

Land Management Annual Monitoring Report

1215 Centre St. West Roxbury, MA
DEP FILE: 006-1926

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PARTERRE
ECOLOGICAL

Work Completed to date:

Fall 2023

Erosion Control Installation and Japanese Knotweed Treatment

- On October 6th, Parterre Ecological oversaw installation of erosion control along the limit of work and just above the wetland marking line, per specification. The majority of the control consisted of 12" straw waddle and in areas where the slope was particularly steep or eroded along the bank, straw bails were added as extra support.
- Additionally, Japanese Knotweed on site was treated along the fence line using a foam-based Glyphosate herbicide (Rodeo) wiped on the leaves to prevent any over-spray. Followup treatment will be required in 2024.

Tree Removal and Snag Creation:

After the sediment control was in place Parterre Ecological oversaw removal of invasive trees on Oct. 19-20 per the LMP plan. Two large trees (One *Ailanthus altissima*, One *Phellodendron amurense*) were cut at 25-30' heights and treated at the base to provide snag habitat. Most of the other trees were cut and removed with the *Robina pseudoacacia* left on site for future milling into planks. Tree Tech cut stumps at 4" height so they could be re-cut and treated by Parterre staff. Two additional trees will be proposed for removal in the phase 2 portion of the plan. Care was taken to prevent any disturbance to the wetland area by the use of cranes.

Invasive Species Management, Erosion Control, and Native Plant Restoration:

- After completion of invasive tree removal, Parterre Ecological's restoration team performed invasive management on the remaining Japanese Knotweed, Burning Bush, Honeysuckle, Norway Maple saplings, and Buckthorn. Celandine and Garlic Mustard were pulled along the slope.
- After removal the team prepared the slope by removing debris (including old silt fence, fence posts, pipe, and asphalt). The area was raked-out to ensure even grades on the slope. A trench was dug along the top of the slope to tie in erosion control of jute and burlap. After seeding with a conservation wild/wetland seed mix, erosion control blanket was laid over the slope and stapled in at 2' intervals. Each roll of erosion control blanket was overlapped by 1' per the Imp plan.
- After erosion control was installed Tree, Shrub and Perennial species were installed per the approved plant list on page: 10. Additional shrubs and trees will be installed according to plan in Phase 2.
- Live stakes of Elderberry, Dogwood, willow and Buttonbush were installed in the wetland edge.



Erosion Control and Straw Waddle



Erosion control waddle (12") installed just above the wetland line marks the limit of invasive species management and slows any erosion from entering the wetland



Straw bales placed along the top the straw waddle to further protect from sediment entering the wetland in certain areas



Tree Removal and Snag Formation:



Ailanthus altissima cut at 30° as a snag



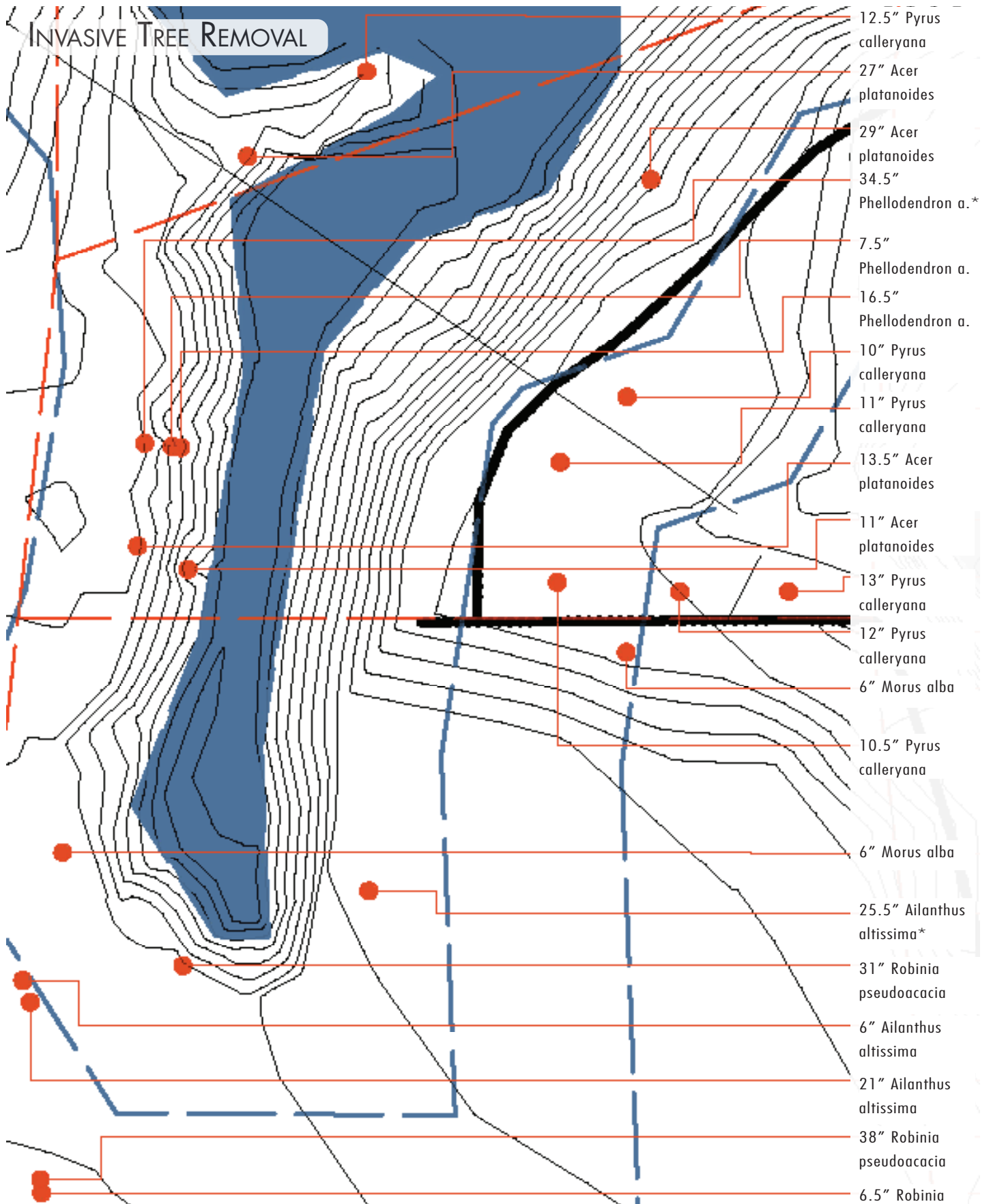
Phellodendron amurense cut at 30' as a snag in three places



The Norway Maple at the top of the dam after removal. It was re-cut and dabbed by Parterre team



INVASIVE TREE REMOVAL



Invasive Species Management



Japanese Knotweed (Fallopia japonica) with foam treatment along the slope below the fence



Invasive Greater Celandine (Chelidonium majus) before removal. All silt fence and a large amount of asphalt were also removed

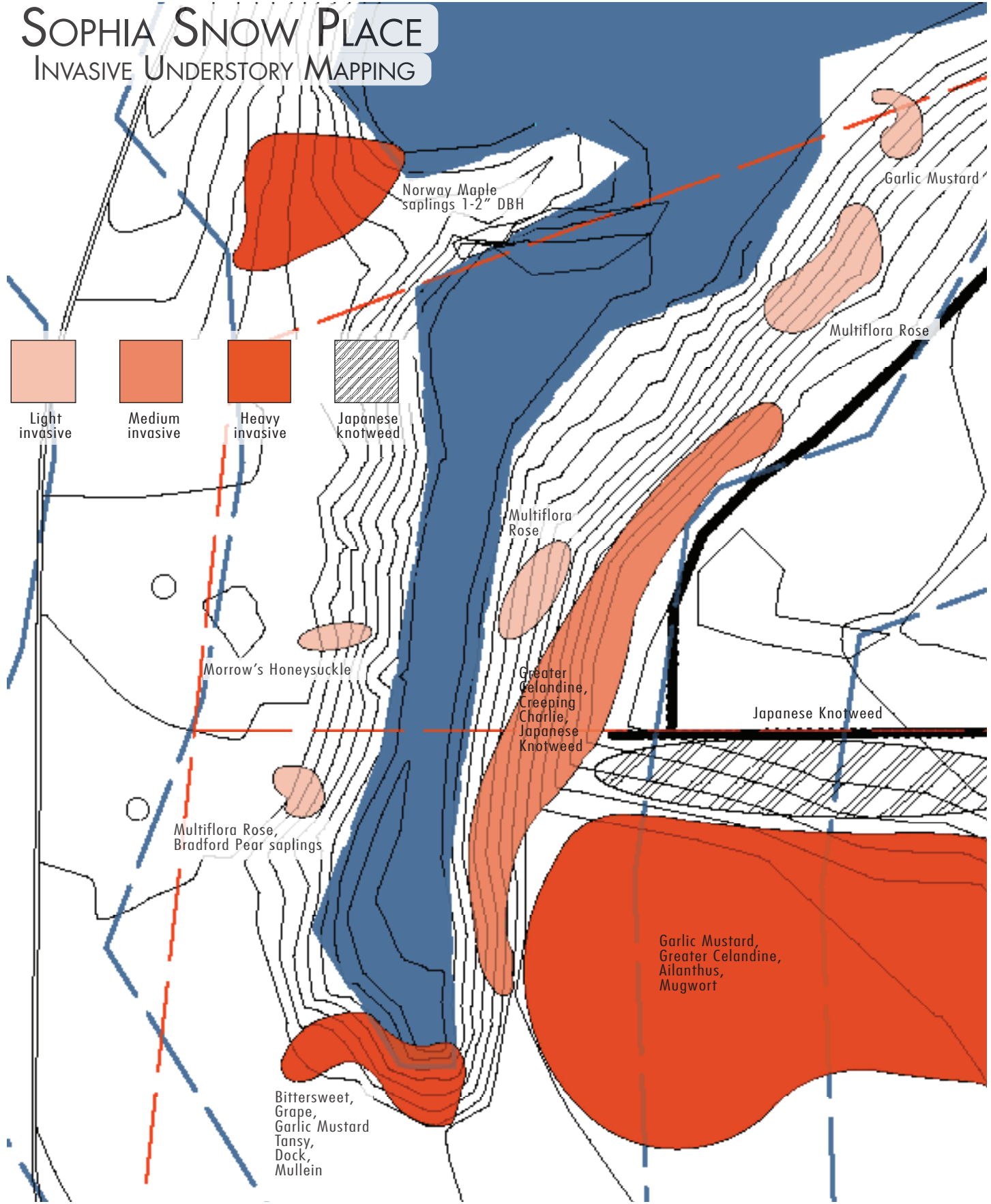


Buckthorn after dabbing with triclopyr-based herbicide



SOPHIA SNOW PLACE

INVASIVE UNDERSTORY MAPPING



2023 Slope Stabilization and Plant Installation:



Restoration team digging trench to toe-in erosion control into the slope after grading. Care was taken to keep as much soil contact as possible to hold soil in place



*Above left: *Aguilegea canadensis* dug into the slope stabilization fabric*

Above right: Layout of native plantings on slope

Left: Installation of shrubs and perennials within the erosion control



Native Plant Installation



Comptonia peregrina planted at the top of the slope in the erosion control blanket



Live staking of native shrubs within the wetland area



NATIVE RESTORATION TECHNIQUES: PLANTING TREES AND SHRUBS

<u>SYM</u>		<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>SIZE</u>
AR	1	Acer rubrum	Red Maple	2"
AS	1	Acer saccharum	Sugar Maple	2"
CA	3	Cornus alternifolia	Pagoda Dogwood	2"
CC	5	Carpinus caroliniana	Hornbeam	2"
LL	2	Larix laricina	American Larch	2"
NS	4	Nyssa sylvatica	Tupelo	2"
PS	4	Pinus strobus	White Pine	2"
PO	1	Platanus occidentalis	Sycamore	2"
QA	1	Quercus alba	White Oak	2"
QB	2	Quercus bicolor	Swamp Oak	2"
SA	18	Sassafras albidum	Sassafras	#3 = 1/3"

The portion of proposed trees highlighted in green indicate trees installed in 2023. The remaining highlighted in orange will be installed in the next phase.

10/54 CALIPER INCHES ADDED in 2023

	<u>SYM</u>		<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	
20	CA	40	Clethra alnifolia	Sweet Pepperbush	#3
	CP	8	Comptonia peregrina	Sweetfern	#3
	CH	19	Corylus americana	American Hazelnut	#5
	FG	29	Fothergilla gardenii	Dwarf Witchalder	#3
	HQ	33	Hydrangea quercifolia	Oakleaf Hydrangea	#5
9	HV	16	Hamamelis virginiana	Witch Hazel	#5
	IV	20	Ilex verticillata	Winterberry	#5
6	LB	16	Lindera benzoin	Spice Bush	#3
	MO	14	Myrica pensylvanica	Northern Bayberry	#5
13	VC	23	Vaccinium corymbosum	Highbush Blueberry	#5
	VA	17	Viburnum acerifolium	Mapleleaf Viburnum	#3

Of the **253 shrubs** proposed in the Land Management Plan, 112 were installed in 2023. The orange number to the left of the symbol indicates the portion remaining to be installed. The remaining shrubs will be installed in phase 2.

112/253 SHRUBS ADDED in 2023

	<u>SYM</u>		<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
	CO	25	Cephalanthus occidentalis	Buttonbush
	CA	25	Cornus amomum	Silky Dogwood
	CS	25	Cornus sericea	Red Osier Dogwood
	SS	25	Salix Spp.	Willow
	SC	25	Sambucus canadensis	Elderberry

Some of the live stakes were purchased and some were harvested from local wetlands. Each cutting was roughly 3' long and they were installed with a root hormone at the base of the stem.



FUTURE RESTORATION WORK

Spring 2024- Winter 2024

Ongoing Maintenance and Monitoring:

- Followup invasive management of woody species as well as Japanese Knotweed and aggressive perennial species.
- Install remaining native trees and shrubs per LMP requirements.
- Monitor plant response and continue hand pulling and herbicide application methods on re-sprouting invasive plant species
- Replace any native woody species that do not survive



Area above the slope Bradford Pear were removed with a native Tulip tree left in place. The project is well-positioned to continue successful restoration into 2024.

