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CONSERVATION OPERATIONS 2023



Becky HandStewardship
Supervisor



Em Livingston Conservation Crew



Juliet BergerOrnithologist



Rachel Maranto Stewardship Supervisor



Brady FrissCrew Leader
*left NAP in 2023



Gabby
DeMott
Conservation Crew



Kirstin Palumbo Conservation Crew *left NAP in 2023



Remy Long Deputy Manager, NAP and Land Acquisition



Chloe HernandezConservation Crew
*left NAP in 2023



George Hammond Field Biologist



Leah JonesOutreach Assistant



Renée Hytinen PR & Special Events



Dana Novak Workday Coordinator



Jess Einck Crew Leader



Matthew Spoor Park Steward Coordinator



Rosie
Pahl Donaldson
Land Acquisition
Supervisor



Eleva
Potter
Environmental Ed.
& Engagement
Coordinator



Josh
Doyle
Conservation Crew



Mike Hahn Stewardship Specialist *left NAP in 2023



Tina
Stephens
Volunteer & Outreach
Coordinator



DECADES OF CONSERVATION

The City of Ann Arbor is home to two exceptional conservation ventures: the Natural Area Preservation (NAP) division of Parks & Recreation which stewards and restores our natural communities, and the pioneering Greenbelt program that permanently protects agricultural and natural lands surrounding Ann Arbor. The overlapping visions of these efforts were born of exceptional investments from a community deeply grounded in conservation. Both programs saw a future rooted in the stewardship and protection of our natural resources and understood these ventures offered solutions to the challenges we faced in the decades ahead.

The programs, the staff, and the spirit are dynamic, evolving, and innovative.

Each trailblazing for their time – with NAP's inception in 1993, and the Greenbelt's a decade later in 2003 – the programs have worked diligently and persistently for decades, growing into what are now exemplary pillars of conservation in our community.

NAP, now thirty years on, and the Greenbelt at twenty years, are all but static undertakings. The programs, the staff, and the spirit are dynamic, evolving, and innovative. This past year serves as a potent example of these program's dedication to their conservation missions and to progress.

The Greenbelt broke new ground in 2023. Years in the making, the Greenbelt launched its first-ever buy-protect-sell (BPS) affordable farmland purchasing opportunity. BPS is a new acquisition framework that fulfills the Greenbelt's primary objective of permanent land conservation, while also providing for secondary outcomes aimed at addressing farmland insecurity and local food system development in the Ann Arbor area.

The nature of BPS acquisitions results in greater risk and complexity for the Greenbelt to navigate, but – all the same – staff have carried out these innovations with grace and proficiency. At their last meeting of the calendar year, City Council approved the sale of the Greenbelt's first two BPS properties, signaling the final City-approval needed to conclude this proof-of-concept project.

NAP underwent its first-ever strategic planning process; engaging partners, stakeholders, focus groups, and the public yielded crucial feedback that reinforced the values NAP has long embodied, and offered us new ideas to leverage as the mission adapts to shifting ecological and social conditions. This process came across several staffing transitions, testing the division's ability to balance delivering consistent programming while also looking toward the future with openness and resolve.

NAP YEAR END REPO

I couldn't be prouder to say that NAP struck that balance, showed unwavering commitment to growth, and is – at long last – operating at full capacity once again. My sincerest thanks for the staff and the public that took part in this necessary process to define NAP's guiding start for the decades ahead.

All this is to say, new opportunities and developments are rising from the City's conservation horizon. As pillars of our community's conservation ethic, both NAP and the Greenbelt are unrelenting in their dedication to visioning, building out, and sustaining this community's conservation success story. This year's accomplishments exemplify that ardent work.

Remy Long Deputy Manager, NAP and Land Acquisition

controlled burns 13%

revegetation 1%



includes 95
tree-over-trail
blockages cleared

invasive species control 70%

"We were well prepared by our guide to do good service and learned a lot along the way."





"We very much appreciated how the staff were both professional and friendly. Their approach made the event purposeful and enjoyable. We love that this city has such programs and the people making it happen are wonderful. Thanks!"

"It was great, thank you!!

Hopefully I will see you all soon!

My arms and legs definitely
have been hurting for the last
two days but it was totally
worth it:)"













hours volunteered

volunteers

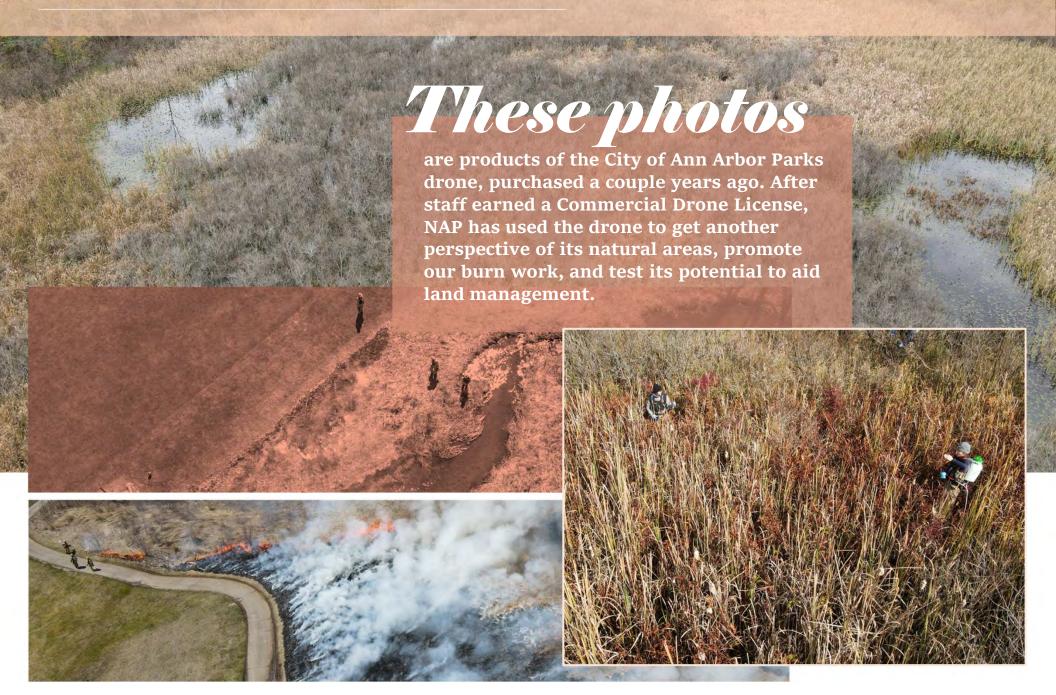
parks acres

"Photo Essay: **Controlled** ecological burns in Ann Arbor."

Check out this photo essay in the Michigan Daily with many dramatic shots of a burn day.



NEW TOOLS FOR LAND MANAGEMENT







"Our expectations were exceeded as we received a lot of useful information and our kiddos, seven and nine years old, were treated as part of the working team. We will be signing up for future events!"

"The workday leader was charismatic and kind and made the workday fun."

AMPHIBIAN AND REPTILE SURVEYS





Tiger salamander



Painted turtle laying eggs

Wood frog

SALAMANDER SURVEY

FROG & TOAD **SURVEY**

From March through June, volunteers visited listening points around the city 502 times. We recorded all 7 of the frog species we hope to find, and our one valiant toad, the American toad.

Special find: Volunteer Dan found a bluespotted salamander at one of our frog listening points—where we had no idea salamanders might be breeding. This could be a new salamander site for us! We'll follow up next spring with some live-traps to see what's going on.

TURTLE STEWARDS

volunteers

Special find: Volunteer Keith found a yellow-bellied slider turtle in Argo Pond. This is a close relative of the more common and widely-released red-eared slider (the two are subspecies of the same species). Neither subspecies is native to Michigan, so it's a safe bet that this slider was released

> here or is descended from turtles brought here in the recent past. It's a new type of turtle to watch for!



Eastern milk snake

SNAKE OBSERVATIONS

Volunteer Antoni found a couple of juvenile eastern milk snakes just outside of Oakwoods Nature Area. This species is not rare in the state, but very rare in the city. These snakes were at a site he has been checking for years, why there now? Could they be released captives? Another mystery.

ASPECIAL WILDLIFE FIND Queens of the Huron

QUEEN SNAKE Regina septemvittata

Regina (queen) Septemvittata (seven-striped) One of the highlights of 2023 has been to see a few **queen snakes** basking along the banks of the Huron River. These harmless snakes are rare in Michigan, and we are lucky to have a small population of them in the city.

The <u>Michigan Natural Features Inventory</u> has rated them a Species of Special Concern, and they are a Species of Greatest Conservation Need, both in the state and across the Midwest region.

NAP first learned of **queen snakes** in the city from a snake-savvy volunteer who spotted them on a stream close to the river. We searched for them at that site for years with little success, following the advice of guidebooks that emphasize how they like rocky streams. Then just in the last couple of years park visitors and NAP staff have discovered that they are along the river itself too. They are not easy to find – they spend most of their time in the water or under rocks, but they will climb up on shrubs and tree branches at the water's edge to bask on sunny days. We have been surprised to find some of them several yards up. If a potential predator (like a person) gets too close, they quickly drop into the water and swim away.



however, are easy to find on juveniles. Four

on a young snake's back will fade to a darker

color as it matures.

stripes run down the belly, and the three stripes



495
hours



E, Endangered

In danger of extinction.

T, Threatened

Likely to become endangered.

E and T species are protected under the Endangered Species Act of the State of Michigan.

SC, Special Concern

SC species are not protected. Should these species continue to decline, they would be recommended for T or E status.

SC species are designated by the Michigan Department of Natural Resources.



Young Black-crowned Night-herons

Black-crowned Night-herons (SC) at Mary
Beth Doyle continue to be the stars of twilight,
with several youngsters and adults showing well
throughout the breeding season. Marsh Wrens
(SC) nested at Swift Run pond this year, with at
least 5 males singing in the cattails through the
season. Red-shouldered Hawks (SC)
continued at Wheeler Service Center.
Trumpeter Swans (SC) had 2 nesting
attempts, one at Wheeler Service Center, and
one at the Water Treatment Plant settling pond,
both of which failed.

We also spotted an immature Red-headed Woodpecker (SC) at the Wheeler Service Center, leading us to presume that we have provided habitat for this rare woodpecker to nest.

NAP YEAR END REPORT **NEST BOX** MONTORING volunteers 1. ACADOORS Our new Nest Box Monitoring program was a huge success, fledging at least 39 young Eastern Bluebirds from 12 nesting attempts! Black-capped Chickadees, House Wrens, and Tree Swallows had a successful year, as well, with many nests and fledglings.

CUTTING EDGE SCIENCE: MOTUS TOWER INSTALLATION

In cooperation with the Kalamazoo Valley Bird Observatory and the Kalamazoo Nature Center, NAP facilitated the installation of a wildlife tracking tower at Huron Hills Golf Course. Called a Motus tower, it was installed as part of a U.S. Fish and Wildlife Service grant to establish towers across the state of Michigan. Ann Arbor was the last gap in the chain of towers that needed to be filled, so NAP was excited to facilitate the project.

Motus antennae detect birds and other organisms fitted with transmitter tags within a 15 km radius of each tower. Our tower has already detected two state listed birds: Eastern Whip-poor-will (T), and Kirtland's Warbler (E).



Left: Becky Hand and Juliet Berger from NAP with John Brenneman and Rich Keith from Kalamazoo Nature Center

Information gained from Motus towers has immensely expanded researchers' knowledge of migration patterns in various species of birds, bats, and insects like Monarch butterflies and dragonflies. Knowing migration patterns will help us to better protect critical habitat for the migrating animals we love.

AP YEAR END REPORT

Wildlife tracking tower in Ann Arbor fills gap in statewide network.' Check out this October Michigan Radio article covering the tower installation.





NOVEMBER 18, 2023

PHOTO MONITORING

567
photos

26
parks

31 volunteers

209 hours volunteered

MILLER NATURE AREA PRECISE POINT 11

PROGRESS FROM SHRUB CUTTING BY PARK STEWARDS.



LESLIE WOODS NATURE AREA PRECISE POINT 3B

HONEYSUCKLE AFTER A FALL BURN.



BUTTERFLY SURVEY

302 37
butterflies species

Butterfly volunteers traversed a total of 51 trail miles while conducting surveys!

PEARL **CRESCENT**

Most observed native species



EASTERN TIGER SWALLOWTAIL

Native species observed at the most parks



ENVIRONMENTAL EDUCATION

Creative Adventures with the Natural World

Local K-5 students and their families spent time outside this fall engaging with nature by thinking like a squirrel, identifying insect habitat, and practicing fire-building techniques. Fun nature crafts tied the learning together with hands-on practice and mementos to bring home.

















ENVIRONMENTAL EDUCATION: SENIORS

Artistic Exploration and Enrichment

Adults at the Ann Arbor Senior Center painted, printed, and journaled their way to a deeper appreciation of nature.

Recreating what we've observed in nature through creative practice can help reinforce the knowledge we've gained.

Painting native bird species can help break down the visual cues we use to identify them in the field.

Carving a leaf to create a block print allows the shape, lines, and textures to stand out in our mind's eye.

Constructing a journal for nature observations strengthens our connections to nature and our time spent there.

These simple techniques can bring much beauty and joy to artists and naturalists at any level.







Check out this interactive map of the Greenbelt properties.

Buy-Protect-Sell, Success

In 2003, residents of Ann Arbor approved the Open Space and **Parkland Preservation** Millage, authorizing a 30- year, 0.5 mil tax levy to provide funds for the preservation and protection of public and private open space, natural habitats, and agricultural lands in the Greenbelt area surrounding Ann Arbor.



After a year of planning, the City of Ann Arbor Greenbelt program issued its first-ever Request for Proposal (RFP) over the summer for farmers interested in purchasing conserved farmland at a reduced price via the Greenbelt's buy-protect-sell (BPS) initiative, a new effort to create equitable and affordable farmland purchasing opportunities surrounding Ann Arbor, adding more social benefits on top of continued land preservation.

This first purchasing opportunity was a farm on Nollar Road in Northfield Township being sold in two parts: a 20acre "North Parcel" and a 34 -acre "South Parcel." Applicants could submit proposals to purchase either parcel, or both. Proposals mostly consisted of a business plan; the sale prices of the parcels were fixed. Six complete, competitive proposals from all local applicants were received.

At their December 18th meeting, City Council passed resolutions to sell the North Parcel to Matt Demmon and the South Parcel to Kristen Muelhauser, Both awardees operate their successful, fiveyear-old businesses on leased land and have not been able to access the costly land ownership market.

To date, the Greenbelt program has successfully helped to preserve **7,600** + acres of land.

Demmon's business, Feral Flora, grows native plants and seed for use in restoration projects and landscaping. Kristen's business, Raindance Organic Farm, grows vegetables and flowers and sells them at the Ann Arbor Farmers Market. Both will now be able to invest in the health of their land, have greater stability, and grow their businesses.



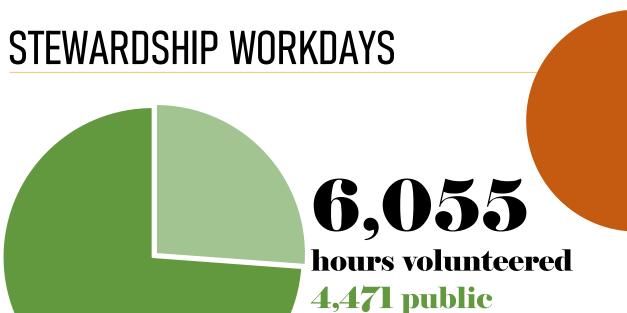


"It was a great event!"

"WELL ORGANIZED AND LOTS OF GOOD ENERGY FROM THE STAFF AND LEAD VOLUNTEER. THE NATURE WALK WAS INFORMATION PACKED."

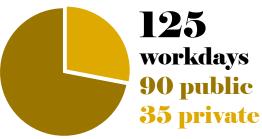
"I thought the staff did an excellent job leading this event. They were especially great at emphasizing the value/importance of the work we had done which I think was particularly good for the youngest volunteers."





1,584 private

1,314
workday volunteers
654 public
660 private







Some state of the state of the

Arbor Psychology Group
Community High School
Concordia University Cardinals Baseball
Concordia University
Criteo
Cub Scout Pack 131
EMU Women's Swim & Dive
EMU The Goats
Everactive
Friends of Dicken Woods
General Motors GPD Track Team
Girl Scout Troop 7
Girl Scout Troup 40739

Girl Scout Troup 41602
Greenhills School
Hebrew Day School of Ann Arbor
LGBT Outdoors
Navitas Systems
Singh & Kaur Foundation
St. Mary Student Parish
TRC
Tree Town Trail Runners
UM AKA Beta Eta
UM Alpha Epsilon Delta
UM Alpha Tau Pi

UM Beta Mu Epsilon

UM Cernak Lab
UM Chi Epsilon
UM Chi Psi
UM Delta Gamma
UM Epsilon Eta
UM Ford School of Public Policy
UM Global CO2 Initiative Student Assoc.
UM LSA Student Government
UM Medical Scientist Training Program
UM Michigan Community Scholars
UM Net Impact Undergraduate Chapter
UM Program in the Environment Club
UM Redefined

UM Running Club/Mrun
UM Sigma Gamma Tau
UM Tau Beta Pi
UM Tau Beta Sigma
Verizon
Washtenaw Audubon Society
Yale Day of Service
Youth for Understanding
Youth Volunteer Corps



LINKS AND SOURCES

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- Eastern milksnake https://www.inaturalist.org/taxa/515419-Lampropeltistriangulum

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- Michigan Natural Features Inventory, queen snakes https://mnfi.anr.msu.edu/species/description/11511/regina-septemvittata
- Queen snake https://www.inaturalist.org/taxa/28850-Regina-septemvittata

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- Queen snake https://www.inaturalist.org/taxa/2885o-Regina-septemvittata
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- Black-crowned Night Heron https://ebird.org/species/bcnher
- Marsh Wren https://ebird.org/species/marwre/
- Red-shouldered Hawk https://ebird.org/species/reshaw
- Trumpeter Swan https://ebird.org/species/truswa

- Red-headed Woodpecker https://ebird.org/species/rehwoo/
- Eastern Bluebird https://ebird.org/species/easblu/
- Black-capped Chickadee https://ebird.org/species/bkcchi/
- House Wren https://ebird.org/species/houwre/
- Tree Swallow https://ebird.org/species/treswa/

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Photo Monitoring Web Map –
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- Eastern tiger swallowtail https://www.inaturalist.org/taxa/60551-Papilio-glaucus
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- Greenbelt interactive map https://www2.a2gov.org/GIS/MapAnnArbor/Greenbelt/

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• NAP Group Volunteering Form - https://www.a2gov.org/departments/Parks-Recreation/NAP/volunteering/Pages/Volunteer-Sign-Up-Form.aspx

PHOTO CREDITS

Cover Paper birch at Bluffs Nature Area, April 2023, by Photo Monitoring volunteer, **Audra Eddy**

 ${f Page~2}$ Controlled burn at Huron Parkway Nature Area, May 2023, by NAP Photographer

Page 4 Gallup Park Wet Meadow Precise Point 6B, May, June, early August, and late August 2023, by Photo Monitoring volunteer

 ${f Page 5}$ Stapp Nature Area Precise Point 7, April 2023, by Photo Monitoring volunteer

Page 6 All photos by NAP Photographer: Burn crew member walking through a burn at Cedar Bend Nature Area, March 2023; Common milkweed seeds; Crew member Gabby DeMott cutting a downed tree with a chainsaw

Page 7 Volunteers pull herbaceous invasives at Mary Beth Doyle Park, April 2023, by NAP Photographer; UM Epsilon Eta volunteers at Mary Beth Doyle Park, October 2023, by NAP Photographer

 ${f Page~8}$ Stapp Nature Area Precise Point 8 (reversed), May 2023, by NAP Photo Monitoring volunteer

Page 9 All photos by NAP Photographer: Controlled Burn Crew volunteer and staff at the water truck, May 2023; Controlled Burn Crew volunteers monitor a fire, May 2023; Controlled Burn Crew volunteers from AmeriCorps, November 2023; Controlled Burn Crew volunteer Dave, May 2023; Controlled Burn Crew volunteer Kristin, May 2023; Controlled Burn Crew volunteer Katy, May 2023; Controlled Burn Crew volunteers from AmeriCorps, November 2023; Controlled Burn Crew staff Leah, November 2023; Buhr Park wet meadow burn aerial, March 2023

Page 10 All photos by NAP drone operator: Aerial photograph of Scarlett Mitchell Nature Area, October 2023; Aerial photograph of Leslie Golf Course controlled burn, March 2023; Aerial photograph of Leslie Golf Course controlled burn, March 2023; Aerial photograph of conservation crew working at Scarlett Mitchell Nature Area, October 2023

Page II All photos by NAP Photographer: Volunteers cutting shrubs at Foxfire West Nature Area, December 2023; Volunteer holding up herbaceous invasive plants at Mary Beth Doyle Park, April 2023

Page 12 Wood frog, by Amphibian and Reptile Survey volunteer, Antoni Wierzbicki; Tiger salamander, by Amphibian and Reptile Survey volunteer, Antoni Wierzbicki; Painted turtle laying eggs, by NAP Photographer; Eastern milk snake, by Amphibian and Reptile Survey volunteer, Antoni Wierzbicki

 $\textbf{Page 13} \ \textbf{Queen snake in buckthorn branches, by Amphibian and Reptile Survey volunteer, \textbf{Antoni Wierzbicki}$

Page 14 Three queen snakes in shrub branches, by Amphibian and Reptile Survey volunteer, Antoni Wierzbicki; Queen snake on branch, by Amphibian and Reptile Survey volunteer, Antoni Wierzbicki

Page 15 Young Black-crowned Night-herons, by NAP Photographer; Eastern Bluebird with green darner dragonfly on bird house, by NAP Photographer

Page 16 *All photos by NAP Photographer*: Motus tower; Becky Hand and Juliet Berger from NAP with John Brenneman and Rich Keith from Kalamazoo Nature Center; Equipment installing Motus tower; "NAPbirds" inscription in Motus tower base

Page 17 Miller Nature Area Precise Point 11, September 2022 and April 2023, by Photo Monitoring volunteer; Leslie Woods Nature Area Precise Point 3B, early and late November 2023, by Photo Monitoring volunteer

Page 18 Eastern tiger swallowtail butterfly,

https://commons.m.wikimedia.org/wiki/File:Eastern_Tiger_Swallowtail_on_a_Flower_Pollinating.jpg; Pearl crescent butterfly, by Jerry A. Payne, USDA Agricultural Research Service, Bugwood.org"

 ${f Page 19}$ Photos of children and families at Environmental Education events, 2023, by NAP Photographer

Page 20 Photos of Environmental Education participants at the Ann Arbor Senior Center, by NAP Photographer; Sketches by Environmental Education participants at the Ann Arbor Senior Center

Page 21 Both photos of Nollar Road property by NAP Photographer

Page 22 All photos by NAP Photographer: Group of volunteers at Ruthven Nature Area, September 2023; UM Alpha Kappa Alpha at Cedar Bend Nature Area, April 2023; UM Tau Beta Pi at Ruthven Nature Area, September 2023

Page 23 Volunteer pulling herbaceous invasives at Bird Hills Nature Area, April 2023, by NAP Photographer; Singh & Kaur Foundation at Leslie Woods Nature Area, October 2023, by NAP Photographer

Page 25 All photos of groups at private workdays by NAP Photographer; Large group photo (left) – Alpha Kappa Alpha at Cedar Bend Nature Area, April 2023; Large group photo (right) – Concordia University Men's Baseball at Kuebler Langford Nature Area, December 2023