Thurston Pond

Stormwater Repairs Update

July 27, 2021

Liz Margolis – Executive Director for Student and School Safety, AAPS

Emile Lauzzana – Executive Director for Capital Projects, AAPS

Wade Rose – Water Resource Specialist, OHM Advisors

Presentation Highlights

- Project Overview
- Investigation Outcome
- Project Details
- Floristic Quality Survey
- Nature Trails Closure Update
- Next Steps

Project Overview

Project Overview

AAPS has recently observed two structural defects in the Thurston Pond storm outlet system:

- An 18” storm pipe has a structural failure and collapse, starting approx. 60 ft from the pond. The pipe connects the Thurston pond to the City of Ann Arbor storm water system and serves to manage pond water levels

- The embankment at the outlet control structure has been undermined and detained storm water is free flowing under the embankment.

These defects need to be repaired before school goes back into session on August 30, 2021.

The storm sewer repair will require the pipe to be exposed with an excavation approximately 10’ deep and 40’ long.

In order to effectively and safely make the repair, the pond level will need to be lowered to minimize the presence of water during the repair.

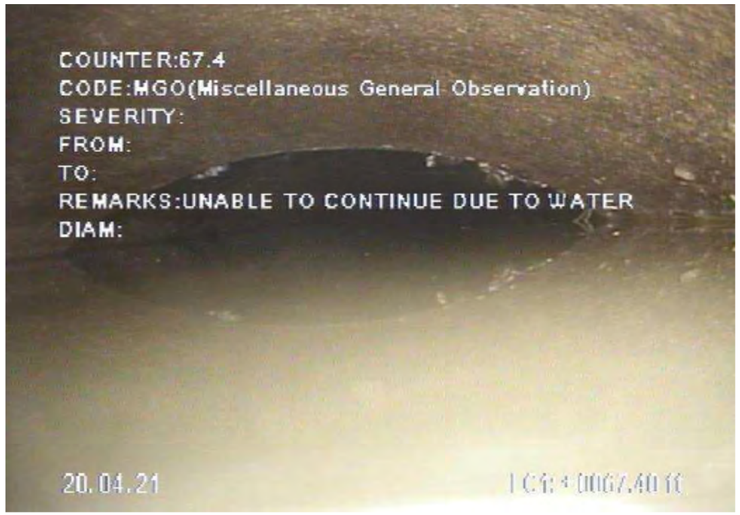
Investigation Outcome

Investigation Report Results:

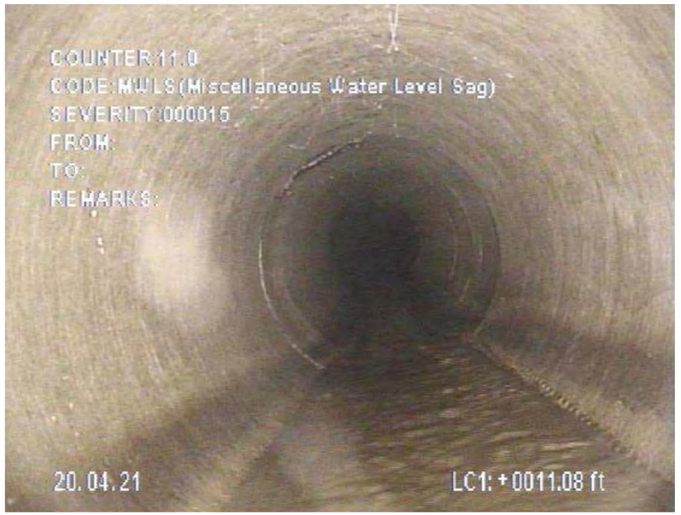
- Upon arrival, little to no water was flowing through Catch Basin #1 near the sink hole
- Water was flowing steady at the opposite end of the pipe at Catch Basin #2
- A video inspection was done, starting from Catch Basin #1
- 67' of pipe was inspected before the water level had risen to 100% and the camera could not continue
- A video inspection was then conducted from Catch Basin #2.
- 114’ of pipe was inspected before the water level had risen to 100% and the camera could not continue.
- A dye test was conducted to see if the dye would find its way from Catch Basin #1 to Catch Basin #2
- The dye did not appear downstream at Catch Basin #2, indicating that the pipe has collapsed or an offset has occurred causing the water to infiltrate somewhere between those 2 points

Investigation Outcome

Water Level at 100% at 67'

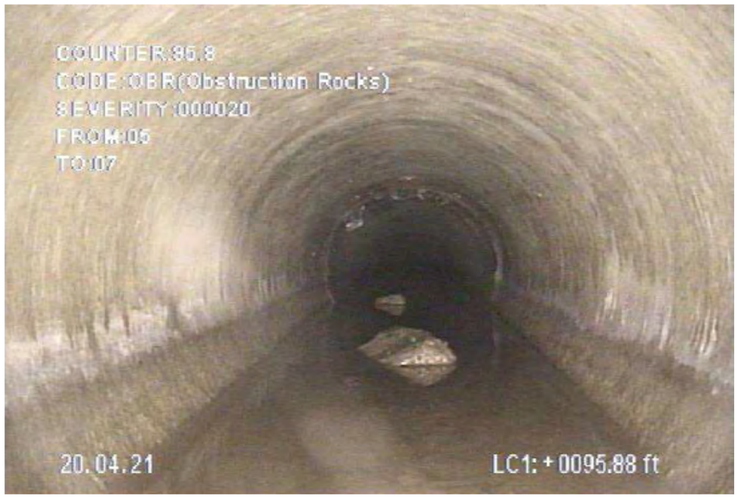


Flow Levels at Downstream End



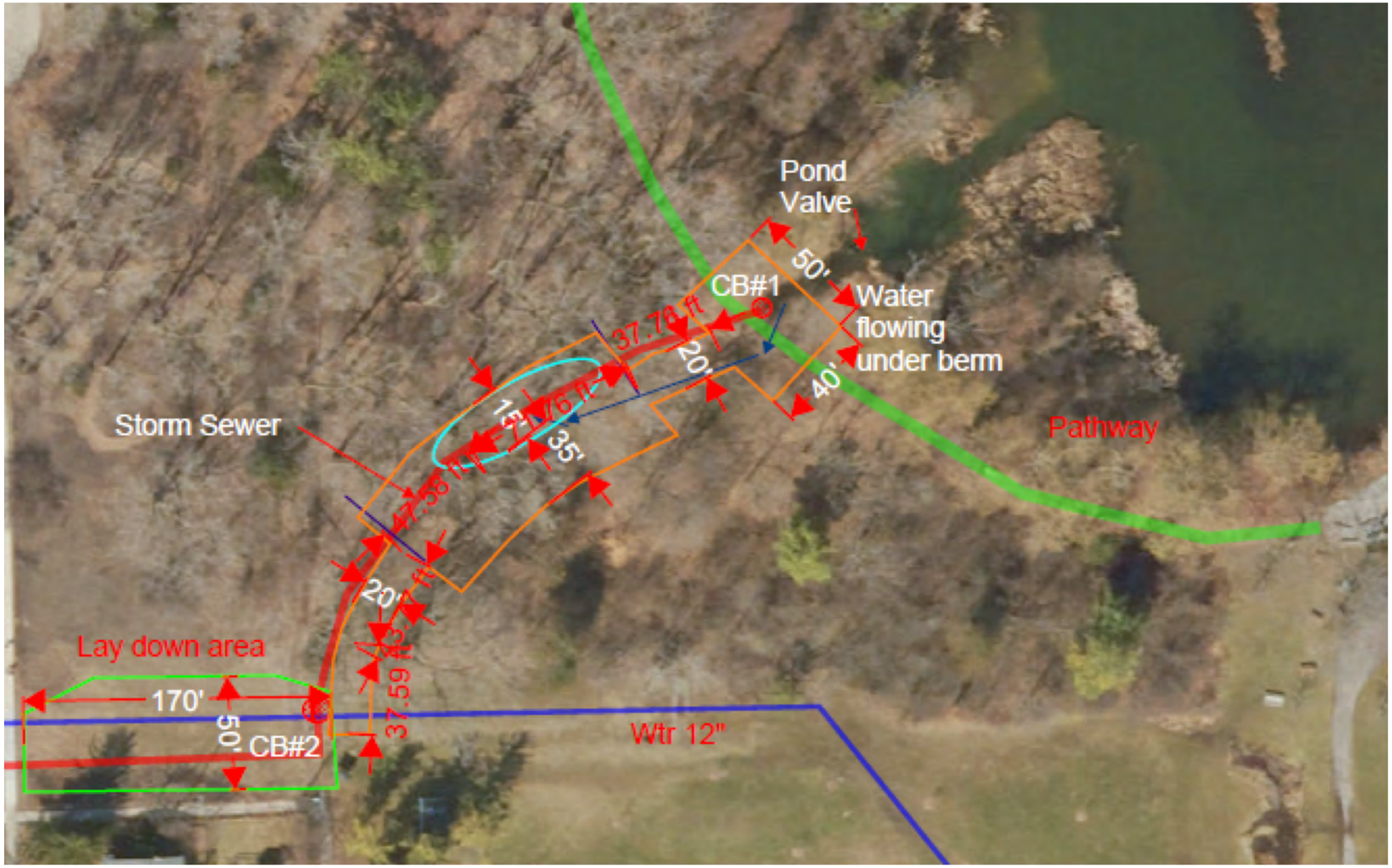
Downstream End of Pipe

Sand and Gravel Debris in Pipe on Downstream Side



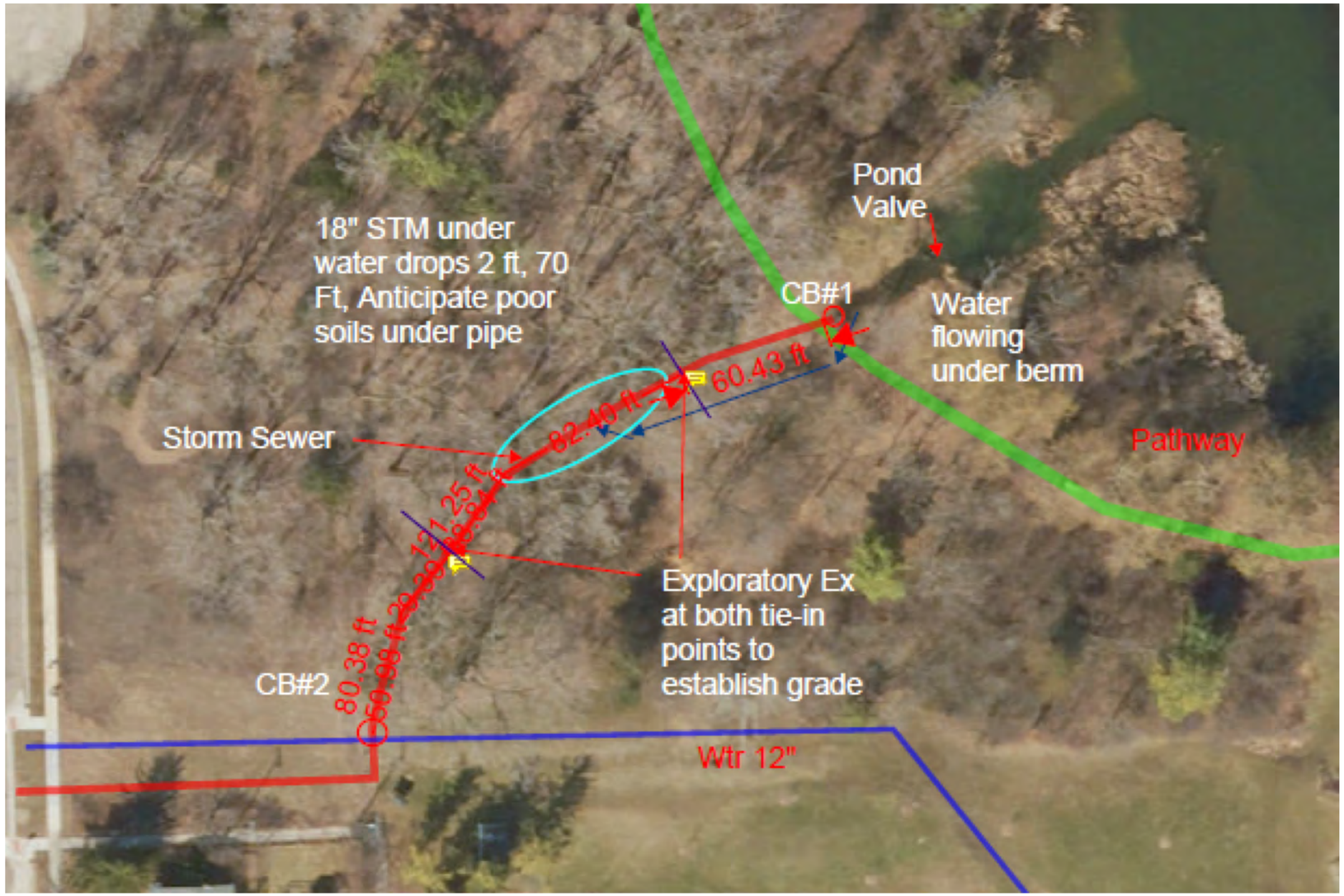
Water Level at 100% at 114'

Project Details



Thurston Pond Storm Clearing Aerial View

Project Details Cont.



Thurston Pond Storm Repair Plan Aerial View

Floristic Quality Survey

Wade Rose holds a Bachelor of Science degree from the University of Michigan – Dearborn in Environmental Studies with a focus in Land Resource. He has worked in both the forestry and landscape industry for over 20 years. Wade previously worked with The Greening of Detroit as a project manager where he specialized in ecosystem services, installing native plant landscapes, and performing community education and outreach on a variety of projects. Wade is currently working in the EWRG Environmental Planning Group where he works on a variety of projects focused on stormwater mitigation, and environmental impact assessments. Wade has also completed advanced coursework in hydric soils and problematic wetland assessment.

As an ecologist and Project Manager for OHM Advisors' Environmental and Water Resource Group (EWRG), John Deslippe is active in many project aspects related to environmental science. Coastal restoration and shoreline naturalization, stream and watershed restoration, investigative fieldwork, wetland delineation, floral and faunal survey and monitoring, riparian habitat assessment, watershed advisory group technical support, and Geographic Information Systems projects are among the activities John is regularly engaged in with OHM Advisors.

His breadth of experience includes an extensive background in landscape construction, as well as horticultural production and the application of native plants in urban and suburban settings. John is International Society of Arborists certified and State of Michigan certified construction stormwater operator as well as a master raingardener. Professional level trainings completed by John included fluvial geomorphology, wetland ecology and restoration, identification of plants of North Central/Northeast Region, winter woody plant identification, hydric soil analysis, wetland delineation, engineered bioretention design and maintenance, and stream habitat assessment methodology.

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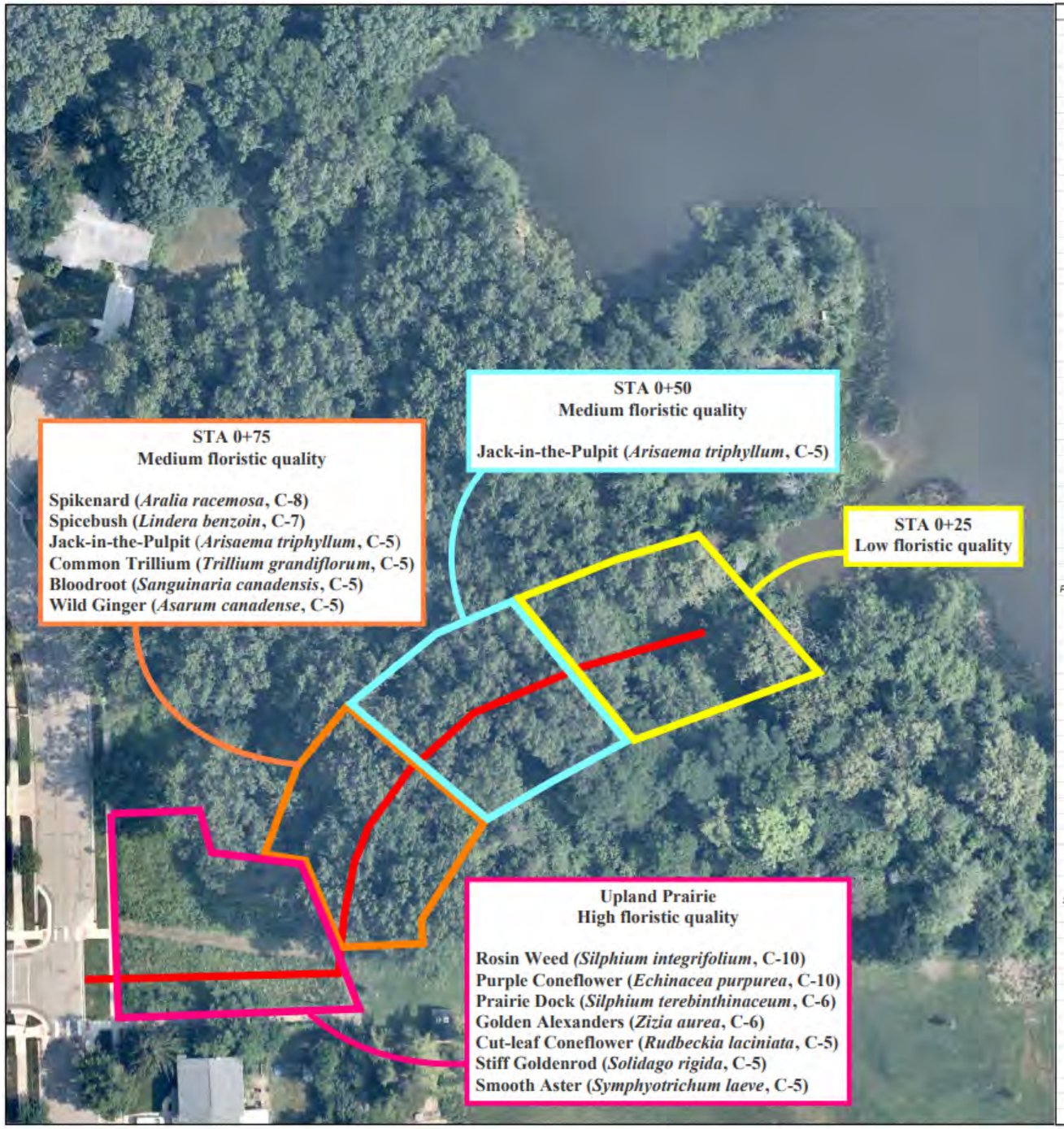
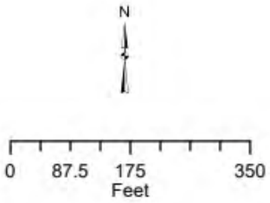


Species	Common Name	C	0+25	0+50	0+75	UPL
Acer negundo	BOX ELDER	0	X	X	X	X
Acer platanoides	NORWAY MAPLE	*			X	
Ambrosia trifida	GIANT RAGWEED	0			X	
Aralia racemosa	SPIKENARD	8			X	
Arctium minus	COMMON BURDOCK	*	X		X	
Arisaema triphyllum	JACK-IN-THE-PULPIT	5		X	X	
Asarum canadense	WILD GINGER	5			X	
Bidens frondosa	COMMON BEGGARS-TICKS	1				X
Calystegia sepium	HEDGE BINDWEED	2				X
Campanula rapunculoides	ROVING/CREEPING BELLFLOWER	*			X	
Catalpa speciosa	NORTHERN CATALPA	*		X		
Centaurea stoebe	SPOTTED KNAPWEED	*				X
Cichorium intybus	CHICORY	*				X
Circaea canadensis	ENCHANTER'S NIGHTSHADE	2		X	X	
Cirsium arvense	CANADA/FIELD THISTLE	2			X	X
Daucus carota	QUEEN ANNE'S LACE	*				X
Echinacea purpurea	PURPLE CONEFLOWER	10				X
Elymus canadensis	CANADA WILD RYE	5				X
Erigeron annuus	DAISY FLEABANE	0				X
Eutrochium maculatum	JOE PYE WEED	4	X			
Frangula alnus	GLOSSY BUCKTHORN	*		X		
Fraxinus pennsylvanica	GREEN ASH, RED ASH	2		X		
Geum canadense	WHITE AVENS	1		X		
Gleditsia triacanthos	HONEY LOCUST	8		X		
Helianthus tuberosus	JERUSALEM ARTICHOKE	6				X
Impatiens capensis	JEWELWEED	2	X			
Lamiaceae (mint family)	*UNKNOWN*				X	
Ligustrum sp.	PRIVET	*			X	
Lindera benzoin	SPICEBUSH	7			X	
Lonicera spp.	HONEYSUCKLE (NON-NATIVE)	*	X	X		
Lotus corniculatus	BIRDSFOOT TREFOIL	*				X
Medicago sativa	ALFALFA	*				X
Melilotus albus	WHITE SWEET-CLOVER	*				X
Monarda fistulosa	WILD BERGAMOT, BEE BALM	2				X
Oenothera villosa	EVENING-PRIMROSE	4				X
Oxalis fontana	YELLOW WOOD-SORREL	0			X	X
Parthenocissus quinquefolia	VIRGINIA CREEPER	5	X	X		
Penstemon digitalis	FOXGLOVE BEARDTONGUE	2				X
Persicaria maculosa	HEART'S EASE, LADY'S THUMB	*				X
Persicaria virginiana	JUMPSEED	4	X			
Phalaris arundanaceae	REED CANARY GRASS	*				X
Phytolacca americana	POKEWEED	2	X	X		
Picea glauca	WHITE SPRUCE	3		X		
Populus deltoides	COTTONWOOD	1		X		
Potentila sp.	CINQUEFOIL					X
Prunus virginiana	CHOKECHERRY	2			X	
Ratibida pinnata	YELLOW CONEFLOWER	4				X
Rhamnus cathartica	COMMON BUCKTHORN	*	X	X	X	
Rosa multiflora	MULTIFLORA ROSE	*		X		X
Rubus strigosus	WILD RED RASPBERRY	2	X			
Rudbeckia hirta	BLACK-EYED SUSAN	1				X
Rudbeckia laciniata	CUT-LEAF CONEFLOWER	6				X
Rumex crispus	CURLY DOCK	*				X
Sanguinaria canadensis	BLOODROOT	5			X	
Securigera varia	CROWN VETCH	*				X
Silphium integrifolium	ROSIN WEED	10				X
Silphium terebinthinaceum	PRAIRIE-DOCK	6				X
Solidago altissima	TALL GOLDENROD	1				X
Solidago rigida	STIFF GOLDENROD	5				X
Symphiotrichum sp.	ASTER			X		
Symphyotrichum laeve	SMOOTH ASTER	5				X
Symphyotrichum sp.	ASTER					X
Taraxacum officinale	DANDELION	*			X	
Tilia americana	BASSWOOD, LINDEN	5	X			
Toxicodendron radicans	POISON IVY	2		X		
Trillium grandiflorum	COMMON TRILLIUM	5			X	
Ulmus americana	AMERICAN ELM	1		X	X	
Verbascum thapsus	COMMON MULLEIN	*				X
Verbena stricta	HOARY VERVAIN	*				X
Vitis riparia	RIVERBANK GRAPE	3	X	X		
Zizia aurea	GOLDEN ALEXANDERS	6				X

Thurston Pond Transplant Candidates



Coordinate System:

Map Published: July 21, 2021

OHM

Nature Trails Closure Update

Next Steps

Tentative Construction Schedule

(Subject to Change – based on weather and other factors)

7/21/21	Thurston Pond Temporary Water Draining Begins
7/23/21	Contractor Selected for Work
7/27/21	Thurston Nature Center Committee Update Meeting
8/2/21	Nature Paths Closed for Stormwater Repairs
8/2/21	Contractor Work Begins – Site Clearing/Staging
8/27/21	Contractor Work Complete
Sept/Oct	Site Restoration (Following Completion of Repair)

*****AAPS will provide regular weekly updates throughout the project*****

Questions?