanica</i>	Green ash	5.00%	Fruit/seeding: Veg
<i>Juglans nigra</i>	Black walnut	1 sapling↓	
<i>Juniperus virginiana</i>	Eastern red cedar	1 tree	
<i>Linaria vulgaris</i>	Common toadflax (butter-and-eggs)	10 plants	Flowering: Veg
<i>Medicago lupulina</i>	Black medick	10%↑	Flowering: Veg
<i>Melilotus albus</i>	White sweet clover	2%↓	Flowering: Veg; Fruit/seeding: Veg
<i>Poa spp.</i>	Grass	10%↑	Fruit/seeding: Veg
<i>Populus deltoides</i>	Eastern cottonwood	60.00%	Fruit/seeding: MS3
<i>Potentilla recta</i>	Sulphur cinquefoil	1 plant↓	Fruit/seeding: Veg, MS5
<i>Rhamnus cathartica</i>	European buckthorn	10%↓	
<i>Rhus typhina</i>	Staghorn sumac	15.00%	Fruiting: Veg, MS5
<i>Robinia pseudoacacia</i>	Black locust	1↓	
<i>Solidago altissima</i>	Tall goldenrod	40%↑	Flowering: MS5
<i>Sonchus oleraceus</i>	Annual sow-thistle	1 plant**	
<i>Tanacetum vulgare</i>	Tansy	2%↓	Flowering: Veg, MS5; Fruit/seeding: MS5
<i>Ulmus pumila</i>	Siberian elm	1 tree↓	
<i>Verbascum thapsus</i>	Common mullein	2 plants**	Flowering: Veg
<i>Vincetoxicum rossicum</i>	Dog-strangling vine	10%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<i>Vitis riparia</i>	Riverbank grape	NONE↓	



PLOT 10



# PLOT 10



SCIENTIFIC NAME	COMMON NAME	COVER	NOTES
<a href="#">Acer negundo</a>	Manitoba Maple	1 tree↓	
<a href="#">Ambrosia artemisiifolia</a>	Common Ragweed	20 plants	Flowering: Veg
<a href="#">Bassia scoparia</a>	Summer cypress	1 plant	
<a href="#">Cichorium intybus</a>	Chicory	1 plant↓	Flowering: Veg, MS5
<a href="#">Daucus carota</a>	Queen Anne's Lace	1.00%	Flowering: Veg, MS5
<a href="#">Echium vulgare</a>	Viper's bugloss	ND**	Flowering: MS3, Veg, Fruit/seeding: Veg
<a href="#">Erigeron strigosus</a>	<b>Rough fleabane</b>	1.00%	Flowering: Veg, MS5;
<a href="#">Fraxinus pennsylvanica</a>	Green ash	5.00%	Fruit/seeding: Veg
<a href="#">Juglans nigra</a>	Black walnut	3 seedlings	
<a href="#">Juncus tenuis</a>	Slender rush	20 plants	
<a href="#">Lonicera tatarica</a>	Tatarian honeysuckle	1 plant	
<a href="#">Malus pumila</a>	Apple tree	1 stem	
<a href="#">Medicago lupulina</a>	Black medick	2.00%	Flowering: Veg
<a href="#">Melilotus albus</a>	White sweet clover	<1%	Flowering: Veg; Fruit/seeding: Veg
<a href="#">Phleum pratense</a>	Timothy-grass	<1%	
<a href="#">Poa pratensis</a>	Kentucky bluegrass	10.00%	Fruit/seeding: Veg, MS5
<a href="#">Populus deltoides</a>	Eastern cottonwood	10.00%	Fruit/seeding: MS3
<a href="#">Rhamnus cathartica</a>	European buckthorn	10 stems↓	
<a href="#">Rhus typhina</a>	Staghorn sumac	20%↑	Fruiting: Veg, MS5
<a href="#">Rubus occidentalis</a>	Black raspberry	1 plant	
<a href="#">Securigera varia</a>	Crownvetch	3%↓	Flowering: Veg 2, MS5
<a href="#">Silene latifolia</a>	White campion	NONE↓	Flowering: Veg 2
<a href="#">Solidago altissima</a>	Tall goldenrod	5.00%	Flowering: MS5
<a href="#">Tanacetum vulgare</a>	Tansy	3%↓	Flowering: Veg, MS5; Fruit/seeding: MS5
<a href="#">Taraxacum officinale</a>	Common dandelion	30 plants	
<a href="#">Torilis japonica</a>	Japanese hedge parsley	30 plants**	
<a href="#">Trifolium repens</a>	White Clover	2%**	
<a href="#">Vincetoxicum rossicum</a>	Dog-strangling vine	5%↓	Flowering: Veg, MS5; Fruit/seeding: Veg, MS5
<a href="#">Vitis riparia</a>	Riverbank grape	3 plants	

## 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-2022-data>

Should readers require a copy of this spreadsheet please contact [cfmp@torontofieldnaturalists.org](mailto:cfmp@torontofieldnaturalists.org).



## APPENDIX B: COMPILED FAUNA DATA

Data presented in this section has been compiled from all fauna logs submitted during the 2022 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	2	2	3	2	4	1		1	17
<i>Anas platyrhynchos</i>	Mallard							3				
<i>Bombycilla cedrorum</i>	Cedar Waxwing				1							
<i>Cardinalis cardinalis</i>	Northern cardinal				1						1	
<i>Catharus guttatus</i>	Hermit thrush										1	
<i>Dryobates pubescens</i>	Downy woodpecker										1	
<i>Empidonax minimus</i>	Least flycatcher	1										
<i>Icterus galbula</i>	Baltimore Oriole	1				1			1		1	
<i>Melospiza melodia</i>	Song sparrow	3			1	2						
<i>Molothrus ater</i>	Brown-headed cowbird					1						
<i>Passerina cyanea</i>	Indigo bunting							1				
<i>Picoides villosus</i>	Hairy woodpecker							2				
<i>Piranga olivacea</i>	Scarlet tanager											1
<i>Polioptila caerulea</i>	Blue-gray gnatcatcher									1		
<i>Poecile atricapillus</i>	Black-capped chickadee				2					2		1
<i>Regulus calendula</i>	Ruby-crowned kinglet							1				
<i>Setophaga petechia</i>	Yellow warbler	2					3	5	2	2		7
<i>Sitta carolinensis</i>	White-breasted nuthatch											1
<i>Spinus tristis</i>	American goldfinch	1			2	2	1			2	3	5
<i>Tachycineta bicolor</i>	Tree swallow			3		1						
<i>Turdus migratorius</i>	American Robin	3			5		3			2	4	1
<i>Tyrannus tyrannus</i>	Eastern kingbird							1		1	1	
<i>Vireo gilvus</i>	Warbling vireo						2	2				
<i>Vireo olivaceus</i>	Red-eyed vireo							1				
<i>Vireo solitarius</i>	Blue headed vireo										1	
<i>Dumetella carolinensis</i>	Grey Catbird										1	
<i>Sciurus carolinensis</i>	Eastern grey squirrel							1				
<i>Danaus plexippus</i>	Monarch butterfly											1
<i>Thymelicus lineola</i>	European Skipper butterfly					1						1

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	23	7	7			
<i>Anas platyrhynchos</i>	Mallard	3					
<i>Bombycilla cedrorum</i>	Cedar Waxwing				1		
<i>Cardinalis cardinalis</i>	Northern cardinal		1		1		
<i>Catharus guttatus</i>	Hermit thrush						1
<i>Dryobates pubescens</i>	Downy woodpecker				1		
<i>Empidonax minimus</i>	Least flycatcher						1
<i>Icterus galbula</i>	Baltimore Oriole		4				
<i>Melospiza melodia</i>	Song sparrow	3	2	1			
<i>Molothrus ater</i>	Brown-headed cowbird		1				
<i>Passerina cyanea</i>	Indigo bunting				1		
<i>Picoides villosus</i>	Hairy woodpecker	2					
<i>Piranga olivacea</i>	Scarlet tanager		1				
<i>Poliophtila caerulea</i>	Blue-gray gnatcatcher	1					
<i>Poecile atricapillus</i>	Black-capped chickadee	2				3	
<i>Regulus calendula</i>	Ruby-crowned kinglet						1
<i>Setophaga petechia</i>	Yellow warbler		16	5			
<i>Sitta carolinensis</i>	White-breasted nuthatch	1					
<i>Spinus tristis</i>	American goldfinch	4	4	1	4	1	2
<i>Tachycineta bicolor</i>	Tree swallow		4				
<i>Turdus migratorius</i>	American Robin	5	5	3	2	3	
<i>Tyrannus tyrannus</i>	Eastern kingbird		1	2			
<i>Vireo gilvus</i>	Warbling vireo		3	1			
<i>Vireo olivaceus</i>	Red-eyed vireo				1		
<i>Vireo solitarius</i>	Blue headed vireo	1					
<i>Dumetella carolinensis</i>	Grey Catbird				1		
<i>Sciurus carolinensis</i>	Eastern grey squirrel						1
<i>Danaus plexippus</i>	Monarch butterfly					1	
<i>Thymelicus lineola</i>	European Skipper butterfly			2			

## 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	47	102	48	72	N/A	132
Person, on bike	7	22	15	20	N/A	32
Dog, on leash	15	7	22	11	N/A	26
Dog, off-leash	32	15	10	22	N/A	17

\* Data not collected (no ambassador)



## APPENDIX D: ASSESSMENT AND SESSION NOTES

### MS1: MONITORING SESSION #1

Date	Apr 26, 7:00am – 9:00am
Temperature	9°C
Beaufort Sky Code	1 (partly cloudy)
Beaufort Wind Code	1 (light)
Flora ID	Laren Stadelman
Fauna ID	Ken Morin; Steph Hill
Photographer	Rosemary Susan Warren
Site Ambassador	Kristina Jackson
Other participants	
Administrator	Charles Bruce-Thompson

### MS2: MONITORING SESSION #2

Date	May 15, 10:00am – 12:00pm
Temperature	29°C to 30°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	2 (light breeze)
Flora ID	Mitch Pencharz
Fauna ID	Jane Cluver; Charles Bruce-Thompson
Photographer	Dave Barr
Site Ambassador	Rosemary Susan Warren
Other participants	
Administrator	Charles Bruce-Thompson

### MS3: MONITORING SESSION #3

Date	Jun 8, 10:00am – 12:00pm
Temperature	21°C to 22°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	3 (gentle breeze)
Flora ID	Charles Bruce-Thompson, Jason Ramsay-Brown
Fauna ID	Ken Morin
Photographer	Lillian Natalizio
Site Ambassador	Kristina Jackson
Other participants	
Administrator	Charles Bruce-Thompson

## VEG: VEGETATION ASSESSMENT

Date	July 24, 10:00am – 2:00pm
Temperature	26°C to 30°C
Beaufort Sky Code	2 (continuous cloud)
Beaufort Wind Code	3 (gentle breeze)
Flora ID	Stephen Smith, Jason Ramsay-Brown, Nancy Dengler, Anna Waldvogel
Fauna ID	Steph Hill
Photographer	Andrew Interisano
Site Ambassador	Kristina Jackson
Other participants	
Administrator	Charles Bruce-Thompson

## MS4: MONITORING SESSION #4

Date	Aug 20, 10:00am – 12:00pm
Temperature	24°C to 28°C
Beaufort Sky Code	0 (clear)
Beaufort Wind Code	2 (light breeze)
Flora ID	Charles Bruce-Thompson
Fauna ID	Rosemary Susan Warren
Photographer	Lillian Natalizio
Site Ambassador	
Other participants	
Administrator	Charles Bruce-Thompson

## MS5: MONITORING SESSION #5

Date	October 16, 10:00am – 12:00pm
Temperature	14°C to 17°C
Beaufort Sky Code	1 (partly cloudy)
Beaufort Wind Code	1 (light)
Flora ID	Laren Stadelman
Fauna ID	Anne Powell
Photographer	
Site Ambassador	Anna Waldvogel
Other participants	Lachtin Poon
Administrator	Charles Bruce-Thompson