(MY2) MONITORING REPORT – *Riparian Buffer Mitigation*

STRAWBERRY HILL MITIGATION PROJECT

Johnston County, North Carolina
Neuse River Basin
HUC 03020201

NCDMS Project #100094 (Contract #7745)
USACE Action ID: SAW-2019-00124
DWR Project #2019-0159

Provided by:

Resource Environmental Solutions, LLC
for Environmental Banc & Exchange – Neuse I, LLC (EBX-Neuse I)

Provided for:
NC Department of Environmental Quality
Division of Mitigation Services
1652 Mail Service Center
Raleigh, NC 27699-1652

January 2023

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MARC RECKTENWALD
Director

NORTH CAROLINA
Environmental Quality

December 4, 2023

Via email: mdeangelo@res.us

Matt Deangelo
RES

Subject: DMS Comments on the MY2 Report
Strawberry Hill, Project ID #100094, DMS Contract 7745

Matt,
DMS received the MY2 draft report on 11/10/2023 and visited the site on 11/30/22. DMS offers the following comments for the report:

Stream Report

1. Section 1.5.1 – References applying a "liquid organic soil amendment" to bare areas on site. Please give more details about the soil amendment.
2. Section 1.5.2 – Incorrect statement that "One stage recorder and one flow gauge are documenting conditions on reaches JH1-A and JH1-B, respectively." This sentence implies that crest gauge data is being collected on JH1-A and flow data on JH1-B.
3. Please review cross sections. Some cross section BHRs are not reproducible with the numbers in the report. For example, XS-3 calculates to a 0.95 BHR based on report numbers (using formula *LTOB Max Depth / [BKFL Elev. Based on MY0 XSA – Thalweg Elevation*]) but is reported as 1.00. Reviewing the submitted Excel data (again using XS-3 as an example) to remove possibility of rounding errors produces similar results. We can reproduce all MY1 BHRs with the method described above.
4. A few minor encroachments (scalloping) were identified during the 11/30 site visit. Please add these areas to the CCPV and indicate how future encroachments will be prevented in these areas.

Buffer Report

1. Section 1.5 – Provide detail on "liquid organic soil amendment" proposed for application to bare areas.
2. A few minor encroachments (scalloping) were identified during the 11/30 site visit. Please add these areas to the CCPV and indicate how future encroachments will be prevented in these areas.

Please incorporate the revisions and provide a response to comments letter, one (1) hardcopy, and one (1) pdf copy along with any updated digital files that may be needed based on the comments above. If you have any questions, or wish to discuss these comments further, please contact me at any time. I can be reached at (919) 218-0226, or via email at jeremiah.dow@ncdenr.gov

Sincerely,

Jeremiah Dow
Eastern Regional Supervisor
NCDEQ Division of Mitigation Services

cc: Jamey McEachran, RES

3600 Glenwood Avenue, Suite 100
Raleigh, NC 27612

Corporate Headquarters
6575 W Loop S #300
Bellaire, TX 77401
Main: 713.520.5400

January 12, 2024

Jeremiah Dow
NC DEQ Division of Mitigation Services
217 West Jones Street
Raleigh, NC 27604

RE: DMS Comments on the MY2 Report Strawberry Hill, Project ID #100094, DMS Contract 7745

Listed below are comments provided by DMS on December 4, 2023 regarding the Strawberry Hill Stream and Riparian Buffer Mitigation Project Year 2 Monitoring Reports and RES' responses.

Buffer Report Comments:

1. Section 1.5 – Provide detail on "liquid organic soil amendment" proposed for application to bare areas.

This has been revised to clarify that the amendment is a liquid humic acid fertilizer.

2. A few minor encroachments (scalloping) were identified during the 11/30 site visit. Please add these areas to the CCPV and indicate how future encroachments will be prevented in these areas.

The CCPV has been revised to include these areas and discussion has been added to **Section 1.5**. The encroachments are very small and narrow and do not appear to result in any tree mortality. The areas are mapped as lines as the areal coverage is minimal.

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1 PROJECT SUMMARY

1.1 Project Location and Description

The Strawberry Hill Project is within the Neuse River Basin within the 8-digit HUC 03020201, 14-digit HUC 03020201140010 and DWR Sub-basin Number 03-04-02.

The Strawberry Hill Project is located in Johnston County in Smithfield, NC at the crossroads of Yelverton Grove Road and Brogden Road (**Figure 1**). To access the Project from Raleigh, take I-40 East to US-70 East. Then take US-70 BUS West until taking a right onto South 3rd Street in downtown Smithfield. Then take a left onto Brogden Road. Follow Brogden Road for 2.9 miles and the downstream extent of reach JH1-B will be on your left. The coordinates are 35.469579 °N and -78.323896 °W.

Environmental Banc & Exchange – Neuse I, LLC (EBX-Neuse I), a wholly-owned subsidiary of Resource Environmental Solutions (RES), is pleased to provide this Year 1 Monitoring Report as a component of the Strawberry Hill Mitigation Project (Project), a full-delivery stream and buffer mitigation project for the Division of Mitigation Services (DMS) (DMS #100094). This buffer component of the Project is designed to provide riparian buffer mitigation credits for unavoidable impacts due to development within the Neuse River Basin, United States Geological Survey (USGS) 8-digit Cataloguing Unit 03020201 (Neuse 01) (**Figure 1**). This Buffer Project provides mitigation in accordance with the Consolidated Buffer Mitigation Rule 15A NCAC 02B .0295 and Nutrient Offset Credit Trading Rule 15A NCAC 02B .0703. The Strawberry Hill Project also entails a stream mitigation component, generating stream mitigation credits through stream restoration. Conditions pertaining to the stream mitigation component of this Project will be provided in a separate baseline monitoring report.

The conservation easement of the Strawberry Hill Project totals 22.12 acres and includes two unnamed tributaries and three ditches that drain into Polecat Branch and eventually the Neuse River. Previous land use within the Project was primarily crop production and disturbed riparian forest. The Project area was used extensively for agricultural and forestry purposes for over 80 years. Land use adjacent to and surrounding the Project is either crop production or forest regeneration. Water quality stressors affecting the Project include pollution from crop production and lack of forested riparian buffer. Previous buffer conditions demonstrated significant degradation with the loss of stabilizing vegetation because of continued crop production and recent clear cut of adjacent riparian forest.

The goal of the buffer component of the Project is to restore and preserve ecological function to the existing streams and their associated riparian buffer areas by establishing appropriate plant communities while minimizing temporal and land disturbing impacts. Buffer and surrounding riparian area improvements will filter runoff from agricultural fields, thereby reducing nutrient and sediment loads to Project channels and provide water quality benefit to the overall watershed. Project attributes are summarized in **Table 1**.

1.2 Monitoring Protocol and Project Success Criteria

Annual vegetation monitoring and visual assessments are being conducted. Riparian vegetation monitoring is based on the "Carolina Vegetation Survey-Ecosystem Enhancement Program Protocol for Recording Vegetation: Level 2 Plot Sampling Only Version 4.2". Monitoring plots were installed a minimum of 100 meters squared in size and cover at least two percent of the planted mitigation area. These plots were randomly placed throughout the planted riparian buffer mitigation area (15.13 acres) and are representative of the riparian restoration conditions. The following data is recorded for all trees in the plots: species, height, planting date (or volunteer), and grid location. All stems in plots are flagged with flagging tape. Data is processed using the CVS data entry tool. In the field, the four corners of each plot were permanently marked with PVC at the origin and metal conduit at the other corners. Photos of each plot are to be taken from the origin each monitoring year. There are 13 fixed vegetation monitoring plots (**Figure 2**).

Photos are being taken at all vegetation plot origins each monitoring year and be provided in the annual reports. Visual inspections and photos are taken to ensure that areas are being maintained and compliant. The measures of vegetative success for the Project are the survival of at least four native hardwood tree species, where no one species is greater than 50 percent of stems, at a density of at least 260 stems per acre at the end of Year 5. Native volunteer species may be included to meet the performance standards as determined by NC Division of Water Resources (DWR).

A visual assessment of the conservation easement is also performed each year to confirm:

- Easement boundary markers/signage are in good condition throughout the site;
- No encroachment has occurred;
- No invasive species in areas were invasive species were treated,
- Diffuse flow is being maintained in the conservation easement areas; and
- There has not been any cutting, clearing, filling, grading, or similar activities that would negatively affect the functioning of the buffer.

Component/ Feature	Monitoring	Maintenance through project close-out
Vegetation	Annual vegetation monitoring	Vegetation shall be maintained to ensure the health and vigor of the targeted plant community. Routine vegetation maintenance and repair activities may include supplemental planting, pruning, mulching, and fertilizing. Exotic invasive plant species shall be treated by mechanical and/or chemical methods. Any vegetation requiring herbicide application will be performed in accordance with NC Department of Agriculture (NCDA) rules and regulations. Vegetation maintenance activities will be documented and reported in annual monitoring reports. Vegetation maintenance will continue through the monitoring period.

Component/ Feature	Monitoring	Maintenance through project close-out
Invasive and Nuisance Vegetation	Visual Assessment	Invasive and noxious species will be monitored and treated so that none become dominant or alter the desired community structure of the Project. Locations of invasive and nuisance vegetation will be mapped.
Project Boundary	Visual Assessment	Project boundaries shall be identified in the field to ensure clear distinction between the mitigation project and adjacent properties. Boundaries are marked with signs identifying the property as a mitigation project and will include the name of the long-term steward and a contact number. Boundaries may be identified by fence, marker, bollard, post, tree-blazing, or other means as allowed by Project conditions and/or conservation easement. Boundary markers disturbed, damaged, or destroyed will be repaired and/or replaced on an as-needed basis. Easement monitoring and staking/ signage maintenance will continue in perpetuity as a stewardship activity.
Road Crossing	Visual Assessment	Road crossings within the Project may be maintained only as allowed by conservation easement or existing easement, deed restrictions, rights of way, or corridor agreements. Crossings in easement breaks are the responsibility of the landowner to maintain.

1.3 Project Components

This Project generates 642,070.977 riparian buffer restoration credits on pre-existing non-forested land, and 8,091.309 buffer preservation credits. The total area of riparian preservation is less than 25 percent of the total area of riparian buffer mitigation in accordance with 15A NCAC 02B .0295 (o)(5). The total riparian buffer mitigation credits that the Strawberry Hill Mitigation Project generate are summarized below, but the detailed Project credit breakdown, including buffer credits that are convertible to nutrient offset credit, utilizing the DWR "Project Credit Table Template (Updated February 2022)," is provided in **Table 1; Appendix A**.

Mitigation Totals	Area Square Feet	Credits
Restoration	652,991	642,070.977
Preservation	81,431	8,091.309
Total Riparian Buffer	**734,422**	**650,162.286**

1.4 Riparian Mitigation Approach

The buffer mitigation is in accordance with the Consolidated Buffer Mitigation Rule 15A NCAC 02B .0295 and Nutrient Offset Credit Trading Rule 15A NCAC 02B .0703. In addition to traditional riparian restoration, the Project also incorporates the alternative buffer mitigation options: Preservation of Buffers on Subject Streams, as outlined in 15A NCAC 02B .0295 (o) (5), and Restoration and Enhancement of Ditches, as outlined in 15A NCAC 02B .0295 (o) (8).

Riparian restoration along the Project streams and ditches is accomplished through the planting, establishment, and protection of a hardwood forest community. Restoration activities included planting a composition of native bare-root tree species along streams and ditches based on reference data. The result will be a riparian area that functions to mitigate nutrient and sediment inputs from the surrounding uplands.

Preservation occurs in some areas along Reach JH1-A and JH1-B. Some of these preservation areas were associated with stream restoration under the stream mitigation component of the Project; therefore, some of the areas were cleared during construction of the new stream corridor. However, these impacted areas were planted under the same criteria as restoration areas.

1.5 Monitoring Performance (MY2)

Year 2 monitoring of 13 fixed vegetation plots was completed on October 3rd, 2023. Vegetation tables are in **Appendix B** and associated photos are in **Appendix C**. MY2 monitoring data indicates that all plots are exceeding the success criteria of 260 planted stems per acre. Planted stem densities ranged from 324 to 688 planted stems per acre with a mean of 529 planted stems per acre across all plots. A total of 12 planted species were documented within the plots. Seven volunteer species were identified across the plots, and it is expected that more volunteers will establish in upcoming years. The average planted stem height in the vegetation plots was 2.7 feet.

Visual assessment of vegetation outside of the monitoring plots indicates that the herbaceous vegetation is establishing in much of the riparian area. However, areas where Priority II stream restoration activities involved extensive grading are struggling to establish dense vegetative cover though still have adequate tree density at this time. The total area of bare areas amounts to 3.77 acres and are depicted in **Figure 2**. In November 2023, RES applied an organic soil amendment in the form of humic acid to these areas to promote soil health and vegetative growth while minimizing damage to planted trees. RES also noted that loblolly pine (*Pinus taeda*) is establishing in some areas, totaling about 3.9 acres (**Figure 2**). The pines are still short, but RES plans to treat these promptly to minimize their competition with desirable trees. For the most part, easement boundary markers and signs are clearly visible and in good condition although there are several along the farm fields that have been damaged from large farm equipment, so RES is planning to re-establish and add markers where applicable. The previously reported (in MY1) encroachment associated with ditches JH2 and JH3 along Stevens Sausage Road were resolved as of March 2023. RES installed additional t-post markers along with horse tape to provide a physical barrier to prevent future encroachment and replanted the driving path footprint with containerized trees to ensure adequate tree density and vigor. Specifically, 65 three-gallon containerized trees were planted including American sycamore (*Platanus occidentalis*), river birch (*Betula nigra*), willow oak (*Quercus phellos*), and swamp chestnut oak (*Quercus michauxii*). RES also relocated a roadside ditch crossing that enables farm equipment to access the fields away from the easement. The construction is complete, and the landowner and farmer are complying and actively utilizing the new driveway. Locations of activities are depicted in **Appendix A, Figure 2** and photos **Appendix C**.

During MY2, inspection of the easement determined two minor encroachments have occurred. One area is located at the boundary edge near the top of JH1-B where the adjacent landowner is mowing his lawn around several of his fruit trees at the boundary, but no planted trees are harmed, and the areal coverage is minimal. For this issue, RES plans to discuss alternative, allowable methods with the landowner to protect his fruit trees while complying with the easement restrictions. Another area occurs at the lower end of JH1-B along the adjacent crop field. Farm equipment has slighty "scalloped" into the easement boundary. However, it is narrow enough that trees do not appear to be affected. For this issue, RES plans to add more easement markers along the boundary at shorter intervals to provide a more visible line. Additionally, RES did document several markers (t-posts and signs) throughout the Project area had been damaged by farm equipment along some of the crop field edges. RES will repair or replace these markers. Additionally, there is no undocumented concentrated flow in the easement area.

2 REFERENCES

Lee Michael T., Peet Robert K., Roberts Steven D., and Wentworth Thomas R., 2008. *CVS-EEP Protocol for Recording Vegetation Level*. Version 4.2

NC Environmental Management Commission. 2014. Rule 15A NCAC 02B.0295 - Mitigation Program Requirements for the Protection and Maintenance of Riparian Buffers.

NC Environmental Management Commission. 2020. Rule 15A NCAC 02B.0714 – Neuse River Basin: Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian Buffers.

Resource Environmental Solutions, LLC (2020). Strawberry Hill Mitigation Project – Final Mitigation Plan – Appendix A – Final Buffer Mitigation Plan.

Schafale, M.P. 2012. Classification of the Natural Communities of North Carolina, Fourth Approximation. North Carolina Natural Heritage Program, Division of Parks and Recreation, NCDENR, Raleigh, NC.

Appendix A

Project Background Tables and Site Maps

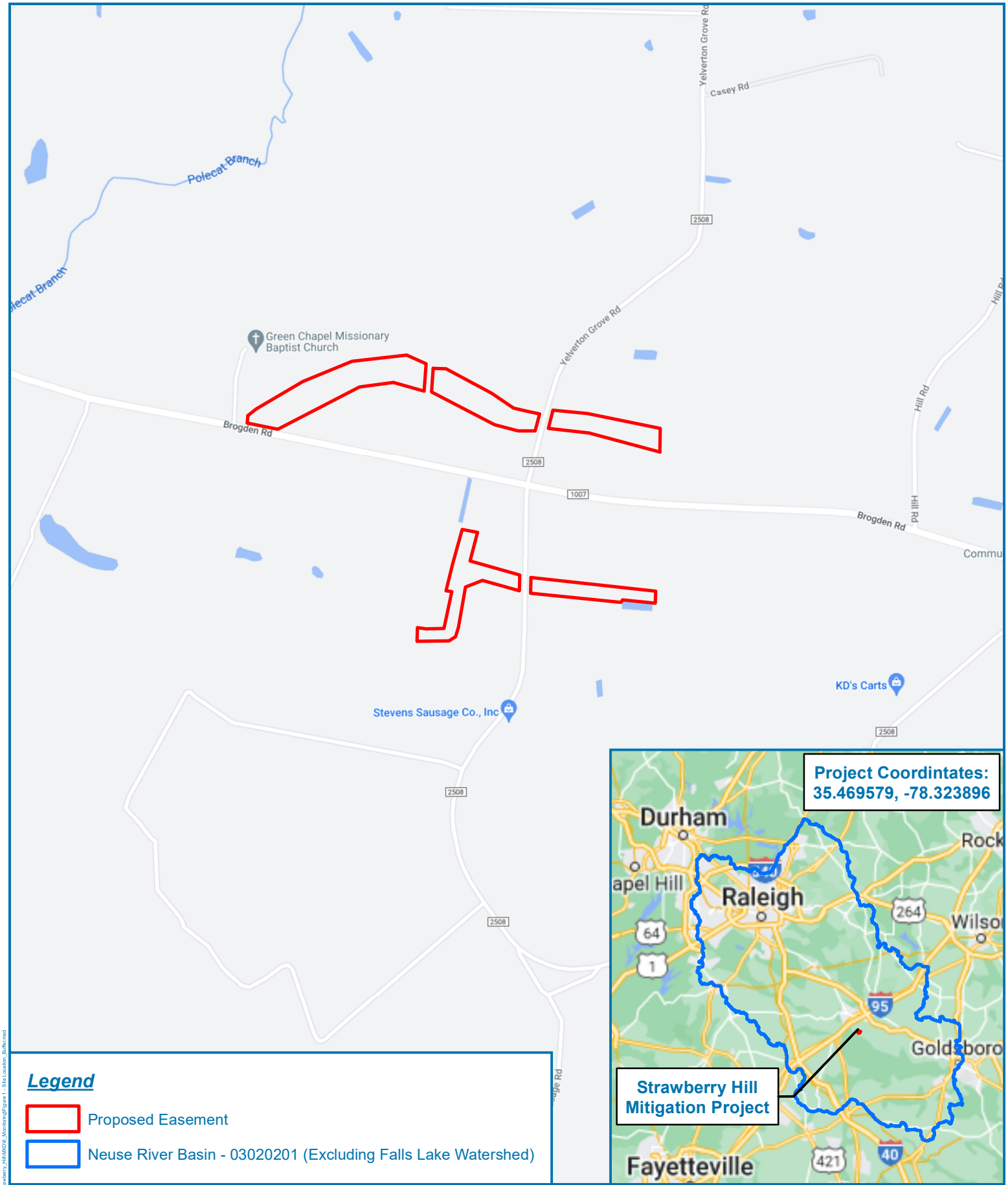

Figure 1 - Site Location

Strawberry Hill Mitigation Project

Johnston County, North Carolina

Date:	3/24/2022
Drawn by:	MDD
Checked by:	JRM
	1 inch = 1,000 feet

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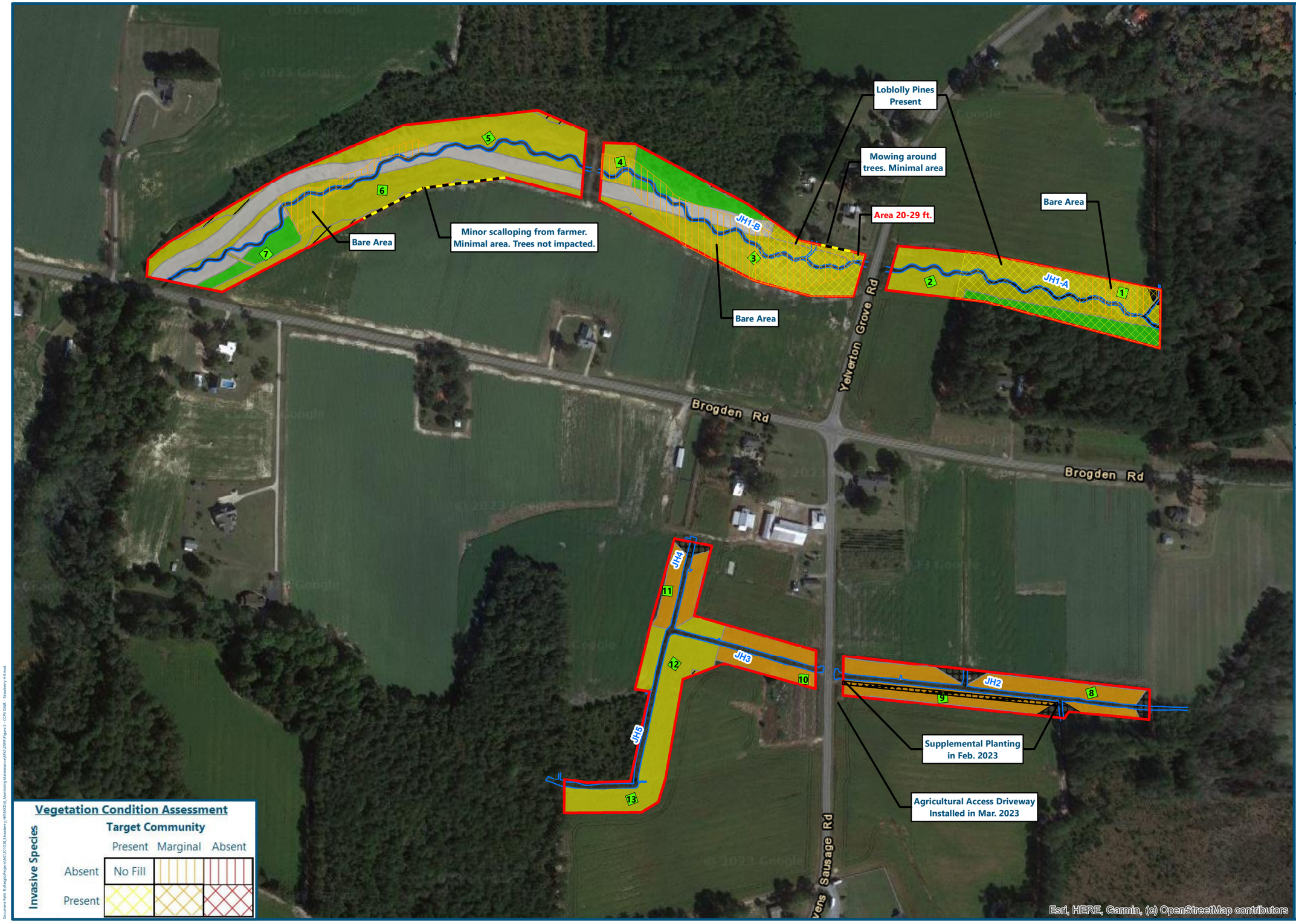
Document Path: R:\Resilience\projects\101038_Strawberry_Hill\MXD\6_Monitoring\Figure 1 - Site Location_Buffer.mxd



Vegetation Condition Assessment

Invasive Species \ Target Community	Present	Marginal	Absent
Absent	No Fill		
Present			

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Restoring a resilient earth for a modern world

N W E S

0 150 300

Feet

Figure 2 - CCPV MY2

Strawberry Hill Mitigation Project

Johnston County, North Carolina

Date: 1/11/2024	Drawn by: MDD
1 in = 300 feet	Checked by: JRM

Legend

- Recorded Easement (22.12 ac)
- Supplemental Planting

Vegetation Plot

- >320 stems/acre

Riparian Buffer Mitigation Approach

- Riparian Restoration, 0-100'
- Riparian Restoration, 101-200'
- Riparian Restoration (Ditch), 0-50'
- Riparian Preservation, 0-100'
- Riparian Preservation, 101-200'
- Non-diffuse Flow Deduction Area
- Area Not Viable for Credit
- Surveyed Top of Bank
- Encroachment Line

Table 1. Strawberry Hill, DMS# 100094, Project Credits

Neuse 03020201 - Outside Falls Lake	**Project Area**
19.16394	**N Credit Conversion Ratio (ft^2/pound)**
N/A	**P Credit Conversion Ratio (ft^2/pound)**

Credit Type	Location	Subject? (enter NO if ephemeral or ditch [1])	Feature Type	Mitigation Activity	Min-Max Buffer Width (ft)	Feature Name	Total Area (ft^2)	Total (Creditable) Area of Buffer Mitigation (ft^2)	Initial Credit Ratio (x:1)	% Full Credit	Final Credit Ratio (x:1)	Convertible to Riparian Buffer?	Riparian Buffer Credits	Convertible to Nutrient Offset?	Delivered Nutrient Offset: N (lbs)	Delivered Nutrient Offset: P (lbs)
Buffer	Rural	Yes	I / P	Restoration	0-100	Cropland (JH1, JH5)	370,703	370,703	1	100%	1.00000	Yes	370,703.000	Yes	19,343.778	—
Buffer	Rural	Yes	I / P	Restoration	0-100	Timberland (JH1)	122,409	122,409	1	100%	1.00000	Yes	122,409.000	No	—	—
Buffer	Rural	Yes	I / P	Restoration	101-200	Cropland (JH1, JH5)	9,149	9,149	1	33%	3.03030	Yes	3,019.173	Yes	477.407	—
Buffer	Rural	Yes	I / P	Restoration	101-200	Timberland (JH1)	6,810	6,810	1	33%	3.03030	Yes	2,247.302	No	—	—
Buffer	Rural	No	Ditch	Restoration	0-50	JH2, JH3, JH4	136,211	136,211	1	100%	1.00000	Yes	136,211.000	Yes	7,107.672	—
Buffer	Rural	No	Ditch	Restoration	0-50	Segment Less than 50' (JH2)	6,799	6,799	1	100%	1.00000	Yes	6,799.000	No	—	—
Buffer	Rural	No	Ditch	Restoration	0-100	Non-diffused Flow Deductions (JH1, JH2, JH4)	16,303	0	1	100%		No	—	No	—	—
Buffer	Rural	Yes	I / P	Restoration	20-29	Segment Less than 30' (JH1)	910	910	1	75%	1.33333	Yes	682.502	No	—	—
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						Totals (ft2):	**669,294**	**652,991**					**642,070.977**		**26,928.857**	**0.000**
						Total Buffer (ft2):	**669,294**	**652,991**								
						Total Nutrient Offset (ft2):	**0**	**N/A**								

Total Ephemeral Area (ft^2) for Credit:	**0**	**0**	
Total Eligible Ephemeral Area (ft^2):	**187,681**	**0.0%**	**Ephemeral Reaches as % TABM**
Total Eligible for Preservation (ft^2):	**223,098**	**9.1%**	**Preservation as % TABM**

Enter Preservation Credits Below

Credit Type	Location	Subject?	Feature Type	Mitigation Activity	Min-Max Buffer Width (ft)	Feature Name	Total Area (sf)	Total (Creditable) Area for Buffer Mitigation (ft^2)	Initial Credit Ratio (x:1)	% Full Credit	Final Credit Ratio (x:1)	Riparian Buffer Credits
	Rural	Yes	I / P		0-100	JH1, JH5	80,658	80,658	10	100%	10.00000	8,065.800
	Rural	Yes	I / P		101-200	JH1, JH5	773	773	10	33%	30.30303	25.509
												—
												—
												—
						Preservation Area Subtotals (ft^2):	**81,431**	**81,431**				

TOTAL AREA OF BUFFER MITIGATION (TABM)		
Mitigation Totals	**Square Feet**	**Credits**
Restoration:	652,991	642,070.977
Enhancement:	0	0.000
Preservation:	81,431	8,091.309
Total Riparian Buffer:	734,422	650,162.286
TOTAL NUTRIENT OFFSET MITIGATION		
Mitigation Totals	**Square Feet**	**Credits**
Nutrient Offset: Nitrogen:	0	0.000
Nutrient Offset: Phosphorus:		0.000

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Credit conversions must be calculated using the guidance provided in the Clarified Procedures for Calculating Buffer Mitigation Credits and Nutrient Offset Credits letter issued by the DWR in November 2019.

1. The Randleman Lake buffer rules allow some ditches to be classified as subject according to 15A NCAC 02B .0250 (5)(a).

last updated 08/03/2020

Table 2: Summary: Goals, Performance and Results

Goal	Objective/Treatment	Likely Functional Uplift	Performance Criteria	Measurement	Cumulative Monitoring Results
Restore and preserve native floodplain and streambank vegetation.	Established and increased forested riparian buffers to 50 feet and greater along both sides of the channel along the project reaches with a hardwood riparian plant community;	Reduction in floodplain sediment inputs from runoff, increased bank stability, increased LWD and organic material in streams, increased	Survival of at least four native hardwood tree species, where no one species is greater than 50 percent of stems, at a density of at least 260 stems per acre at the end of Year 5.	13 fixed vegetation plots	13/13 passed - MY1 13/13 passed - MY2

Table 3. Project Attributes			
Project Name		Strawberry Hill Mitigation Project	
County		Johnston	
Project Area (acres)		22.12	
Project Coordinates (latitude and longitude)		35.469579, -78.323896	
Planted Acreage (Acres of Woody Stems Planted)		19.73	
Project Watershed Summary Information			
Physiographic Province		65m - Rolling Coastal Plain	
River Basin		Neuse	
USGS Hydrologic Unit 8-digit	03020201	USGS Hydrologic Unit 14-digit	03020201140010
DWR Sub-basin		03-04-02	
Project Drainage Area (Acres and Square Miles)		383 ac (0.60 mi^2)	
Project Drainage Area Percentage of Impervious Area		2%	
CGIA Land Use Classification		Bottomland Forest, Cultivated, Evergreen Shrubland, Southern Yellow Pine, Unconsolidated Sediment	

Table 4. Project Timeline and Contacts

Activity or Deliverable	Data Collection Complete	Task Completion or Deliverable Submission
Project Instituted	NA	Dec-20
Mitigation Plan Approved	NA	Nov-20
Construction (Grading) Completed	NA	20-Jan-22
Planting Completed	NA	07-Mar-22
As-built Survey Completed	NA	May-22
MY-0 Baseline Report	Mar-22	May-22
Encroachment	Areas noted in Nov-22. Hunting driving path continued use and farm equipment cutting corners. Only applies to buffer mitigation-only section of Project. RES is actively resolving.	
MY1 Monitoring Report	Nov-22	Jan-23
Encroachment Adressed	Farmer access driveway relocated. Easement boundary markers and horse tape installed.	Mar-23
Supplemental Planting	Replanted 65 container trees on driving path encroachment area.	Feb-23
MY2 Monitoring Report	XS - June-23 VP - Oct-23	Nov-23
Remediation Items (e.g. beaver removal, supplements, repairs etc.)		

Strawberry Hill #100094	
Provider	RES / 3600 Glenwood Ave., Suite 100, Raleigh, NC 27612
Mitigation Provider POC	Jamey Mceachran (919) 623-9889
Designer	RES / 3600 Glenwood Ave., Suite 100, Raleigh, NC 27612
Primary project design POC	Ben Carroll, PE (336) 514-0927
Construction Contractor	RES / 3600 Glenwood Ave., Suite 100, Raleigh, NC 27612
Construction contractor POC	Jacy Kirkpatrick

Appendix B

Vegetation Assessment Data

Table 5. Strawberry Hill Riparian Buffer Planted Species Summary

Common Name	Species	% Zone 1	% Zone 2	Total Planted Amount
River birch	*Betula nigra*	10	10	1,600
Buttonbush	*Cephalanthus occidentalis*	5	5	800
Yellow poplar	*Liriodendron tulipifera*	10	10	1,600
Wax Myrtle	*Morella cerifera*	5	10	1,000
Swamp tupelo	*Nyssa biflora*	5	5	800
American sycamore	*Platanus occidentalis*	10	10	1,600
Laurel oak	*Quercus laurifolia*	5	10	1,000
Overcup oak	*Quercus lyrata*	10	10	1,600
Swamp chestnut oak	*Quercus michauxii*	10	10	1,600
Water oak	*Quercus nigra*	10	10	1,600
Willow oak	*Quercus phellos*	10	10	1,600
Bald cypress	*Taxodium distichum*	10	0	1,000
			TOTAL	15,800

Table 6. Strawberry Hill Riparian Buffer Vegetation Plot Mitigation Success Summary

Plot #	Planted Stems/Acre	Volunteer Stems/Acre	Total Stems/Acre	Success Criteria Met?	Average Planted Stem Height
1	647	0	647	Yes	2.0
2	607	324	931	Yes	3.4
3	486	162	647	Yes	1.6
4	688	243	931	Yes	1.4
5	567	688	1255	Yes	3.2
6	567	607	1174	Yes	3.0
7	526	0	526	Yes	2.2
8	445	0	445	Yes	2.4
9	647	0	647	Yes	3.6
10	526	0	526	Yes	1.6
11	324	243	567	Yes	3.7
12	486	162	647	Yes	3.7
13	364	121	486	Yes	3.4
Project Avg	**529**	**196**	**725**	**Yes**	**2.7**

Table 7. Strawberry Hill Riparian Buffer Stem Count Total and Planted by Plot Species

Strawberry Hill			Current Plot Data (MY2 2023)																												
			101038-01-0001			101038-01-0002			101038-01-0003			101038-01-0004			101038-01-0005			101038-01-0006			101038-01-0007			101038-01-0008			101038-01-0009			101038-01-0010		
Scientific Name	Common Name	Species Type	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T
Acer rubrum	red maple	Tree															3														
Baccharis	baccharis	Shrub															1			15											
Betula nigra	river birch	Tree	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	2	2	2							1	1	1			
Cephalanthus occidentali	common buttonbush	Shrub				1	1	1																			3	3	3	1	1	1
Clethra alnifolia	coastal sweetpepper	Shrub															1														
Liquidambar styraciflua	sweetgum	Tree						2						6			11														
Liriodendron tulipifera	tuliptree	Tree	1	1	1	1	1	1				2	2	2										2	2	2	1	1	1	3	3	3
Magnolia virginiana	sweetbay	Tree															1														
Morella cerifera	wax myrtle	shrub	2	2	2										1	1	1	2	2	2	4	4	4									
Nyssa biflora	swamp tupelo	Tree																												1	1	1
Pinus	pine	Tree									4																					
Platanus occidentalis	American sycamore	Tree							2	2	2				3	3	3				2	2	2	1	1	1				2	2	2
Quercus laurifolia	laurel oak	Tree	2	2	2				3	3	3	2	2	2							1	1	1				1	1	1	1	1	1
Quercus lyrata	overcup oak	Tree	3	3	3	2	2	2				2	2	2	4	4	4							2	2	2				2	2	2
Quercus michauxii	swamp chestnut oak	Tree				2	2	2	2	2	2	1	1	1				6	6	6							2	2	2	1	1	1
Quercus nigra	water oak	Tree	2	2	2							1	1	1	2	2	2	2	2	2	2	2	2	4	4	4	8	8	8			
Quercus phellos	willow oak	Tree	1	1	1	1	1	1	3	3	3	4	4	4	1	1	1	1	1	1	1	1	1	2	2	2				2	2	2
Sambucus	elderberry	Shrub						6																								
Taxodium distichum	bald cypress	Tree	3	3	3	6	6	6				3	3	3				1	1	1	3	3	3									
		Stem count	16	16	16	15	15	23	12	12	16	17	17	23	14	14	31	14	14	29	13	13	13	11	11	11	16	16	16	13	13	13
		size (ares)	1			1			1			1			1			1			1			1			1			1		
		size (ACRES)	0.02			0.02			0.02			0.02			0.02			0.02			0.02			0.02			0.02			0.02		
		Species count	8	8	8	7	7	9	5	5	6	8	8	9	6	6	11	6	6	7	6	6	6	5	5	5	6	6	6	8	8	8
		Stems per ACRE	647	647	647	607	607	931	486	486	647	688	688	931	567	567	1255	567	567	1174	526	526	526	445	445	445	647	647	647	526	526	526

Strawberry Hill			Current Plot Data (MY2 2023)									Annual Means								
			38-01-0011			101038-01-0012			101038-01-0013			MY2 (2023)			MY1 (2022)			MY0 (2022)		
Scientific Name	Common Name	Species Type	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T	PnoLS	P-all	T
Acer rubrum	red maple	Tree												3						
Baccharis	baccharis	Shrub			6			4			3			29						
Betula nigra	river birch	Tree				3	3	3				17	17	17	17	17	17	18	18	18
Cephalanthus occidentali	common buttonbush	Shrub							2	2	2	7	7	7	8	8	8	9	9	9
Clethra alnifolia	coastal sweetpepper	Shrub												1						
Liquidambar styraciflua	sweetgum	Tree												19						
Liriodendron tulipifera	tuliptree	Tree	2	2	2	1	1	1	1	1	1	14	14	14	17	17	17	33	33	33
Magnolia virginiana	sweetbay	Tree												1						
Morella cerifera	wax myrtle	shrub							2	2	2	11	11	11	11	11	11	23	23	23
Nyssa biflora	swamp tupelo	Tree							2	2	2	3	3	3	5	5	5	15	15	15
Pinus	pine	Tree												4						
Platanus occidentalis	American sycamore	Tree				1	1	1				11	11	11	11	11	11	18	18	18
Quercus laurifolia	laurel oak	Tree	2	2	2	1	1	1				13	13	13	13	13	13	24	24	24
Quercus lyrata	overcup oak	Tree	1	1	1	2	2	2				18	18	18	17	17	17	16	16	16
Quercus michauxii	swamp chestnut oak	Tree	1	1	1							15	15	15	14	14	14	12	12	12
Quercus nigra	water oak	Tree	1	1	1	1	1	1				23	23	23	30	30	30	20	20	20
Quercus phellos	willow oak	Tree	1	1	1	3	3	3	2	2	2	22	22	22	23	23	23	34	34	34
Sambucus	elderberry	Shrub												6			3			
Taxodium distichum	bald cypress	Tree										16	16	16	15	15	15	20	20	20
		Stem count	8	8	14	12	12	16	9	9	12	170	170	233	181	181	184	242	242	242
		size (ares)	1			1			1			13			13			13		
		size (ACRES)	0.02			0.02			0.02			0.32			0.32			0.32		
		Species count	6	6	7	7	7	8	5	5	6	12	12	19	12	12	13	12	12	12
		Stems per ACRE	324	324	567	486	486	647	364	364	486	529	529	725	563	563	573	753	753	753

STRAWBERRY 2023

Plot (continued): 101038-01-0001

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Vegetation Monitoring Data (VMD) Datasheet — **Please fill in any missing data and correct any errors.**

Plot 101038-01-0001

VMD Year (1-5): 2 Date: 9/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 210

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
MDD	
JD	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
1	Morella cerifera	a	R	0.2	0.2	30.0		☐	40		☐	3		
2	Taxodium distichum	e	R	3.0	1.7	40.0		☐	70		☐	1		
3	Quercus nigra	d	R	2.8	4.2	60.0		☐	70		☐	1		
4	Liriodendron tulipifera	b	R	2.3	6.5	*Missing*		☐	—		☐	X		
5	Taxodium distichum	c	R	2.2	8.9	*Missing*		☐	—		☐	X		
6	Quercus laurifolia	f	R	3.9	7.1	10.0		☐	40		☐	3		
7	Quercus laurifolia	g	R	4.1	4.8	49.0		☐	90		☐	1		
8	~~Quercus lyrata~~ laurifolia	h	R	4.6	2.4	37.0		☐	70		☐	1		
9	~~Morella cerifera~~ Qu La	i	R	4.9	0.2	60.0		☐	95		☐	1		
10	~~Quercus nigra~~ lyrata	l	R	5.8	1.5	18.0		☐	35		☐	1		
11	Quercus lyrata	k	R	5.6	3.9	*Missing*		☐	—		☐	X		
12	Quercus lyrata	m	R	5.8	6.4	*Missing*		☐	—		☐	X		
13	Quercus phellos	j	R	5.5	9.0	*Missing*		☐	—		☐	X		
14	Taxodium distichum	n	R	7.2	7.5	70.0		☐	100		☐	3		
15	Quercus nigra	o	R	7.5	4.3	*Missing*		☐	—		☐	X		
16	Betula nigra	p	R	7.7	1.9	55.0		☐	40		☐	2		
17	Quercus phellos	q	R	7.9	0.1	39.0		☐	—		☐	X		
18	Quercus phellos	t	R	9.4	1.3	40.0		☐	45		☐	2		
19	Quercus lyrata	u	R	9.4	3.9	20.0		☐	60		☐	3		
20	Betula nigra	s	R	9.1	6.5	47.0		☐	60		☐	1		
21	Quercus lyrata	r	R	8.6	9.1	20.0		☐	45		☐	1		

 # stems: 21

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

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Plot (continued): 101038-01-0001

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

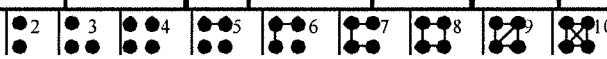
Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%.



Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

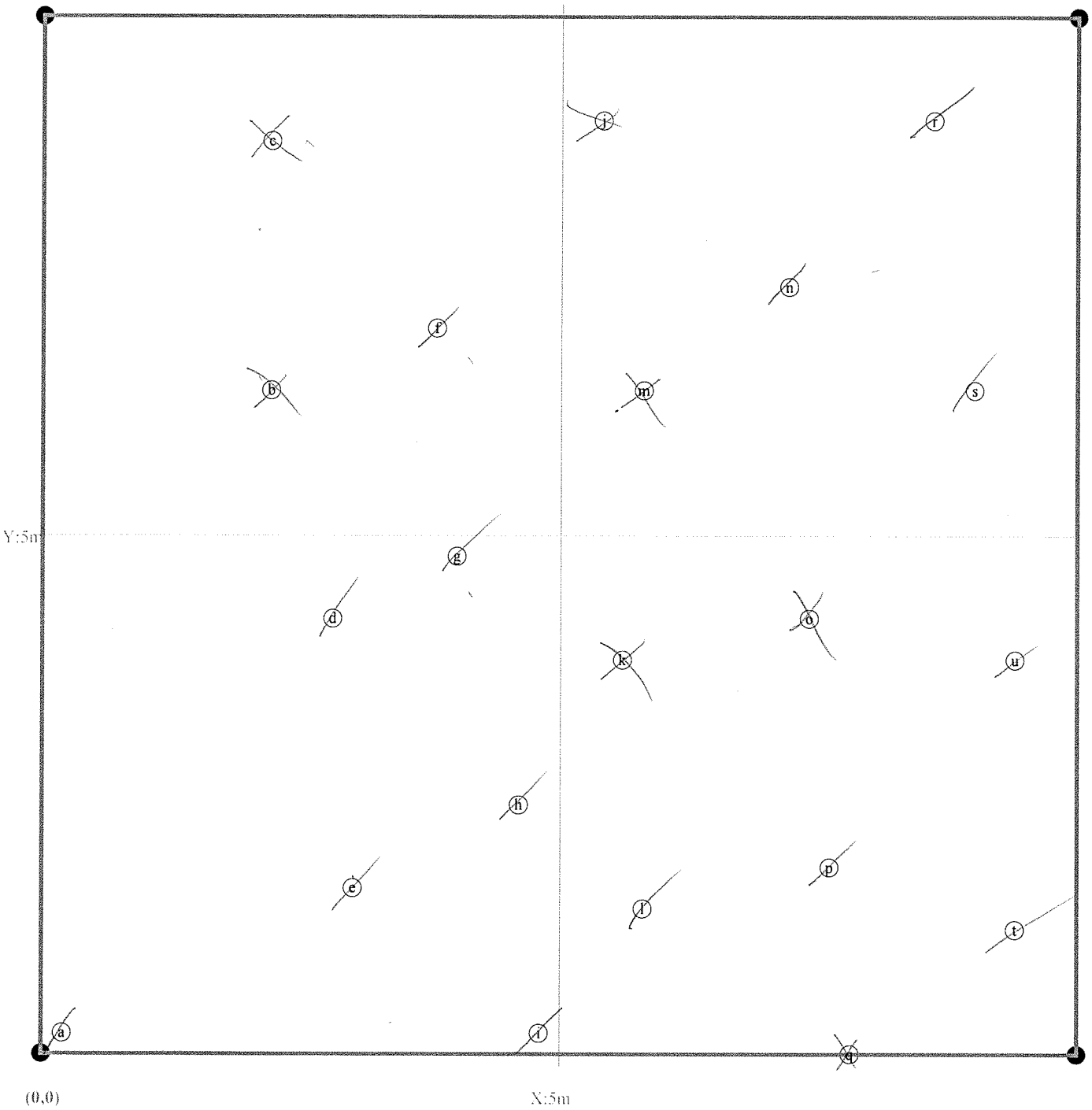
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0001

X-axis: 210°

 # stems: 21
map size: LARGE

N



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0002

VMD Year (1-5): 2 Date: 9/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 61

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
MDD	
JD	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
22	Taxodium distichum	a	R	0.2	0.2	78.0		☐	120		☐	3		
23	Quercus michauxii	j	R	4.6	0.6	95.0		☐	170	0.3	☐	4		
24	Quercus michauxii	g	R	3.1	1.4	46.0		☐	95	0.3	☐	3		
25	Morella cerifera	d	R	1.5	2.3	*Missing*		☐	—		☐	X		
26	Quercus lyrata	b	R	0.3	6.6	69.0		☐	155	0.4	☐	4		
27	Liriodendron tulipifera	f	R	1.6	5.5	*Missing*		☐	—		☐	X		
28	Liriodendron tulipifera	i	R	3.5	4.4	5.0		☐	50		☐	3		
29	Betula nigra	l	R	5.4	3.1	*Missing*		☐	—		☐	X		
30	Cephalanthus occidentalis	o	R	7.1	1.7	60.0		☐	170	0.3	☐	4		
31	Betula nigra	r	R	8.7	0.8	52.0		☐	60		☐	3		
32	Quercus ~~lyrata~~ M. chauxii	t	R	9.3	3.3	87.0		☐	165		☐	4		
33	Taxodium distichum	q	R	7.9	4.6	24.0		☐	85		☐	3		
34	~~Betula nigra~~ TaD.	n	R	6.5	5.5	5.0		☐	65		☐	1		
35	Taxodium distichum	k	R	5.0	6.5	20.0		☐	70		☐	1		
36	Taxodium distichum	h	R	3.3	7.4	97.0		☐	120		☐	1		
37	Taxodium distichum	e	R	1.5	8.6	65.0		☐	100		☐	1		
38	Taxodium distichum	c	R	0.5	9.7	*Missing*		☐	70		☐	1		
39	Liriodendron tulipifera	m	R	5.5	9.9	*Missing*		☐	—		☐	X		
40	Quercus phellos	p	R	7.4	9.0	20.0		☐	75		☐	3		
41	Betula nigra	s	R	8.8	7.9	*Missing*		☐	—		☐	X		

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0002

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
Sweetgum		___		● ●		___					
elderberry		___		● ● ●	●	___	●				
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%. ●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

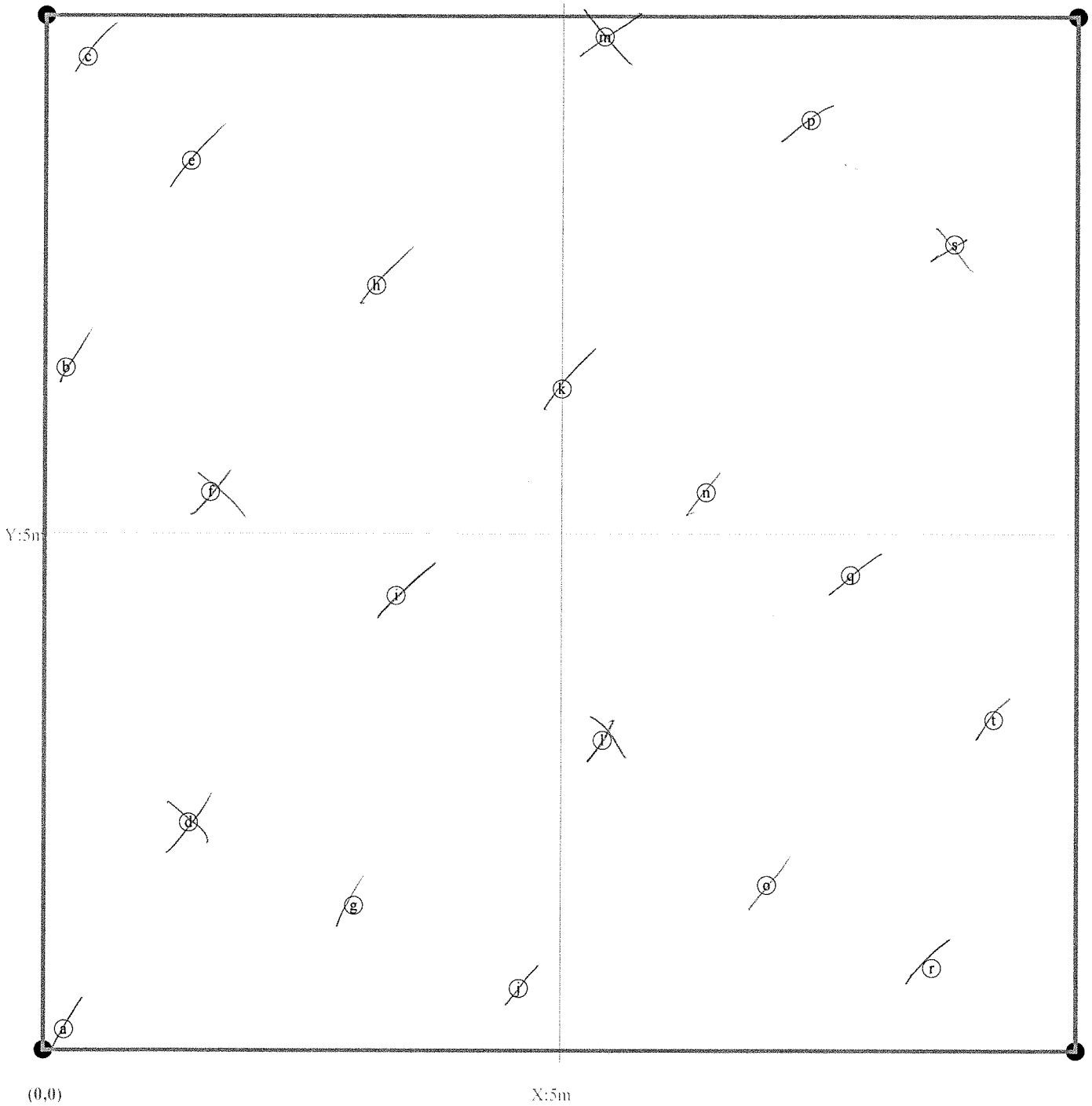
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0002

X-axis: 61 °

N

 # stems: 20
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0003

VMD Year (1-5): 2 Date: 10/ 3/ 23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 45

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
MAP	
JD	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
42	Quercus phellos	l	R	7.1	0.6	48.0		☐	50		☐	2		
43	Quercus laurifolia	o	R	9.1	1.8	32.0		☐	35		☐	2		
44	Liriodendron tulipifera	d	R	10.0	5.8	38.0		☐	—		☐	X		
45	Quercus phellos	n	R	8.2	4.7	45.0		☐	45		☐	2		
46	Quercus phellos	k	R	6.1	3.7	68.0		☐	70		☐	2		
47	Quercus michauxii	h	R	4.2	2.6	48.0		☐	50		☐	2		
48	Betula nigra	e	R	2.5	1.4	*Missing*		☐	—		☐	X		
49	Nyssa biflora	a	R	0.5	0.1	16.0		☐	—		☐	X		
50	Cephalanthus occidentalis	c	R	1.3	4.0	42.0		☐	—		☐	X		
51	Quercus michauxii	g	R	3.7	5.3	32.0		☐	30		☐	1		
52	Quercus laurifolia	j	R	5.3	6.1	32.0		☐	20		☐	2		
53	Quercus laurifolia	m	R	7.1	7.4	45.0		☐	30		☐	2		
54	Betula nigra	p	R	9.1	8.8	55.0		☐	60		☐	2		
55	Platanus occidentalis	i	R	4.4	9.9	39.0		☐	60		☐	2		
56	Platanus occidentalis	f	R	2.7	8.9	71.0		☐	80		☐	3		
57	Betula nigra	b	R	0.7	7.7	42.0		☐	50		☐	2		

 # stems: *16*

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0003

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
Pine											

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

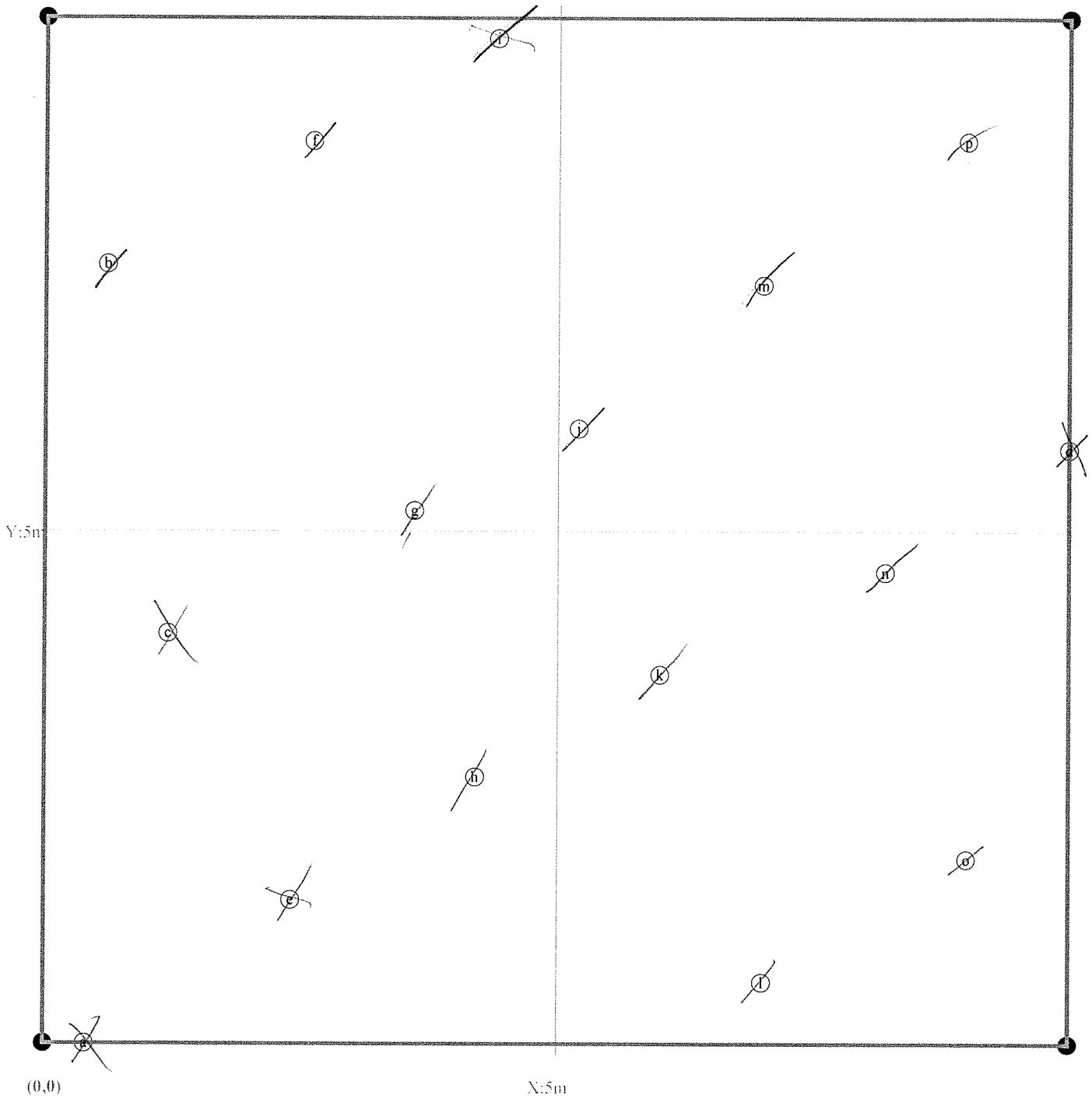
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0003

X-axis: 45 °

N

 # stems: 16
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0004

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 65

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
MDD	
JD	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
58	Quercus phellos	a	R	0.2	0.2	58.0		☐	60		☐	2		
59	Betula nigra	b	R	1.0	2.1	50.0		☐	35		☒	2		
60	Betula nigra	c	R	1.6	3.8	48.0		☐	35		☐	2		
61	Liriodendron tulipifera	d	R	2.0	5.4	41.0		☐	45		☐	1		
62	Quercus nigra	e	R	2.2	6.9	40.0		☐	10		☒	1		
63	Taxodium distichum	f	R	2.4	8.4	51.0		☐	50		☐	2		
64	Quercus phellos	k	R	5.2	8.3	40.0		☐	45		☐	2		
65	Quercus michauxii	j	R	4.7	6.4	40.0		☐	40		☐	2		
66	Quercus phellos	i	R	4.3	4.4	61.0		☐	65		☐	2		
67	Quercus phellos	h	R	3.8	2.3	40.0		☐	50		☐	2		
68	Liriodendron tulipifera	g	R	3.2	0.7	*Missing*		☐	2		☒	1		
69	Quercus ~~laurifolia~~ lyrata	l	R	6.2	1.0	42.0		☐	50		☐	2		
70	Quercus lyrata	m	R	6.5	2.7	54.0		☐	55		☐	3		
71	Quercus ~~laurifolia~~ lyrata	n	R	7.1	4.5	*Missing*		☐	20		☒	2		
72	Quercus laurifolia	o	R	7.5	6.3	*Missing*		☐	—		☐	X		
73	Taxodium distichum	p	R	8.0	8.3	62.0		☐	70		☐	3		
74	Taxodium distichum	s	R	9.7	4.5	3.0		☐	—		☐	X		
75	Taxodium distichum	r	R	9.3	2.9	48.0		☐	35		☐	2		
76	Quercus lyrata	q	R	8.9	1.1	63.0		☐	65		☐	3		

 # stems: 19

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0004

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
sweetgum											

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

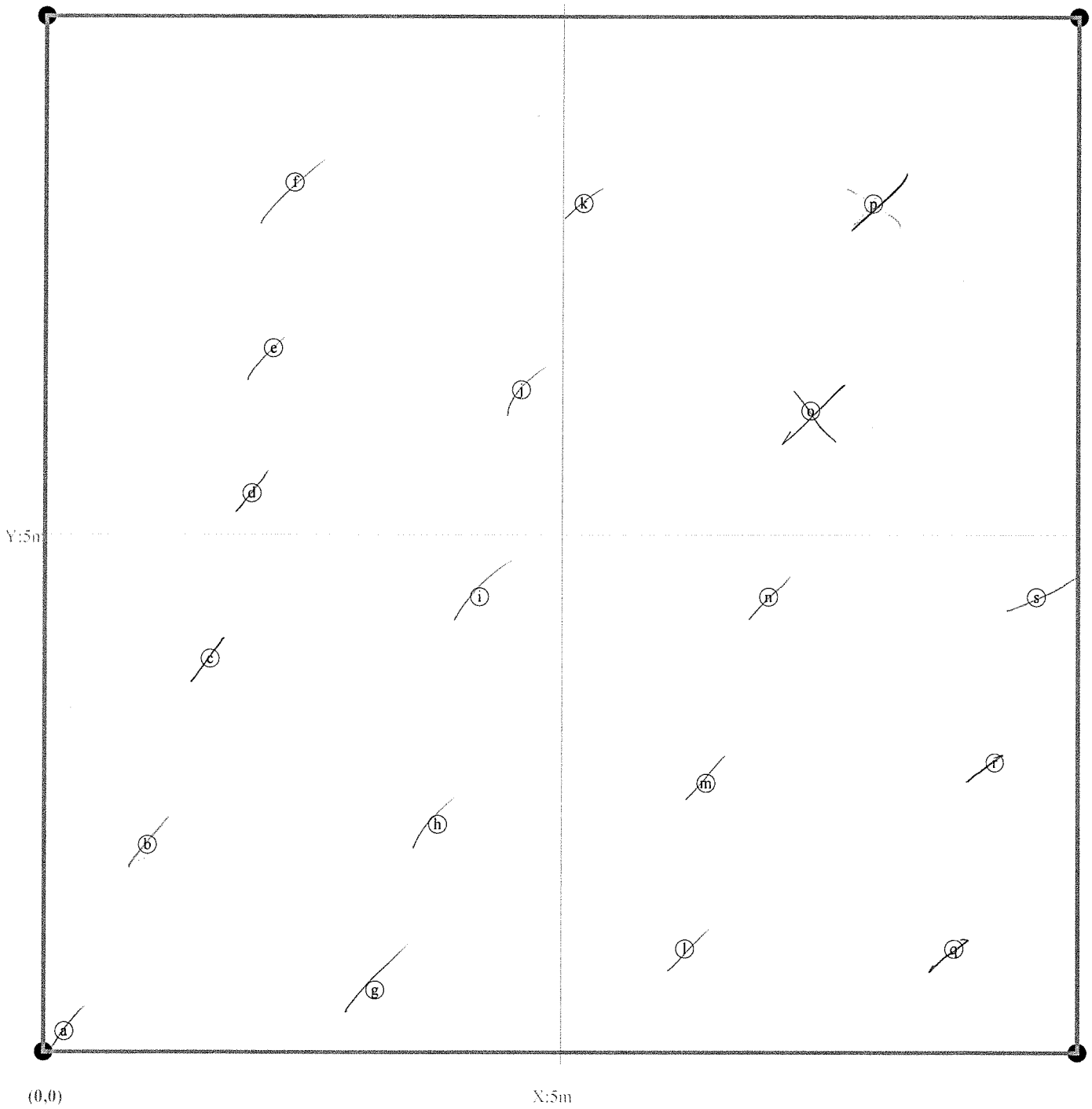
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0004

X-axis: 65 °

N

 # stems: 19
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0005

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 53

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
MDD	
JD	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
77	Quercus ~~nigra~~ lyrata	ⓑ	R	0.4	9.9	43.0		☐	140		☐	3		
78	Betula nigra	ⓖ	R	2.3	8.5	70.0		☐	160	0.2	☐			
79	Betula nigra	ⓔ	R	1.3	7.2	93.0		☐	155	0.2	☐			
80	Betula nigra	ⓒ	R	0.7	5.9	42.0		☐	160	0.2	☐			
81	Quercus lyrata	ⓐ	R	0.2	0.2	33.0		☐	70		☐			
82	Quercus ~~nigra~~ lyrata	ⓓ	R	1.1	2.2	20.0		☐	30		☐			
83	Quercus nigra	ⓕ	R	1.9	3.6	23.0		☐	—		☐	X		
84	Morella cerifera	ⓗ	R	2.8	5.0	*Missing*		☐	—		☐	X		
85	Quercus phellos	ⓙ	R	3.6	6.6	42.0		☐	—		☐	X		
86	Quercus nigra	ⓛ	R	4.2	7.9	40.0		☐	—		☐	X		
87	Morella cerifera	ⓝ	R	5.0	9.0	5.0		☐	—		☐	X		
88	Liriodendron tulipifera	ⓤ	R	8.4	8.9	*Missing*		☐	—		☐	X		
89	Quercus ~~nigra~~ lyrata	ⓢ	R	7.5	7.7	20.0		☐	80		☐	3		
90	Platanus occidentalis	ⓠ	R	6.7	6.0	10.0		☐	80		☐			
91	Platanus occidentalis	ⓞ	R	5.7	4.5	47.0		☐	130		☐			
92	Platanus occidentalis	ⓜ	R	4.7	3.2	55.0		☐	130		☐			
93	Quercus phellos	ⓚ	R	3.8	1.9	*Missing*		☐	—		☐	X		
94	Quercus nigra	ⓘ	R	3.0	0.5	67.0		☐	—		☐	X		
95	Morella cerifera	ⓟ	R	6.0	0.5	10.0		☐	45		☐	3		
96	Quercus laurifolia	ⓡ	R	7.5	2.8	*Missing*		☐	—		☐	X		
97	Quercus nigra	ⓣ	R	8.5	4.2	42.0		☐	95		☐	3		
98	Quercus phellos	ⓦ	R	9.4	5.8	35.0		☐	—		☐	X		
99	Quercus phellos	ⓧ	R	9.8	1.9	40.0		☐	40		☐	2		
100	Quercus nigra	ⓥ	R	9.0	0.6	28.0		☐	30		☐	3		

 # stems: 24

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0005

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling:**

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
Sweetgum		___	1	●●	●	___					
red maple		___		●●	●	___					
hacharis		___		●		___					
pepperbush		___		●		___					
sweetbay Magnolia		___			●	___					
		___				___					
		___				___					

****Required** if cut-off >10cm or subsample ? 100%. ●1 ●2 ●3 ●●4 ●●5 ●●6 ●●7 ●●8 ●●9 ●●10 Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

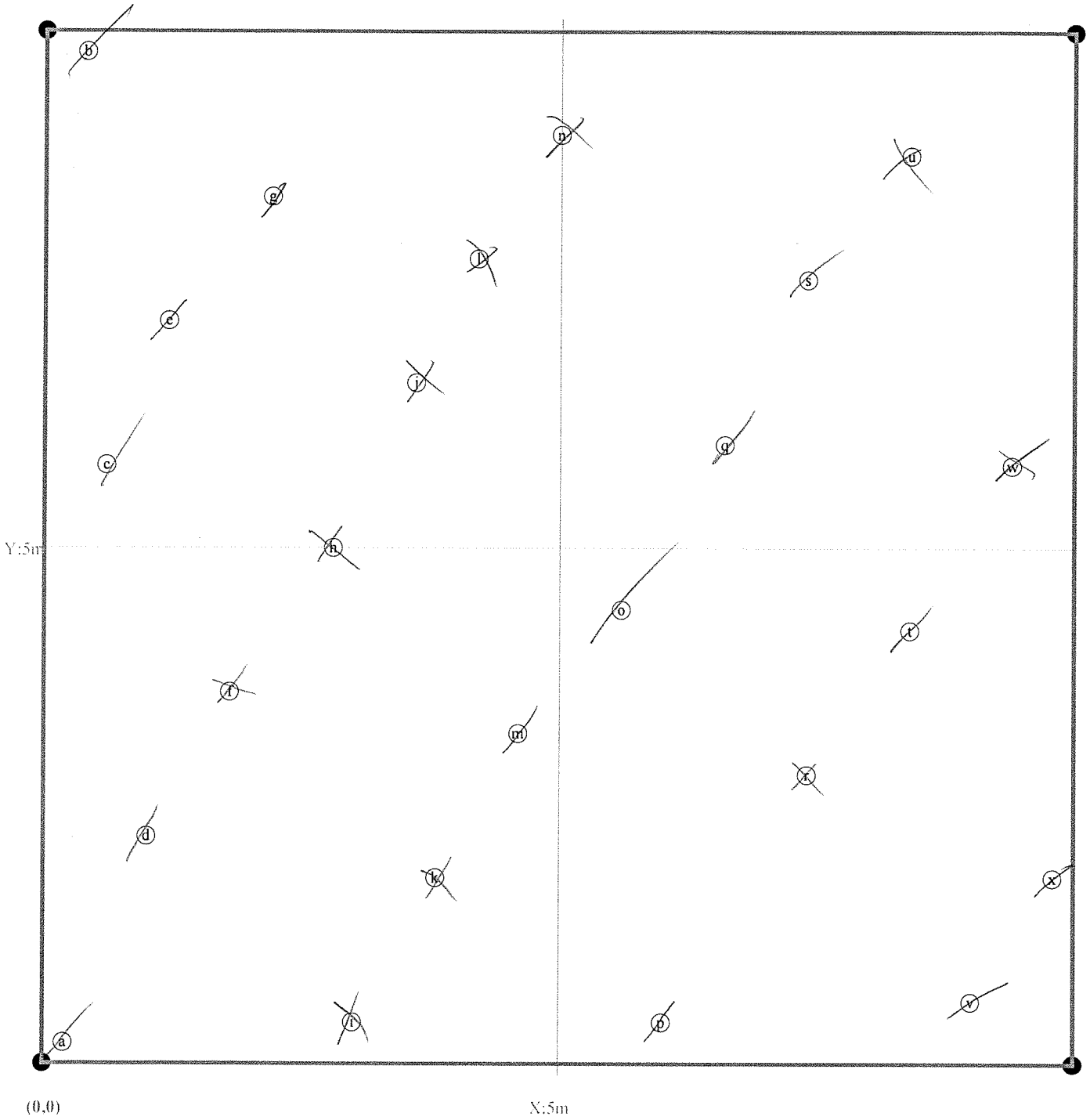
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0005

X-axis: 53°

N

 # stems: 24
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0006

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 90

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party: MDD, JD, JRM, SB Role:

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes: BRACHARIS

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
102	Liriodendron tulipifera	g	R	3.3	0.5	35.0		☐	X	X	☐	X		
103	Quercus michauxii	e	R	2.3	1.9	58.0		☐	60	X	☐	3		
104	Quercus michauxii	c	R	1.0	3.7	45.0		☐	60		☐			
105	Quercus michauxii	a	R	0.3	5.0	40.0		☐	50		☐			
106	Betula nigra	b	R	0.9	8.9	39.0		☐	140	0.1	☐			
107	Quercus phellos	d	R	1.8	7.4	*Missing*		☐	X	X	☐	X		
108	Betula nigra	f	R	2.7	5.9	23.0		☐	94		☐	3		
109	Liriodendron tulipifera	h	R	3.7	4.6	*Missing*		☐	X	X	☐	X		
110	Morella cerifera	j	R	4.4	3.2	*Missing*		☐	X	X	☐	X		
111	Morella cerifera	l	R	5.3	1.8	16.0		☐	70		☐			
112	Quercus michauxii	n	R	6.3	0.6	60.0		☐	135		☐			
113	Morella cerifera	s	R	9.0	2.4	60.0		☐	140	0.2	☐			
114	Quercus nigra	q	R	8.1	3.9	42.0		☐	42		☐			
115	Liriodendron tulipifera	o	R	6.9	5.3	*Missing*		☐	X	X	☐	X		
116	Quercus michauxii	m	R	5.8	6.7	72.0		☐	120		☐	3		
117	Liriodendron tulipifera	k	R	4.7	8.1	*Missing*		☐	X	X	☐	X		
118	Morella cerifera	i	R	3.6	9.5	*Missing*		☐	X	X	☐	X		
119	Taxodium distichum	p	R	7.8	9.5	8.0		☐	30		☐	3		
120	Quercus nigra	r	R	8.9	7.7	49.0		☐	75		☐			
121	Quercus michauxii	t	R	9.9	6.0	52.0		☐	165	0.4	☐			

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Plot (continued): 101038-01-0006

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
BACHARIS							𝍸	𝍸			

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ● 3 ●● 4 ●●5 ●●6 ●●7 ●●8 ●●9 ●●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

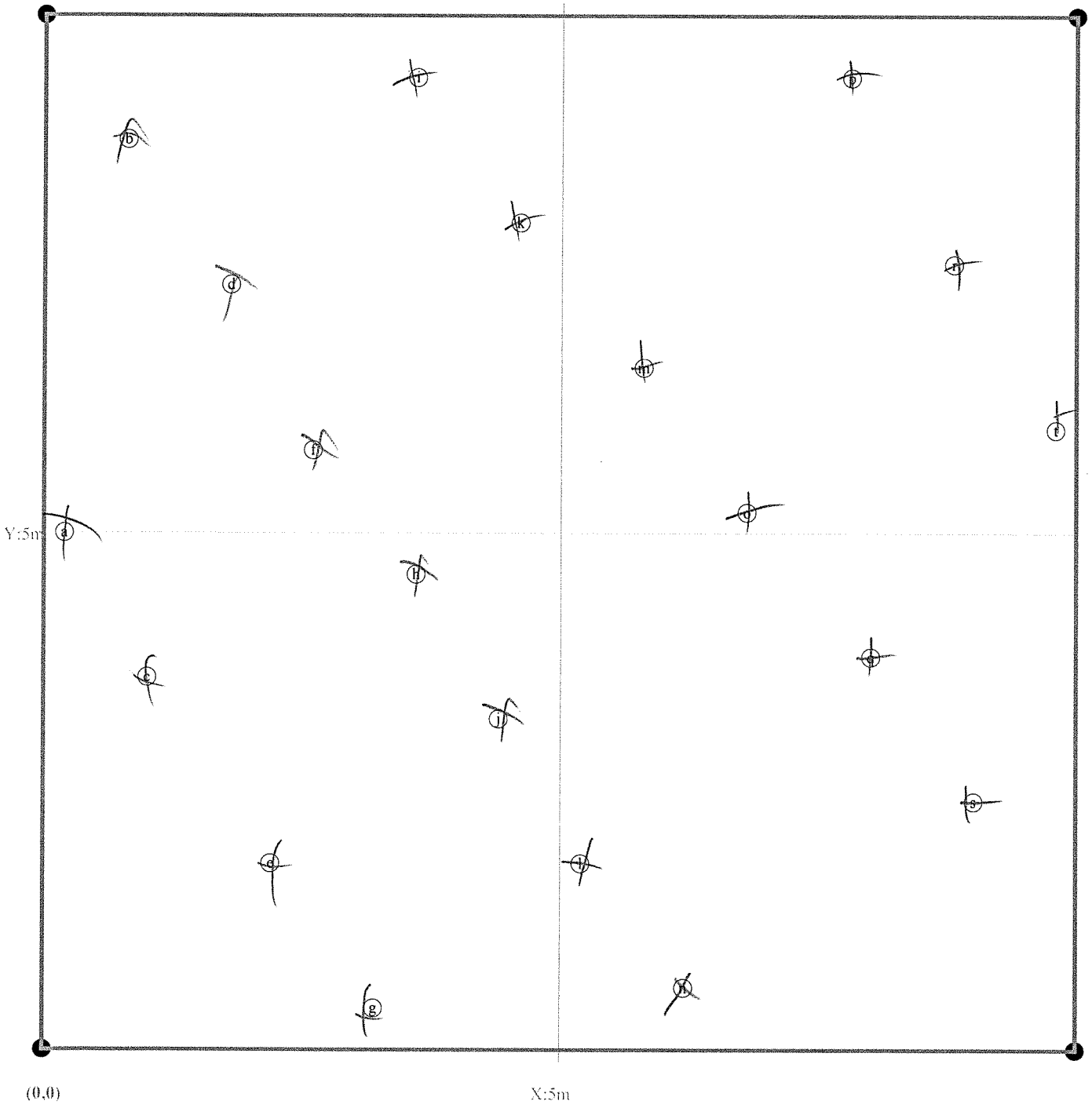
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0006

X-axis: 90 °

N

 # stems: 20
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0007

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 51

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
JTM	
JSB	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
122	Liriodendron tulipifera	ⓑ	R	0.5	9.6	*Missing*		☐	X		☐	X		
123	Cephalanthus occidentalis	ⓗ	R	3.2	9.6	*Missing*		☐	X		☐	X		
124	Taxodium distichum	ⓖ	R	2.7	8.0	*Missing*		☐	X		☐	X		
125	Taxodium distichum	ⓕ	R	2.2	6.5	70.0		☐	100		☐	3		
126	Quercus nigra	ⓔ	R	1.9	4.9	8.0		☐	X		☐	X		
127	Quercus laurifolia	ⓓ	R	1.5	3.2	10.0		☐	10		☒	2		
128	Quercus phellos	ⓒ	R	1.0	1.9	15.0		☐	40		☐	3		
129	Platanus occidentalis	ⓐ	R	0.2	0.2	48.0		☐	60		☐	2		
130	Taxodium distichum	ⓘ	R	3.4	1.0	62.0		☐	90		☐	3		
131	Morella cerifera	ⓙ	R	4.1	2.3	*Missing*		☐	10		☒	1		
132	Quercus nigra	ⓚ	R	4.5	3.7	52.0		☐	12		☐	3		
133	Taxodium distichum	ⓛ	R	4.9	5.2	100.0		☐	153	0.4	☐	3		
134	Morella cerifera	ⓜ	R	5.5	7.0	12.0		☐	40		☐	3		
135	Quercus nigra	ⓝ	R	6.3	8.5	50.0		☐	82		☐	3		
136	Morella cerifera	ⓢ	R	8.5	7.1	*Missing*		☐	X		☐	X		
137	Morella cerifera	ⓡ	R	8.0	5.4	47.0		☐	80		☐	3		
138	Morella cerifera	ⓠ	R	7.5	3.8	*Missing*		☐	X		☐	X		
139	Morella cerifera	ⓟ	R	7.0	1.9	5.0		☐	35		☒	2		
140	Platanus occidentalis	ⓞ	R	6.4	0.5	35.0		☐	65		☐	3		
141	Liriodendron tulipifera	ⓣ	R	9.7	1.1	*Missing*		☐	X		☐	X		

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0007

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%. ●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10 Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

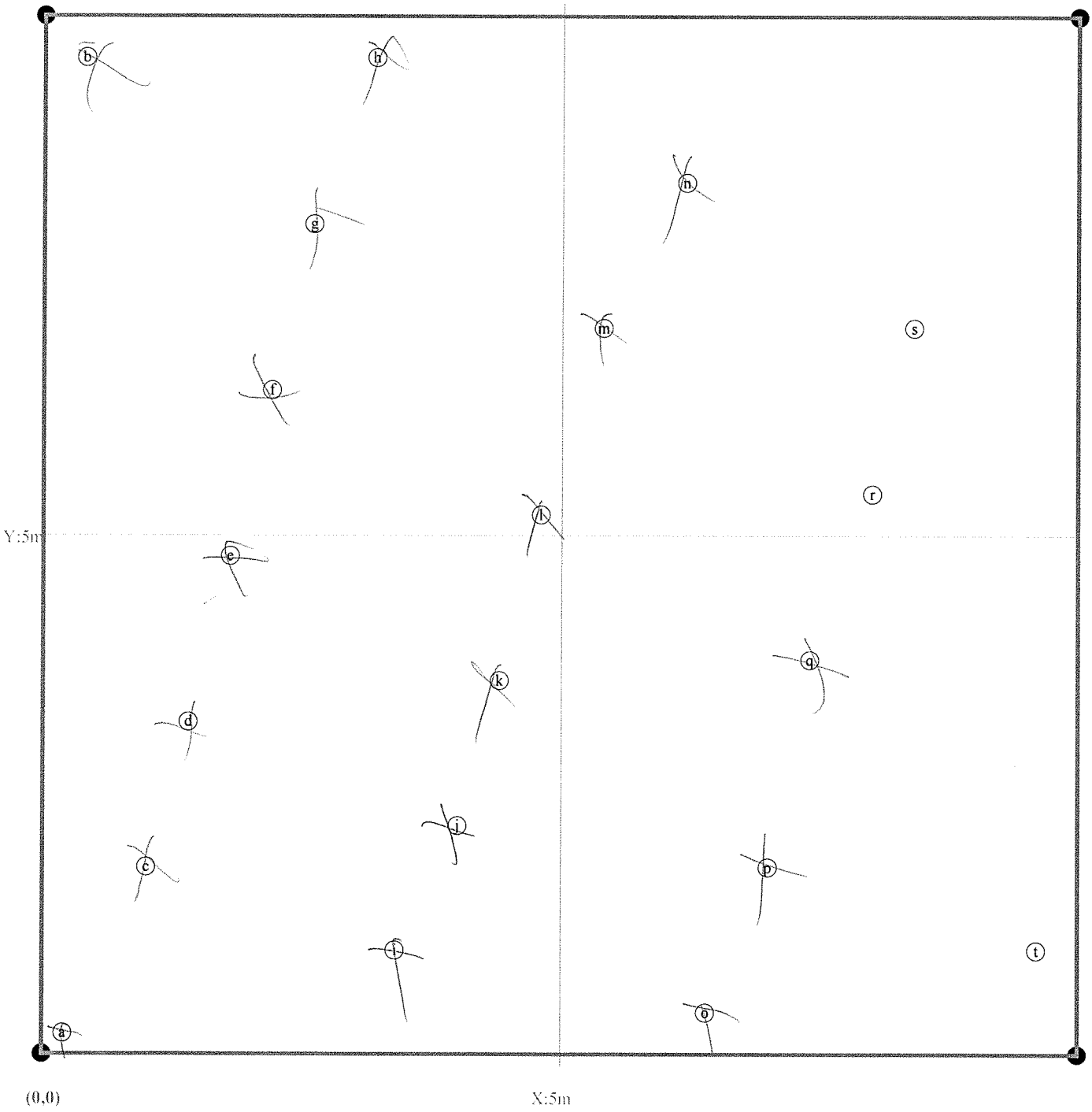
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0007

X-axis: 51 °

N

 # stems: 20
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0008

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 268

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
JM	
SB	

Date last planted:

New planting date m/yy?

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
142	Betula nigra	a	R	0.4	0.4	*Missing*		☐	X		☐	X		
143	Quercus lyrata	t	R	9.9	0.3	51.0		☐	95		☐	3		
144	Liriodendron tulipifera	q	R	8.2	0.6	10.0		☐	10		☐	1		
145	Liriodendron tulipifera	m	R	6.4	1.3	*Missing*		☐	X		☐	X		
146	Liriodendron tulipifera	j	R	4.6	1.9	*Missing*		☐	X		☐	X		
147	Liriodendron tulipifera	f	R	2.7	2.5	*Missing*		☐	X		☐	X		
148	Liriodendron tulipifera	c	R	1.1	3.3	15.0		☐	40		☐	2		
149	Platanus occidentalis	b	R	0.5	6.9	53.0		☐	90		☐	3		
150	Quercus nigra	e	R	1.7	6.2	35.0		☐	35		☐	2		
151	Platanus occidentalis	g	R	3.0	5.4	*Missing*		☐	X		☐	X		
152	Platanus occidentalis	i	R	4.5	4.5	*Missing*		☐	X		☐	X		
153	Quercus laurifolia	n	R	6.5	3.9	*Missing*		☐	X		☐	X		
154	Platanus occidentalis	r	R	8.3	3.1	*Missing*		☐	X		☐	X		
155	Quercus phellos	s	R	8.7	6.4	29.0		☐	90		☐	3		
156	Quercus nigra	o	R	6.5	6.9	53.0		☐	90		☐	3		
157	Quercus phellos	k	R	4.7	7.5	50.0		☐	100		☐	3		
158	Quercus nigra	h	R	3.0	8.5	5.0		☐	40		☐	3		
159	Quercus lyrata	d	R	1.2	9.4	28.0		☐	90		☐	3		
160	Quercus nigra	p	R	7.9	9.4	69.0		☐	150	0.2	☐	3		
161	Quercus lyrata	l	R	6.1	9.8	*Missing*		☐	X		☐	X		

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0008					Nov 2022 Data			Notes*	THIS YEAR'S DATA						
ID	Species	map char	source	X (m)	Y (m)	ddh (mm)	Height (cm)	DBH (cm)		ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES				SAPLINGS — DBH			TREES — DBH		
		Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	Sub-Sapl	0-1 cm	1-2.5	2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%. ●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10 Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

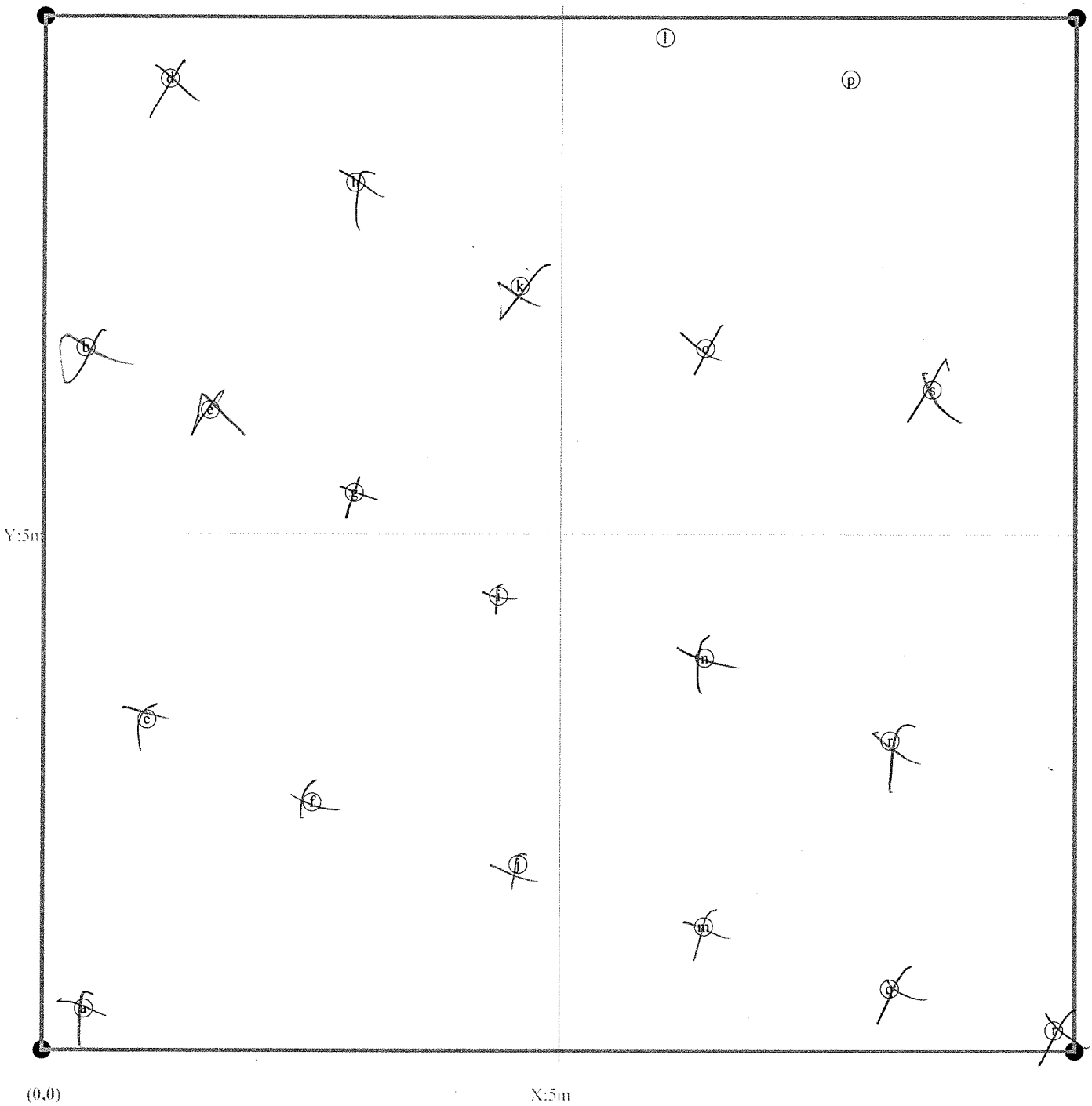
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0008

X-axis: 268 °

 # stems: 20
map size: LARGE

N



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0009

VMD Year (1-5): 2 Date: 10 / 3 /23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 90

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party: James, Sydney Role:

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
162	Quercus michauxii	C	R	2.0	0.2	51.0		☐	140	.3	☐	3		
163	Quercus laurifolia	B	R	9.2	0.2	20.0		☐	28		☐	3		
164	Liriodendron tulipifera	D	R	7.6	0.5	40.0		☐	Miss		☐	0		
165	Liriodendron tulipifera	I	R	5.6	1.0	15.0		☐	Miss		☐	0		
166	Quercus phellos	E	R	3.7	1.1	*Missing*		☐	dead		☐	X		
167	Quercus nigra	G	R	1.9	1.6	41.0		☐	50		☐	3		
168	Betula nigra	M	R	2.0	4.8	83.0		☐	181	.3	☐	3		
169	Quercus nigra	H	R	4.6	4.2	60.0		☐	215	.4	☐	4		
170	Liriodendron tulipifera	K	R	5.8	2.6	37.0		☐	37		☐	3	resprout	
171	Betula nigra	L	R	9.3	2.1	*Missing*		☐	Dead		☐	X		
172	Quercus nigra	S	R	9.8	3.0	116.0	*DBH?*	☐	300		☐	4		
173	Quercus nigra	N	R	7.1	3.5	43.0		☐	100		☐	3		phellos?
174	Quercus nigra	J	R	4.8	5.6	46.0		☐	95		☐	4		
175	Quercus michauxii	C	R	2.5	6.1	44.0		☐	135		☐	4		
176	Cephalanthus occidentalis	A	R	1.2	8.1	75.0		☐	77		☐	2		
177	Cephalanthus occidentalis	A	R	3.6	7.6	45.0		☐	58		☐	3		
178	Cephalanthus occidentalis	F	R	6.0	7.0	70.0		☐	95		☐	2		
179	Quercus nigra	O	R	8.6	6.3	30.0		☐	110		☐	3		
180	Quercus nigra	O	R	9.8	9.2	42.0		☐	73		☐	3		
181	Quercus nigra	O	R	7.5	9.7	40.0		☐	82		☐	3		

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes
NySSa				72				

on P

Supp looks good

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Plot (continued): 101038-01-0009

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

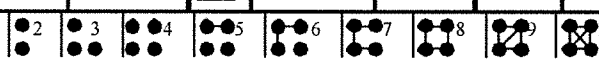
Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%.



Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

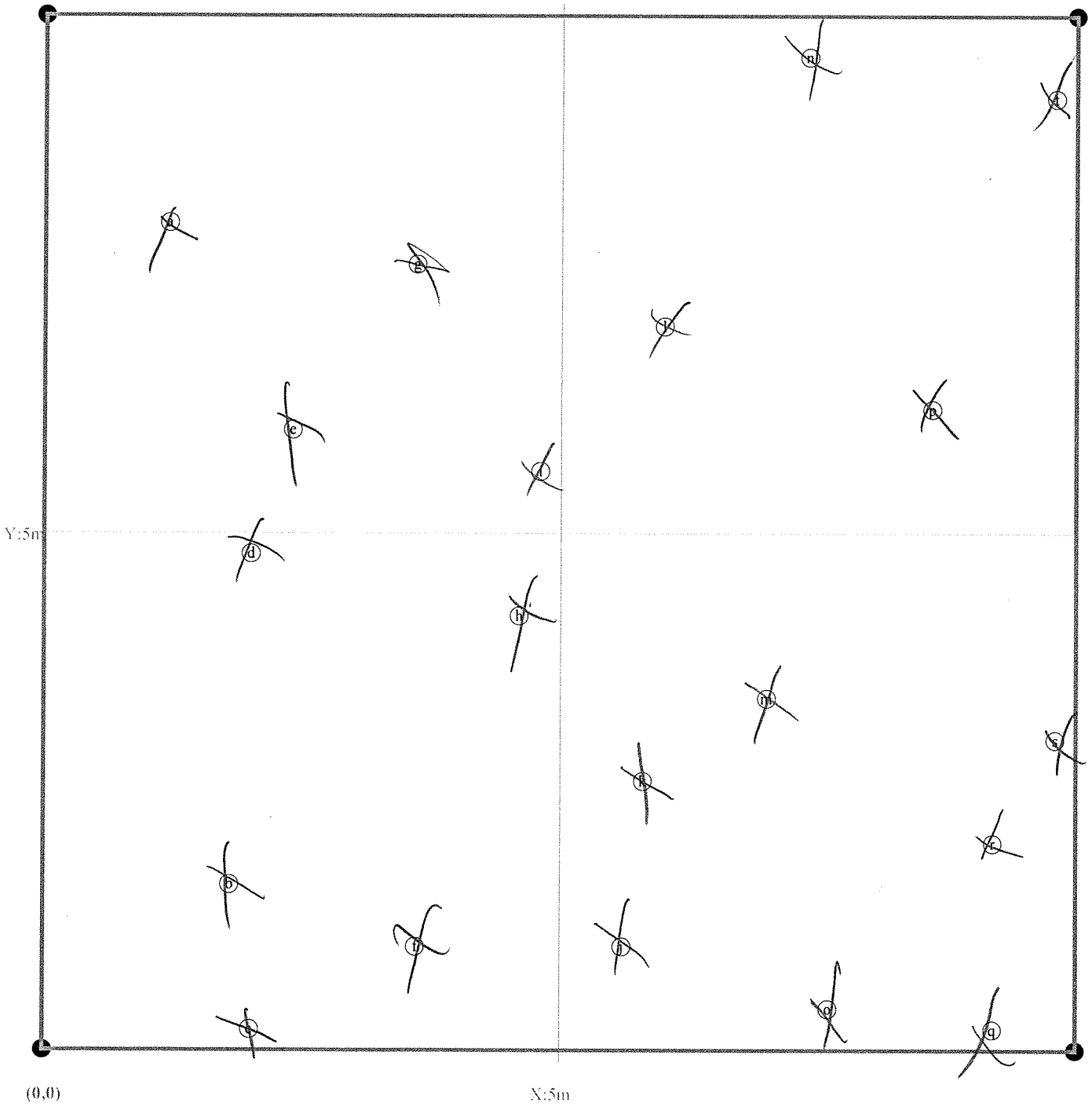
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0009

X-axis: 90 °

N

 # stems: 20
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0010

VMD Year (1-5): 2 Date: 10/3/23 - 11/1/1

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 353

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
SB	
JM	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
182	Liriodendron tulipifera	a	R	0.3	0.3	62.0		☐	90		☐	3		
183	Platanus occidentalis	b	R	0.4	2.5	40.0		☐	45		☐	2		
184	Platanus occidentalis	c	R	1.5	6.5	*Missing*		☐	X		☐	X		
185	Platanus occidentalis	i	R	4.2	8.3	*Missing*		☐	X		☐	X		
186	Platanus occidentalis	g	R	3.6	6.6	*Missing*		☐	X		☐	1		
187	Liriodendron tulipifera	f	R	3.2	4.1	49.0		☐	75		☐	3		
188	Platanus occidentalis	e	R	2.8	2.3	50.0		☐	60		☐	2		
189	Quercus michauxii	d	R	2.1	0.3	49.0		☐	70		☐	3		
190	Quercus lyrata	h	R	4.3	0.8	40.0		☐	30		☒	2		
191	Quercus phellos	n	R	7.6	0.2	*Missing*		☐	X		☐	X		
192	Cephalanthus occidentalis	m	R	7.4	1.8	45.0		☐	50		☐	1		
193	Liriodendron tulipifera	l	R	7.3	3.5	51.0		☐	missing		☐	X		
194	Quercus phellos	k	R	7.0	5.7	48.0		☐	50		☐	3		
195	Liriodendron tulipifera	j	R	6.9	7.8	56.0		☐	30		☒	1		
196	Nyssa biflora	t	R	9.8	7.8	76.0		☐	80		☐	2		
197	Quercus lyrata	p	R	9.3	6.1	missing		☐	X		☐	X		
198	Quercus laurifolia	o	R	9.3	4.3	43.0		☐	40		☑	3		
199	Quercus lyrata	q	R	9.5	2.3	22.0		☐	20		☒	3		
200	Nyssa biflora	r	R	9.7	0.9	83.0		☐	X		☐	X		
201	Quercus phellos	s	R	9.9	0.2	20.0		☐	23		☒	3		

 # stems: 20

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0010

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

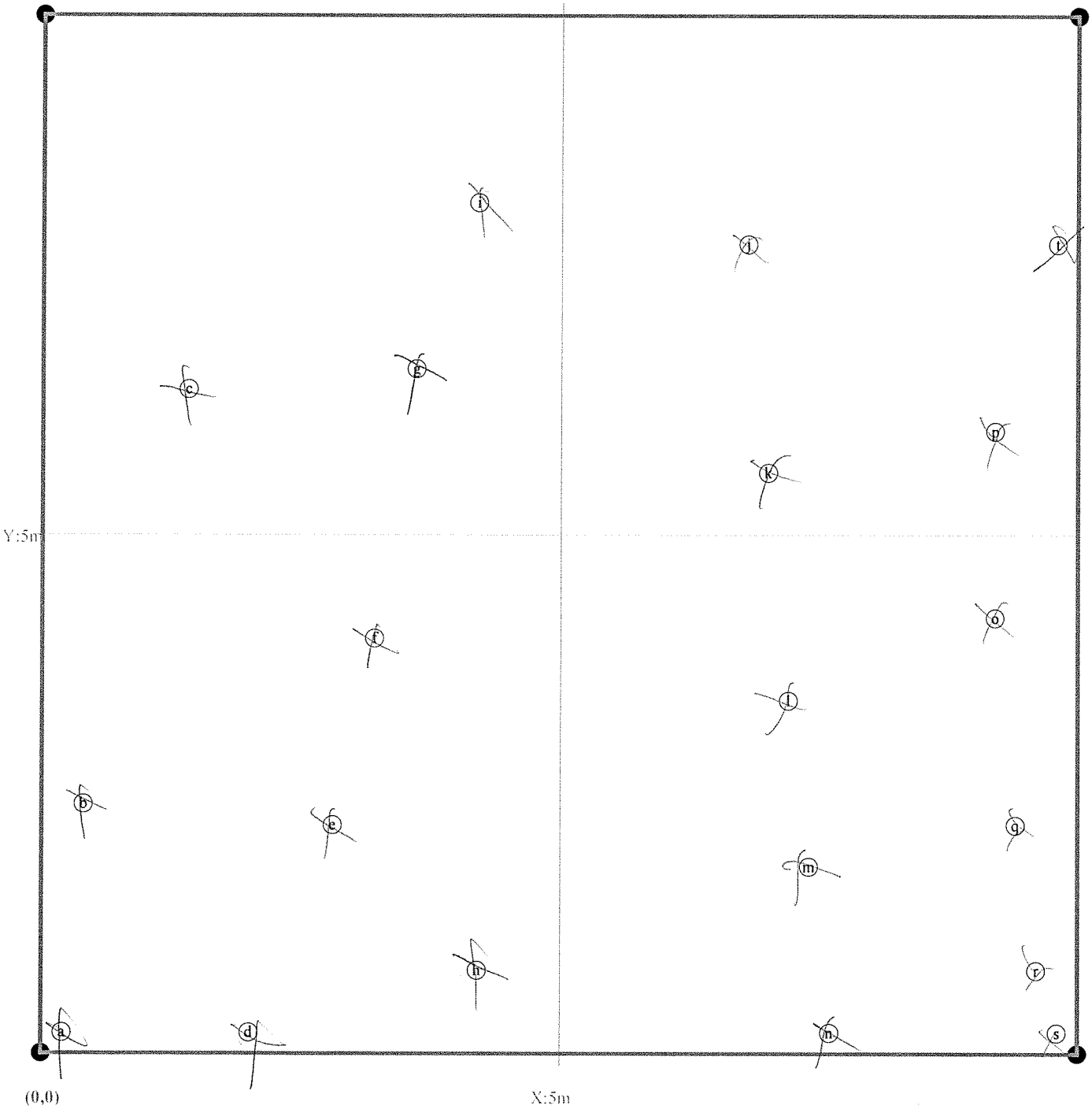
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0010

X-axis: 353 °

 # stems: 20
map size: LARGE

N



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

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Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0011

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 86

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party: Role:
Jahsey
Sydney

Date last planted:
New planting date m/yy? /
☐ Check box if plot was not sampled, specify reason below
Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
202	Quercus laurifolia	a	R	0.1	0.2	*Missing*		☐	Dead		☐	X		
203	Quercus laurifolia	b	R	0.5	2.7	56.0		☐	128		☐	3		
204	Quercus laurifolia	c	R	0.8	4.9	52.0		☐	135	.3	☐	3		
205	Quercus phellos	d	R	1.0	6.7	*Missing*		☐	Dead		☐	X		
206	Quercus phellos	e	R	1.4	9.2	54.0		☐	210	.5	☐	3		
207	Liriodendron tulipifera	k	R	4.5	8.6	*Missing*		☐	Dead		☐	X		
208	Liriodendron tulipifera	j	R	4.2	6.8	40.0		☐	47		☐	3		
209	Liriodendron tulipifera	i	R	4.0	4.9	15.0		☐	28		☐	2		
210	Morella cerifera	h	R	3.6	2.9	*Missing*		☐	Dead		☐	X		
211	Liriodendron tulipifera	g	R	3.4	1.1	*Missing*		☐	Dead		☐	X		
212	Quercus lyrata	l	R	6.7	2.3	63.0		☐	90		☐	3		Michaux
213	Quercus nigra	m	R	7.2	5.0	*Missing*		☐	Dead		☐	X		
214	Quercus lyrata	n	R	7.6	6.7	40.0		☐	66		☐	3		
215	Quercus nigra	f	R	10.0	1.0	50.0		☐	203	.3	☐	3		

 # stems: *14*

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

Bacchanis

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0011

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

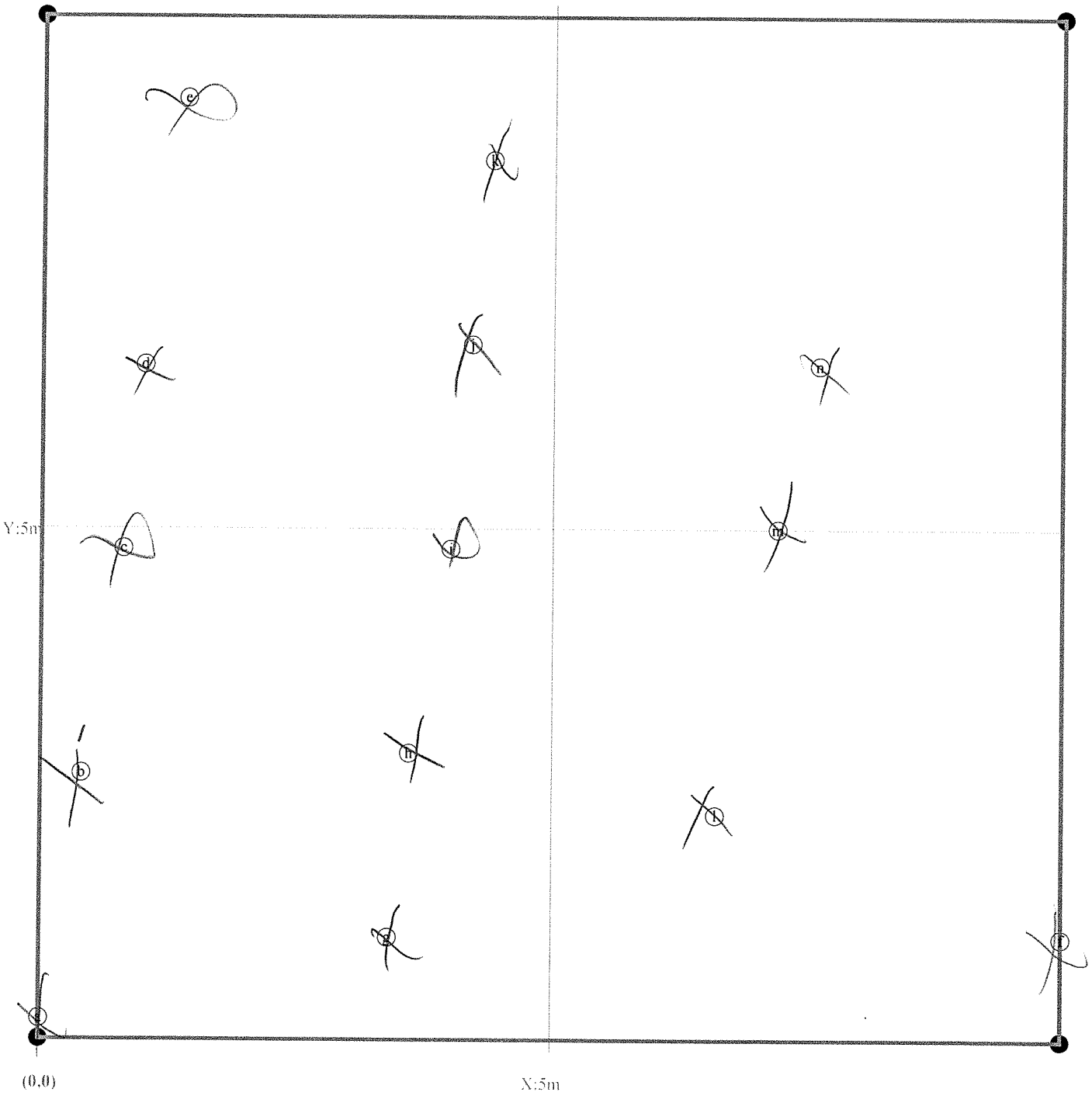
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0011

X-axis: 86 °

N

 # stems: 14
map size: LARGE



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0012 10

VMD Year (1-5): 2 Date: 9/13/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 318

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
JM	
SB	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes:

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
216	Quercus phellos	ⓐ	R	0.2	0.2	50.0		☐	80		☐	3		
217	Morella cerifera	ⓑ	R	0.5	7.3	*Missing*		☐	X		☐	X		
218	Morella cerifera	ⓒ	R	1.5	5.5	*Missing*		☐	X		☐	X		
219	Platanus occidentalis	ⓓ	R	2.3	3.5	108.0	*DBH?*	☐	215	0.7	☐	3		
220	Betula nigra	ⓕ	R	2.9	1.7	82.0		☐	190	0.4	☐	3		
221	Liriodendron tulipifera	ⓘ	R	5.4	1.6	19.0		☐	35		☐	3		
222	Betula nigra	ⓗ	R	4.7	4.1	136.0	*DBH?*	☐	260	1.5	☐	3		
223	Quercus laurifolia	ⓖ	R	3.5	6.8	9.0		☐	40		☐	3		
224	Betula nigra	ⓔ	R	2.4	9.3	42.0		☐	120		☐	3		
225	Quercus phellos	ⓙ	R	6.4	8.4	5.0		☐	20		☐	3		
226	Quercus lyrata	ⓚ	R	7.1	6.1	62.0		☐	105		☐	3		
227	Quercus lyrata	ⓛ	R	7.8	4.0	8.0		☐	160	0.5	☐	3		
228	~~Quercus laurifolia~~ QUPH	ⓜ	R	8.6	7.7	10.0		☐	20		☐	3		
229	Quercus nigra	ⓝ	R	9.7	0.2	52.0		☐	100		☐	3		

 # stems: 14

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes
QUPH	P			20		3		

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0012

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
Baccaris		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%.

●1 ●2 ●3 ●4 ●5 ●6 ●7 ●8 ●9 ●10

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

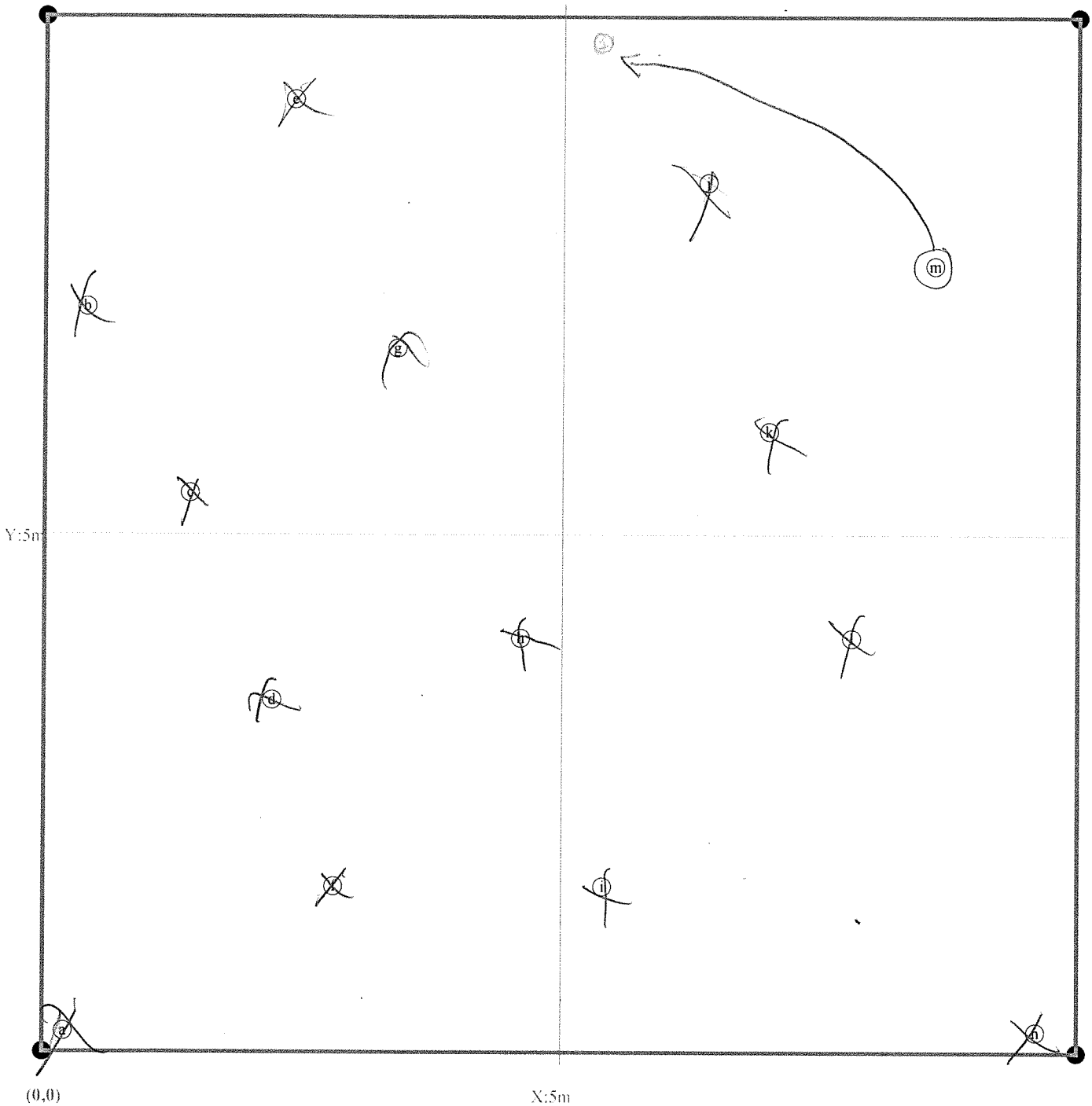
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0012

X-axis: 318 °

 # stems: 14
map size: LARGE

N



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Vegetation Monitoring Data (VMD) Datasheet **Please fill in any missing data and correct any errors.**

Plot 101038-01-0013

VMD Year (1-5): 2 Date: 10/3/23 - / /

Taxonomic Standard:

Taxonomic Standard DATE:

Latitude or UTM-N: (dec.deg. or m) Datum:

Longitude or UTM-E: UTM Zone:

Coordinate Accuracy (m): X-Axis bearing (deg): 357

Plot Dimensions: X: 10 Y: 10 ☐ Plot has reverse orientation for X and Y axis (Y is 90 degrees to the right of X

Party:	Role:
Janney	
Sydney	

Date last planted:

New planting date m/yy? /

☐ Check box if plot was not sampled, specify reason below

Notes: oaks around plot look good. Smaller trees in plot.

ID	Species Name	Map char	Source*	X 0.1m	Y 0.1m	Nov 2022 Data Height 1cm*	Nov 2022 Data DBH 1 cm	Notes*	THIS YEAR'S DATA Height 1cm*	DBH 1 cm	Re-sprout	Vigor*	Damage*	Notes
230	Morella cerifera	a	R	0.2	0.2	*Missing*		☐	Dead		☐	X		
231	Nyssa biflora	b	R	0.8	2.5	*Missing*		☐	Dead		☐	X		
232	Morella cerifera	c	R	1.1	4.8	33.0		☐	112		☐	4		
233	Nyssa biflora	d	R	1.5	7.0	*Missing*		☐	Dead		☐	X		
234	Morella cerifera	e	R	2.2	9.0	40.0		☐	67		☐	3		
235	Liriodendron tulipifera	i	R	5.6	8.3	45.0		☐	42		☐	3		resprout?
236	Nyssa biflora	h	R	5.0	5.8	49.0		☐	60		☐	2		resprout
237	Nyssa biflora	g	R	4.6	3.2	25.0		☐	30		☐	3		resprout
238	Nyssa biflora	f	R	4.0	0.8	*Missing*		☐	Dead		☐	X		
239	Cephalanthus occidentalis	j	R	7.4	1.1	70.0		☐	120		☐	2		
240	Cephalanthus occidentalis	k	R	7.8	3.1	60.0		☐	103		☐	3		
241	Quercus phellos	l	R	8.5	5.3	138.0	0.2	☐	238	.5	☐	3		
242	Quercus phellos	m	R	9.4	7.0	75.0		☐	147	.1	☐	3		

 # stems: 13

New Stems, not included last year, but are obviously planted. If more space needed, use blank PWS (Planted Woody Stems) Form:

Species Name	Source*	X (m)	Y (m)	Height 1 cm*	DBH 1 cm	Vigor*	Damage*	Notes

NO volunteers but bacchanis.

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Plot (continued): 101038-01-0013

ID	Species	map char	source	X (m)	Y (m)	Nov 2022 Data: ddh (mm)	Height (cm)	DBH (cm)	Notes*	THIS YEAR'S DATA: ddh (mm)	Height (cm)	DBH (cm)	Re-sprout	Vigor*	Damage*	Notes

Natural Woody Stems - tallied by species

Explanation of cut-off & subsampling**:

Height Cut-Off (All stems shorter than this are ignored. If >10cm, explain why to the right.): ☐ 10cm ☐ 50cm ☐ 100cm ☐ 137cm

Species Name	☑ c	SEEDLINGS — HEIGHT CLASSES: Sub-Seed	10 cm-50 cm	50 cm-100 cm	100 cm-137 cm	SAPLINGS — DBH: Sub-Sapl	0-1 cm	1-2.5	TREES — DBH: 2.5-	5-	=10 (write DBH)
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					
		___				___					

**Required if cut-off >10cm or subsample ? 100%.

Form WS2, ver 9.1

*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

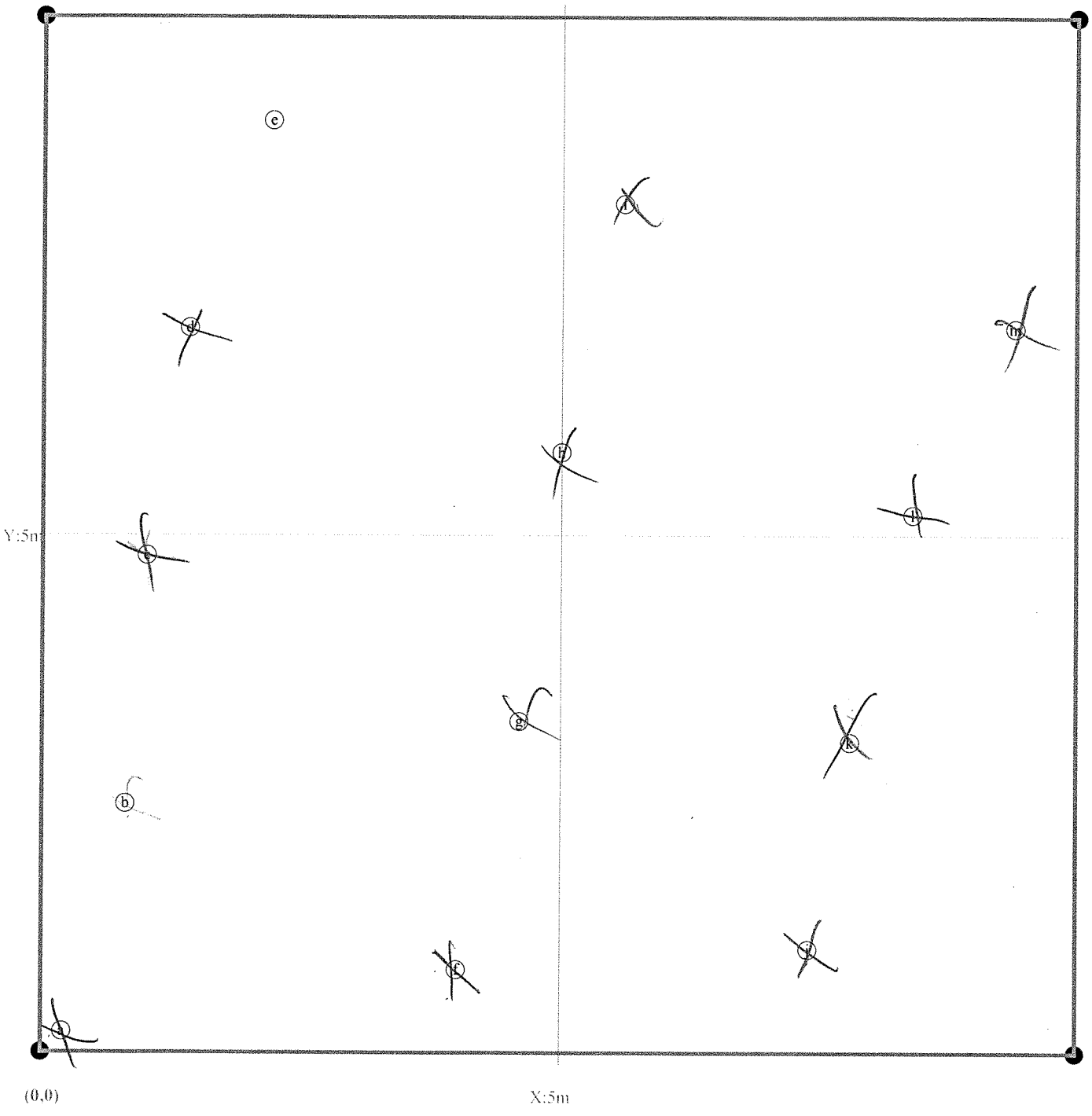
*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Map of stems on plot 101038-01-0013

X-axis: 357°

 # stems: 13
map size: LARGE

N



*SOURCE: Tr=Transplant, L=Live stake, B=Ball and burlap, P=Potted, Tu=Tubling, R=bare Root, M=Mechanically, U=Unknown

*VIGOR: 4=excellent, 3=good, 2=fair, 1=unlikely to survive year, 0=dead, M=missing.

*DAMAGE: REMoval, CUT, MOWing, BEAVer, DEER, RODents, INSects, GAME, LIVESTock, Other/Unknown ANIMal, Human TRAMpled, Site Too WET, Site Too DRY, FLOOD, DROUght, STORM, HURRicane, DISeased, VINE Strangulation, UNKNown, specify other.

*HEIGHT PRECISION drops to 10cm if >2.5m and 50cm if >4m.

Printed in the CVS-EEP Entry Tool ver. 2.3.1

Appendix C

Photos

Strawberry Hill Riparian Buffer Vegetation Monitoring Plot Photos (MY2)

Vegetation Plot 1 (10/03/2023)

Vegetation Plot 2 (10/03/2023)

Vegetation Plot 3 (10/03/2023)

Vegetation Plot 4 (10/03/2023)

Vegetation Plot 5 (10/03/2023)

Vegetation Plot 6 (10/03/2023)

Vegetation Plot 7 (10/03/2023)

Vegetation Plot 8 (10/03/2023)

Vegetation Plot 9 (10/03/2023)

Vegetation Plot 10 (10/03/2023)

Vegetation Plot 11 (10/03/2023)

Vegetation Plot 12 (10/03/2023)

Vegetation Plot 13 (10/03/2023)

Strawberry Hill General Site Buffer Photos (MY2)

Boundary Condition along JH1-A (10/3/2023)

Pines along JH1-A (10/3/2023)

Sunflowers along JH1-A (10/3/2023)

General Condition along JH1-A (10/3/2023)

Bare area along JH1-B (10/3/2023)

Boundary condition along JH1-B (10/3/2023)

JH1-B looking upstream (5/19/2023)

General Condition along JH1-B (10/3/2023)

Newly installed agricultural driveway near JH2 (5/19/2023)

Supplemental plantings on old path along JH2 (5/19/2023)

Markers and horse tape blocking path near JH2 (3/6/2023)

Markers and horse tape blocking path near JH3 (10/3/2023)

Boundary condition along JH3 (10/3/2023)

Diffuse flow live stakes in JH5 swale (5/19/2023)