

# 2022 WATER AND THE ENVIRONMENT GRANT FINAL REPORT



## Mt. Lebanon - Bird Park Riparian Initiative and Instructional Stations



June 30, 2023

### Project Overview

Through award of a 2022 Water & the Environment Grant of \$16,217, Mt. Lebanon Nature Conservancy has completed in less than one year, our volunteer-driven Riparian Initiative and Instructional Stations project in Mt. Lebanon's 42-acre Bird Park.

- The project rehabilitated a 0.6-acre riparian area at the headwaters of a stream that contributes to the Chartiers Valley (Ohio River) watershed.
- Grant funding also enabled development of an interpretive sign explaining how native habitat in this riparian zone, and allowed the Conservancy to purchase instructional materials that correspond with site improvements for use at the Conservancy's School in the Park program.
- Phase 1, site preparation, took place in September 2022-March 2023, and centered on removing invasive, non-native plants. Phase 2, planting, took place in April-June 2023, and focused on creating the riparian zone native plant habitat.

The following pages provide a visual summary of the work, none of which would have been possible without the grant funding.

## AT A GLANCE

### THE IDEA

Rehabilitate 0.6 acres of a riparian woodland in Bird Park, Mt. Lebanon, PA, and purchase instructional materials and interpretive sign to correspond with the site improvements.

### THE SITE

The Bird Park Stream Headwaters area is a popular part of the park, frequently visited by walkers, families, adventuring children and trail runners. It is the site of an instruction station for the Conservancy's School in the Park program.

### PROJECT PARTNERS

- Mt. Lebanon Nature Conservancy
- American Water Co. Foundation
- Mt. Lebanon School District
- Municipality of Mt. Lebanon
- Mt. Lebanon Parks Advisory Board
- Argentine Productions Inc.

### DIVERSITY, EQUITY & INCLUSION

Mt. Lebanon Nature Conservancy works in the public interest to support natural ecosystems and all community member who use or may use Mt. Lebanon's public parks.

### THE BUDGET

ITEM	VALUE
Total grant award	\$16,217
Total spending	\$16,213
<b>Budget vs actual spending</b>	<b>\$4 under budget</b>
Proposed in-kind contributions	\$24,670
Actual in-kind contributions	\$37,029
<b>Proposed vs actual in-kind contributions</b>	<b>\$12,359 more than expected</b>

## THE “BEFORE” SITE

The riparian zone of the Bird Park Stream headwaters was an impenetrable tangle of downed ash trees, invasive bush honeysuckle, privet, English ivy and vinca, and vigorous poison ivy and grapevine.



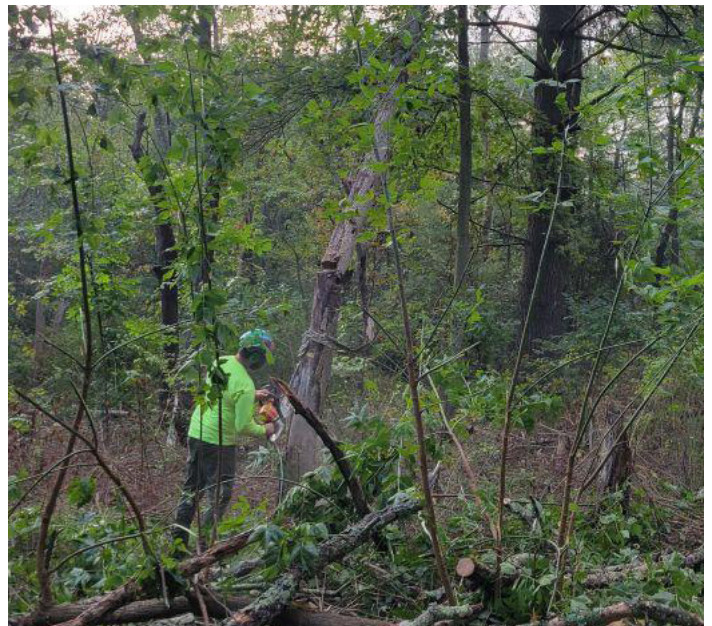
**Photos from spring 2021, when our organization first considered applying for a grant. We were not sure our volunteers could sufficiently clear the proposed project area of invasives plants to allow for native plantings, but we did it. Work began immediately after learning in August 2022 that Mt. Lebanon Nature Conservancy was awarded a Water & the Environment Grant.**

## SEPTEMBER 2022: DPW DOES SOME HEAVY LIFTING

To begin, a worker with Mt. Lebanon’s Department of Public Works (DPW) sprayed herbicide to kill poison ivy in early September. He hand-sprayed plants using a special formulation appropriate for a riparian zone. Later that month, a DPW forestry crew felled about 25 dead or dying trees, mostly ash trees killed by the emerald ash borer over the past 15 years. The DPW work represented some of the in-kind contributions that the municipality pledged as part of the grant proposal.



**Spraying poison ivy**



**Felling and cutting trees**

**AUGUST-DECEMBER: PROJECT PUBLICITY**

The Riparian Initiative project won ample publicity in Mt. Lebanon, including an article in [Mt. Lebanon Magazine in October](#). Social media posts by the Conservancy and amplified by the municipality helped drive project awareness and volunteer participation.

**TOWN TOPICS**  
**Conservancy to improve Bird Park**

The American Water Charitable Foundation has given the Mt. Lebanon Nature Conservancy a \$16,217 grant to improve the area around the streams in Bird Park.

The area lost a lot of ash trees to the Emerald Ash Borer several years ago, and more recently has lost some large black locust and black cherry trees to age.

As the trees died, invasive shrubs and ground covers including honeysuckle, privet, buckthorn, multiflora rose, English ivy and vinca filled the void, creating an almost impassible tangle, which made getting near the stream edges difficult, as well as making it difficult for native trees and shrubs to get established.

The grant will allow the conservancy to plant 41 trees and 20 shrubs in the affected area, and will also pay for equipment to augment its School in the Park program.

"We're very excited about it," said conservancy president Angie Phares. "A grant of this size is of tremendous importance because it positions us to do work that we otherwise wouldn't have the financial capacity to do."

And they could use some help. One of the conditions of the grant is that the conservancy receive in-kind donations. Mt. Lebanon's Public Works Department is contributing 50 hours of labor to remove invasive species and trees that pose a hazard. Public works is also killing poison ivy and donating materials to improve the surface of the hiking trails. In addition, the conservancy estimates that it will need a total of 440 hours of volunteer labor, to clear invasives, plant the trees and stabilize the trails.

The project's timeline calls for removal of invasive species through November, with a winter break and then resuming work in March.

"It is potentially one of the most attractive areas of the park, and up until recently it's been almost impossible to access," said Ron Block, conservancy vice president in charge of projects. "Restoring the canopy over this area will help create stability over the long term. That's the best way to ensure the park's health over decades." If you're interested in helping, you can learn more about volunteering at the conservancy's website, [lebanature.org](#).



Mt. Lebanon Nature Conservancy president Angie Phares and her dog Kala, survey an area in Bird Park that will be receiving new native trees and shrubs next year. The conservancy is seeking volunteers to help get the space ready for planting.

**Mt. Lebanon Nature Conservancy**  
★ Favorites - August 29, 2022

Woohoo! Let's get started with the stream headwaters project in Bird Park! This is the project for which we were awarded a generous grant from American Water Charitable Foundation. We have lots of site preparation to do this fall to be able to plant in the spring, so please sign up at [www.lebanature.org/new-events](#) to help this Saturday, Sept. 3, 9-noon. (AND Saturday, Sept. 10, same time.) Meet at the Beadling lot.

New volunteers are welcome, and there are lots of ways to h... See more



**Mt. Lebanon Nature Conservancy**  
★ Favorites - September 7, 2022

This is Sandy. Sandy is removing an invasive shrub at Bird Park. Be like Sandy. YOU can help make Bird Park a healthier forest! No experience is needed and there are many ways to help. Come volunteer on Saturday 9/10 from 9 to noon. REGISTER HERE: <https://www.signupgenius.com/go/10c0c4eacab28a1f4c07-bird2>

Meet at the Beadling lot. If you have gloves and loppers, bring them, but if not, we have extras. Cover up to protect your skin.

The Conservancy thanks you! The forest than... See more



**Mt. Lebanon Nature Conservancy**  
★ Favorites - August 25, 2022

We are thrilled to announce we've been selected as a 2022 American Water Charitable Foundation Water and Environment grantee. The grant will enable the Mt. Lebanon Nature Conservancy to reforest the headwaters of Bird Park Stream with native plants. Learn more at [lebanature.org](#). Volunteers, get ready to sign up!

#KeepCommunitiesFlowing #WaterandEnvironment

**2022 WATER AND ENVIRONMENT GRANT RECIPIENT**

**AMERICAN WATER CHARITABLE FOUNDATION**

**SEPTEMBER-DECEMBER: VOLUNTEER ENGAGEMENT**

Volunteers turned out beyond expectation in fall 2022 to help clear invasive plants from the site. One hundred fifty-two volunteers contributed 355 hours during scheduled work parties. In addition, some regular volunteers put in hours on their own as their schedules allowed.



**Clockwise from below: First-time volunteer Ramona with 2-month-old Leo; tired but proud Conservancy board members; fathers and sons giving back to the community; some mothers and daughters from a Temple Emanuel volunteer group; volunteers with invasives removal tools.**



**DECEMBER-FEBRUARY: PURCHASING/ORDERING MATERIALS**

The Conservancy used the cold-weather months, when outdoor volunteering became more difficult, to begin drawing from the grant money, purchasing or ordering materials.



Above, Sarah Levinthal, School in the Park leader, shows off new signs to be used in the project area for instructional stations. Below, Conservancy board treasurer Bethany McGee looks through some new School in the Park supplies with her son at an “unpacking party.”



Above, Conservancy board vice president Ron Block checks out deer-protection fencing. Below, some native plant selections. Trees and shrubs purchased with grant money were delivered in April with Mt. Lebanon’s tree order. The municipality paid for the shipping.



## MARCH-APRIL: SITE CLEARING AND PREPARATION, AND TREE PLANTING

Volunteers continued to turn out beyond expectation in spring 2023 to continue clearing the site for spring plantings, pre-digging holes for trees and shrubs according to a planting plan, and installing about 50 trees and shrubs. Mt. Lebanon DPW transferred the large nursery trees by front-loader from the public works yard to the project site.

One hundred forty-nine volunteers contributed 417 hours in March-June 2023, 1.6 times the number of work-hours we had anticipated.



**MAY: FIRST USE OF THE NEW INSTRUCTIONAL MATERIALS AT SCHOOL IN THE PARK**

During May, the Conservancy runs its annual School in the Park science curriculum program for all third graders at Mt. Lebanon School District. This year, students had new materials for the educational stations at or near the project site thanks to the grant-funded purchase of hands-on instructional supplies.



**JUNE: ADD PERENNIALS, MULCH AND DEER PROTECTION FENCING**

Conservancy volunteers erected deer enclosure fencing, installed erosion control matting on stream banks, and distributed 8 cubic yards of mulch. Using specific planting plans for each deer enclosure area, volunteers installed about 900 perennial flowers, sedges and rushes to add beauty and help hold soil in place to minimize erosion. We hope to be able to remove the fencing in a few years when the plants are established.

Upon finishing the plantings, volunteers spread conservation seeding. This is a mix of groundcover, herbaceous perennials and grasses, to help fill in the ground plane and hold soil in place.





**JUNE-AUGUST: CREATE AND INSTALL INTERPRETIVE SIGN**

The final item to be installed will be the interpretive sign. It will help future park visitors to understand the value of the Bird Park Riparian Initiative. This last element of the project remains in progress at the time of this report. [Argentine Productions](#) has donated professional services and worked with a sign manufacturer to provide at-cost materials for the sign. Peter Argentine helped the Conservancy identify an artist to produce original work and design for the sign, "Restoring Native Habitat."

**Restoring Native Habitat**

Native plants along the water's edge stabilize the streambank and filter pollutants.

Dead trees provide food and shelter for insects, birds, and other animals.

Fungi and insects break down old logs and enrich the soil.

Native plants provide berries, seeds, and nuts for wildlife.

Trees cool the water for insects and animals that use the stream.

**This is a Riparian Zone — a natural area bordering a stream that benefits all life.**

Invasive pests and plants heavily damaged this area in the past. Volunteers removed them and planted native trees, shrubs, flowers, and grasses. Over time this restored riparian area will ensure the park's health into the future.

➔ What evidence of a healthy ecosystem can you see?

LEARN MORE AT: [lebonature.org](http://lebonature.org)

*A Mt. Lebanon Nature Conservancy  
Project funded by American Water  
Charitable Foundation*

**This is draft 1 of 4 of the interpretive sign, with final copy due in August and manufacturing and installation to take place immediately afterward.**



**The Conservancy, in collaboration with Mt. Lebanon Municipality, will install the interpretive sign at the location shown at left. People viewing the sign will be able to see how sign content relates to the Bird Park Stream Headwaters Riparian Initiative project site. Volunteers will remove the remaining invasive shrubs in the sign area, plant Appalachian sedge, and provide a wood chip standing area.**

**FINANCIALS: A FINAL SUMMARY OF GRANT SPENDING**

Bird Park Stream Headwaters Riparian Zone Improvements & Instruction Stations					6/16/23	Actuals	Actual vs proposed		
Item Description	Proposed Quantity	Unit	Unit Cost	Total Item Proposed	Spending				
<b>Riparian Zone Improvements</b>									
Riparian Interpretive Sign	1	EA	1500	\$1,500.00	\$ 160				
Pending remaining for Interpretive sign					\$ 1,640				
1.25" caliper canopy trees	12	EA	200	\$2,400.00	\$ 2,138				
1.25" understory trees	12	EA	150	\$1,800.00	\$ 2,138				
Sapling canopy trees	9	EA	50	\$450.00	\$ 129				
Sapling understory trees	8	EA	50	\$400.00	\$ 385				
Shrubs	20	EA	35	\$700.00	\$ 645				
Tree protection - staking/fencing (materials priced at 2 home-imp	61	EA	78	\$4,758.00	\$ 2,997				
Landscape plugs (flats of 32 to 50 plants)	24	EA	80	\$1,920.00	\$ 2,555				
Groundcover conservation seeding	12	LBS	30	\$360.00	\$ 575				
<b>ADDED AFTER OMITTING SOME PROPOSED FENCING:</b>									
More fence clips					\$ 17				
Erosion control blanket (added)					\$ 409				
Erosion control stakes (added)					\$ 64				
Mulch (added)					\$ 323				
<b>Subtotal Riparian Zone Improvements</b>					<b>\$14,288</b>	<b>\$ 14,175</b>	<b>\$113</b>		
<b>School in the Park Supplies</b>									
<b>STREAM MATERIALS INVENTORY</b>									
Laminated photos of macro-invertebrates (free from state agency	10	EA	\$0.00	\$0					
Pollution chart (free from state agency)	10	EA	\$0.00	\$0					
Dragonfly life cycle acrylic block	1	EA	\$38.45	\$38	v				
Biotic indicators of water quality display	1	EA	\$107.80	\$108	v				
Aquatic insects display	1	EA	\$63.80	\$64	v				
Aquatic macroinvertebrate dichotomous key (6)	1	EA	\$48.02	\$48	v				
Waterproof freshwater invertebrate sorting sheets 6	1	EA	\$58.20	\$58	v				
Aquatic macroinvertebrate insect ID flashcards	1	EA	\$59.55	\$60	v				
Petri dishes (90mm) sleeve of 10	3	EA	\$3.95	\$12	v				
"Crittter Keeper"	1	EA	\$24.95	\$25	v				
Flex-Tank (Field/classroom observation container)	1	EA	\$9.95	\$10	v				
Flex-Tank Cover (ventilated)	1	EA	\$4.95	\$5	v				
Trays for specimens	2	EA	\$11.50	\$23	v				
Specimen jars + lids (12)	1	EA	\$14.10	\$14	v				
Two-way bug viewer	10	EA	\$12.65	\$127	v				
Create-a-slide set of 50	1	EA	\$12.04	\$12	v				
Wolfe® Intermediate Cordless Stereo Microscopes	1	EA	\$305.00	\$305	v				
Bug box (large, clear lucite magnifying chamber)	15	EA	\$1.25	\$19	v				
<b>FOREST MATERIALS INVENTORY</b>									
Forest in a Box forest specimen set	1	EA	\$46.20	\$46	v				
Leaves and seeds of trees displays	1	EA	\$82.45	\$82	v				
Guide books on native plants	2	EA	\$10.00	\$20	v				
Binoculars	6	EA	\$89.95	\$540	v				
Hand sanitizer large pump	2	EA	\$15.00	\$30					
Garbage bags	1	EA	\$5.00	\$5					
Guide books (Fandex trees, bugs, birds)	3	EA	\$12.95	\$39	v				
<b>Total supplies for sessions</b>					\$1,689	\$ 1,817			
<b>PROGRAM SUPPORT MATERIALS</b>									
School in the park signs (stations and entrance)	5	EA	\$32.60	\$163	\$ 173				
Name tags for instructors and volunteers	140	EA	\$0.55	\$77	\$ 106				
<b>Total Program Support</b>					\$240				
<b>Subtotal School In the Park Instructional Materials and Supplies</b>					<b>\$1,929</b>	<b>\$ 2,038</b>	<b>(\$109)</b>		
<b>TOTAL RIPARIAN IMPROVEMENTS AND INSTRUCTIONAL MATERIALS</b>					<b>\$16,217</b>	<b>\$ 16,213</b>	<b>under budget \$4</b>		
<b>ITEM DESCRIPTION</b>					<b>Quantity</b>	<b>Unit</b>	<b>Unit Value</b>	<b>Total In-Kind Value Proposed</b>	<b>Actual In-Kind Value</b>
<b>In-kind contributions by partners</b>									
Volunteer hours (invasive clearing) *	180	HRS	\$27	\$ 4,860	\$ 8,910				
Volunteer hours (planting) *	170	HRS	\$27	\$ 4,590	\$ 9,072				
Volunteer hours (trail stabilization) * including student	50	HRS	\$27	\$ 1,350	\$ 2,187				
Volunteer hours professional services - project design and management **	40	HRS	\$115	\$ 4,600	\$ 7,590				
DPW - Removal and disposal of invasive plant debris ***	18	HRS	\$47	\$ 853	\$ 853				
DPW - Treating poison ivy ***	8	HRS	\$47	\$ 379	\$ 379				
DPW - Hazardous tree removal ***	24	HRS	\$47	\$ 1,138	\$ 1,138				
DPW - Trail Surface Aggregate (trail on existing trail) ***	440	SY	\$10	\$ 4,400	\$ 4,400				
Argentine Productions Inc - interpretive signage professional services ***	1	LS	\$2,500	\$ 2,500	\$ 2,500				
<b>TOTAL IN-KIND CONTRIBUTIONS</b>					<b>\$24,670</b>	<b>\$ 37,029</b>	<b>over expectation \$ 12,359</b>		

\* Hourly volunteer rate for PA (2020 data) from independentsector.org  
 \*\* Hourly rate based on professional billing rates  
 \*\*\* Amounts cited by donors