

Project Report

Short-Grass Prairie Creation, Phase 2

Thurston Elementary School / Thurston Nature Center

Submitted by Jim Vallem, TNC Land Steward

December, 2016

Introduction

Thurston Nature Center (TNC) is part of the Ann Arbor Public Schools' (AAPS) property and is used by the district for outdoor science education. It is adjacent to Thurston Elementary School. The center's planning committee is made up of volunteers who plan and execute projects; it is a sub-committee of the Thurston Parent-Teacher Organization (PTO). Thurston is one of the AAPS schools that began a STEAM (Science, Technology, Engineering, Arts and Math) program in 2014. The school's concentration is environmental science, and they call their program Green STEAM to reflect that focus.

In 2009, a 7/10ths acre corner of the school playground was planted with 20 oak trees (Bur, Chinkapin, White and Swamp White), to begin the creation of an oak savanna. The non-native turf grass was left, but was no longer mowed. It was the intention to replace this grass with native plants, but our limited resources were needed for other work.

In 2015, we received a grant from the Wildflower Association of Michigan (WAM) to begin this conversion. We received a second WAM grant in 2016 to complete the conversion. These grants have enabled us to begin the conversion to a native short-grass prairie amongst the oaks.

Because of the size of the area, and the desire to always have habitat for birds in the area, we worked on the southern half of the area in 2015 (Phase 1), with Phase 2 on the northern half in 2016 (see Project Orientation View from Google Maps). Work on Phase 2 was done by Boy Scout Troop 1 led by Eagle Scout candidate Max Bonevich, and TNC volunteers.

We learned from Phase 1 that despite being covered all summer and fall (of 2015) by black plastic, that there was a large seed bank of weed seeds that were not killed. Substantial weed growth, including Canada thistle, occurred there in 2016, and we anticipate the same in Phase 2. Consequently, we have deviated from the original Phase 2 plan.

After consulting with two restoration experts at NAP (Dave Borneman and Mike Hahn), we decided to: (a) only sow the relatively low cost grass seeds and cover crop for now in Phase 2; (b) mow both phases in early summer 2017 prior to the setting of more weed seeds; (c) conduct a burn in Fall 2017 in Phase 1 (after two growth seasons) and potentially Phase 2 (after just one season); and (d) sow the forb seeds, and additional grass seeds if needed, in Fall of 2017 (using the rest of the 2016 WAM grant).

The mowing and burn will be timed to maximize the damage to the Canada thistle. We hope to have enough of the weeds under control in this area by the end of 2017, but recognize that mowing and burning will be needed for several more years before we achieve the native prairie we envision. (Fortunately, our volunteers love to burn.)

2016 Timeline

May 22 (TNC volunteers): The northern half of the oak savanna was burned to remove the tall turf grass. This was later than desired, due to the area not drying out prior to this time. There was already significant new green grass, so the burn was not as complete as desired (see photo).

June 26 (BSA Troop 1): Plastic (reused from the 2015 phase) was put down over the area to smother the grass. Also on this day, cardboard and then wood chips were put down under all the oak trees to smother the grass there. The start of this part of the project was delayed from late May due to a medical emergency in the family of one of the participants.

November 12 (BSA Troop 1): The plastic was removed and grass seeds sowed, along with a cover crop of winter wheat. The combination of the late/incomplete burn and the late covering resulted in an area that did not appear as well prepared (see the seed sowing photo) as the Phase 1 area, which had completely bare ground when it was uncovered.

Expenses

Grass seeds (Michigan Wildflower Farm)	\$179.50
Sawdust (Fingerle Lumber, filler to aid in sowing seeds)	\$5.29
Potting Soil (Home Depot, filler to aid in sowing seeds)	\$7.40
Total (excluding Eagle Scout project expenses)	\$192.19

Remaining grant money = \$807.81.

Winter wheat used as a cover crop was left over from Phase 1. In addition, Max provided refreshments for the scout troop during their work days, which he covered by fundraising as part of his Eagle Scout Project.

Note that by using two differently-colored fillers, it is easy to tell when the seeds are thoroughly mixed in to the filler prior to sowing. We have not heard of others using this trick.

Plants

The grasses used were selected for their relative shortness, to make the area seem more accessible to the school's students. The side-oats grama is state threatened.

Latin Name	Common Name	oz.
<i>Bouteloua curtipendula</i>	Side-oats Grama	32
<i>Schizachyrium scoparium</i>	Little Bluestem	24
<i>Bromus kalmii</i>	Prairie Brome	12

A variety of forbs will be added according to our original project plan, hopefully in late 2017, after assessing the success of controlling weeds in the area. We will provide a follow-up report to WAM after completing that work.

Educational Value

The project has both short-term and long-term educational value.

For his Eagle Scout project, Max Bonevich was able to practice fundraising, project planning and leadership. The scouts also learned about the native plants.

This savanna will be one of the habitats future Thurston and other AAPS students will study as part of their outdoor environmental education. They regularly go out to find and study land and water insects in the nature center, as well as learn about biodiversity and how the many ecosystems in the center function.

Conclusion

This project adds a short-grass prairie to the other terrestrial and aquatic ecosystems already in the nature center. It allowed us to replace a monoculture of non-native turf grass with a diverse set of native plants, several of which are listed as rare in the state.

The project provided another opportunity to work with a local scout troop.


Maintenance in 2017 will include mowing the area at least once prior to the expected weeds setting seed, and a Fall burn. Provided we are able to get good control of the weeds, we will have Thurston students help us sow the forb seeds in the area in late 2017. Mowing and burning will occur over several years to control weeds.

We want to again thank WAM for their support of this and the many other worthwhile projects which you helped fund this past year.

Photos and Online Posts

**Thurston Nature Center**
Published by Jim Vallem (?) · January 27 · Ann Arbor, Ann Arbor · 🌐

We just received GREAT news from the Wildflower Association of Michigan! WAM is providing Thurston Elementary and TNC a \$1000 grant to complete the conversion of our oak savanna to a native short-grass prairie! We plan to introduce 30 native plant species -- several of them endangered or threatened in Michigan -- and install an interpretive sign. This is the second half of the project which we started last year, with help from Boy Scout Troop 1 and Thurston students.



160 people reached [Boost Post](#)

Thurston Nature Center

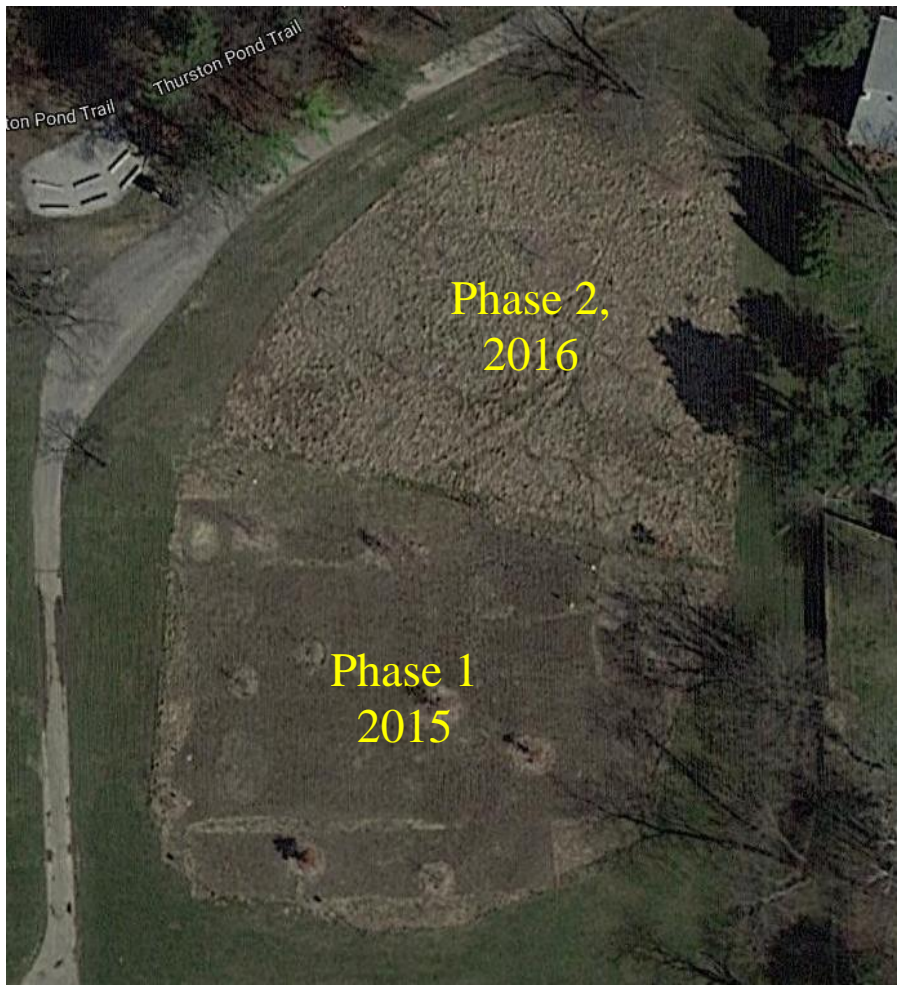
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Orientation View, Google Maps, Taken Spring 2016 Prior to Phase 2 Burn (Top = North)



Grass Burn, May 22



 **Thurston Nature Center**
Published by Colin Neil Brooks (?)
Like This Page · May 23 · 🌐

Helping improve the ecology of the oak savanna - thank you Jim Vallem! — at 📍 Thurston Nature Center.

📷 Tag Photo 🖋 Edit

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 **Jim Vallem** Additional thanks to Colin Brooks, Frank Commiskey, David Vallem and Brian Kearfott, who manned the hose and water tanks to protect the trees. We cleared out some of the dead grass underlying the green grass, in preparation for killing off the whole area and planting natives.
Like · Reply · Message · May 24 at 9:15pm

 Write a comment... 📷 😊


Uncovering the Area, November 12 (Phase 1 in Background)



Aerial View from the North, Uncovering the Area, November 12 (Thurston School in Background)

 **Thurston Nature Center** at [Thurston Nature Center](#)
November 13 at 3:26pm · 🌐


Max's Eagle Scout project work went very well on Saturday!




305 people reached [Boost Post](#)

👍 12 [1 Comment](#)

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 Write a comment...

 **Thurston Nature Center** We would like to thank Max Bonevich and the rest of the BSA Troop 1 volunteers for their help killing off the non-native grass and sowing native grasses in the northern half of the Oak Savanna. Also, thanks to the Wildflower Association of Michigan (WAM) for their grant to purchase the native seeds.

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Sowing Native Grass Seeds, November 12

