

From: beth collins <rdhbeth@gmail.com>

Sent: Sunday, April 22, 2018 9:17 AM

To: Kowalski, Matthew <MKowalski@a2gov.org>; Philip McMillion <philcmill@yahoo.com>; Planning <Planning@a2gov.org>; Warpehoski, Chuck <CWarpehoski@a2gov.org>; Smith, Chip <ChSmith@a2gov.org>

Subject: please put this in the packet for PC also

4-20-2018

To Planning Commission and Planning Staff,
Please review this and Do Not Approve Lockwood to Re Zone this parcel of land.

On April 7 2008 a Resolution was passed by the Mayor and City Council of Ann Arbor to provide the citizens of Ann Arbor with additional opportunities for early and effective citizen participation for Planned Projects, Planned Unit Developments and Conditional Zoning Applications.

It states this was to “foster improved, ongoing communications between developers and the public for these types of developments by ensuring that citizens have an adequate opportunity to learn about applications that affect them, as well as an opportunity to work with developers to resolve concerns at an earlier stage of the City approval process.”

This has not happened at all on the proposed Lockwood PUD Project. They had one Citizens Participation Meeting in Dec 2016 and the site plan was of an **E shape building** (I have attached the picture of the first proposal), appearing much smaller, on the far eastern side of the lot, leaving many trees in place around the existing homes. Many residents did not object to this drawing, and there is a need for affordable senior housing.

It was, in this first plan, about 140 ft away from my fence line.....

Then came the extremely large **X shaped building** in November 2017, with no space between homes and this project, and inconsiderately placing the loading zone and dumpsters on the single family homes fence line. The building now, in the second plan, was 50 feet away from my fence line.

When residents saw this, they were horrified. We were immediately in touch with city planning staff, Matt Kowalski, both of our 5th ward Councilmembers, and not one person explained these PUD ordinances which state we could all work together. Staff was helpful, but only explaining things and telling me why this is the way it is. Mr. Kowalski actually had me call Mark Korinek and try to discuss things. They said we should request another Citizens Participation Meeting, and Lockwood refused. Staff explained that this is all by the book. They make sure that all the T's are crossed and boxes are checked to **PUSH THIS THROUGH.**

Yet, the citizens' surely were not being worked with. Planning staff was always friendly, but we were not involved in solutions or changes. Yes, the access to Ferry was eliminated, but that was due to the pavers not being to code, I believe for a fire access. And the dumpster was moved 10 feet from my home to my neighbors. If I had not read the eTrakit daily and kept bombarding Planning with emails, I would not have been in the loop at all.

Here is what I have read in the PUD ordinance: According to PUD regulations 5:80 (5) Zoning (iv):

If the proposal does not conform to the adopted master plan and policies, there must be **sufficient compelling justification for departure.**

Lockwood makes their own interpretation of the master plan and policies and re-words things to fabricate why this should become a commercial entity in the middle of a single-family neighborhood because it has residential units, but it will be at the resident's expense. NO, our neighborhood has been here since before the car dealerships, before the Gelman Plume, and before Webers and all the hotels. Yes, Jackson Rd is commercialized, but our quadrant is NOT and should NOT be commercialized. We are viable single-family homes with residents who DO NOT want a 5-story commercial apartment building in the middle of our neighborhood.

(6) (c) states.... The use or uses proposed shall not have a **detrimental effect on public utilities or SURROUNDING PROPERTIES.** This project will severely diminish the residents quality of life and have a significant detrimental effect.

(6) (g) states....there must be safe, convenient, uncongested, and well-defined vehicular and pedestrian circulation within. With approximately 14 semi-trucks per week and trash pick-up 3 times a week, all doing 3-point turning around, this is not safe or uncongested. And it will be NOISY FOR RESIDENTS 10 FEET AWAY, 50 FEET AWAY, 300 FEET AWAY WILL HERE THE BEEPING AND TRUCK ENGINES MANY TIMES A WEEK. Ms. Redinger never would return my emails. This isn't working together with the residents.

(6) (h) states.... Disturbance of existing **natural features**, historical features, and historically significant architectural features of the the district shall be limited to the **minimum** necessary to allow a reasonable use of the land and the **BENEFIT TO THE COMMUNITY SHALL BE SUBSTANTIALLY GREATER THAN ANY NEGATIVE IMPACTS.**

THIS PROJECT IS TOO LARGE FOR THE VERY SMALL RESIDENTIAL LOT. THERE IS A HISTORICAL PRECIOUS GLACIER MADE LAKE ADJACENT AND THE ONLY BENEFITS ARE

- 19 units of affordable housing...FOR ONLY 15 YRS.

- a playscape

- a sidewalk

I have attached an article from NAP Newsletter, start on pg #3 Park Focus. Please read this article to better understand how vulnerable this First Sister Lake is and why we should protect them.

The developer never worked with the residents.

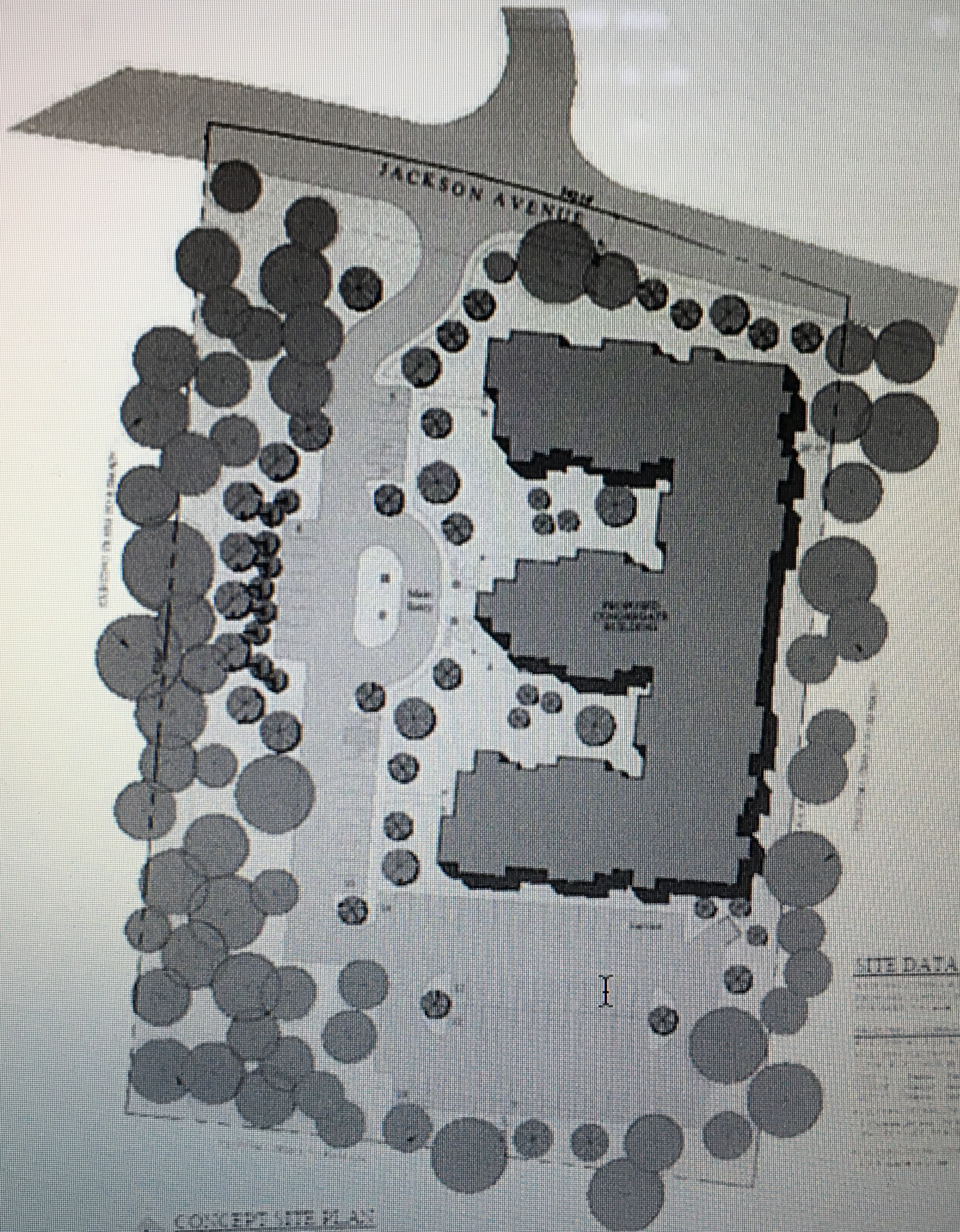
The size should be changed, to 2 stories and the shape should be reconfigured again to not place semi-trucks on the residents fence line. We are not against senior housing or affordable housing. This is the wrong location for this massive building.

I asked Lockwood about the possibility of moving over across the street where the Michigan Inn was, and they stated, "**that would be too noisy for our residents**". Yes, and Lockwood is too noisy for us residents too.

From:

The Sister Lakes Neighborhood

Residents Against Lockwood and Rezone



CONCEPT SITE PLAN

SITE DATA

Site Area	1.25 Acres
Building Area	15,000 sq. ft.
Parking Spaces	100
Planting	100 trees
Site Cost	\$1,000,000
Construction Cost	\$2,000,000
Operating Cost	\$500,000
Revenue	\$1,000,000
Net Income	\$500,000
Payback Period	4 years
Internal Rate of Return	15%
Net Present Value	\$1,000,000
Benefit-Cost Ratio	1.5
Profitability Index	1.5
Payback Period	4 years
Internal Rate of Return	15%
Net Present Value	\$1,000,000
Benefit-Cost Ratio	1.5
Profitability Index	1.5

Natural Area Preservation News

Volume 1, Number 2

Summer 1996



Parks & Recreation
CITY OF ANN ARBOR

Reflections From the Field by Greg Vaclavek

*Beneath the majestic oaks, spots of sunlight danced gracefully on a wavy sea of trout lilies. The honeysuckle leaves occasionally wobbled in the wind, the branches swayed in the cool morning breeze. I grabbed the honeysuckle stem with both hands and yanked it to one side and then the other; the roots tore out of the ground, **rip!!** I stood there holding the mangled shrub in my hands.*

As I looked at the weed I had just pulled, I got to thinking, "What are weeds and why do people pull them?" Obviously people have different opinions about "what is" and "what is not" a weed. After a moment of pondering, I came to the conclusion that a weed is simply a plant that is not wanted.

Pulling weeds is an effort to control the natural environment to some degree. In a way it is like air conditioning, electric lights or pavement. A major difference, though, is that weed pulling in the fresh air can bring us closer to the natural environment, while the others lead us further away. I scratched my head and reflected on the consequences of my actions.

Although I had pulled but one measly shrub from the forest, the impact is felt by the forest as a whole. With one less honeysuckle, more water, nutrients and space are available to the oaks, wild geraniums and other surrounding plants. More sunlight can reach the forest floor and stimulate seeds that lay dormant in the soil. Over time the honeysuckle will decompose and return to the soil from which it came. While the forest changes and adapts in the wake of disturbance, honeysuckle and other invasives have a long reaching negative impact through the exclusion of native plants.

Reflecting on the natural cycles of the forest, consider the value and diversity native plants bring to the circle of life. This cycle is reflected in the life of a plant as it grows from seed to maturity, and in the fires that burn in our city's finest natural areas. The ecosystem can be thought of as fibers woven together to form the fabric of life on earth. We are a part of that fabric.

The mission of the Natural Area Preservation Division is to preserve, protect, and care for the natural areas of Ann Arbor, especially those in the City's park and recreation system.

Natural Area Preservation is a Division of the City of Ann Arbor Department of Parks and Recreation.

Our **NEW** Address is:

1831 Traver Road,
Ann Arbor, MI 48105
313-994-4834 or 996-3266

Program Coordinator:

David Borneman

Stewardship Coordinator:

David Mindell

Volunteer Coordinator:

Catriona Mortell

NAP Assistant:

Deb Paxton

Conservation Workers:

Mike Levine, Cara
Rockwell, Greg Vaclavek

Inventory Staff:

Bridget Fahey, Tim
Howard, Mike Kielb, Bev
Walters, Dave Warners

For up-to-date information on stewardship activities call the 'hotline' at 313-996-3266

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WHAT A SPRING!

Seventeen prescribed burns, zero mishaps! These are numbers I'm extremely proud of. The spring 1996 burn season surpassed my expectations, thanks to many long days by the staff and our volunteer burn crew. Keep an eye on the spots we've burned, and you'll see why we are so eager to use such a powerful, efficient, and natural management tool in our parks.

Meanwhile, this year's inventory effort is progressing nicely, with many volunteers helping with our frog and toad, butterfly, and breeding bird surveys. We're already filling gaps in last year's data. I'm anxious to get all the data compiled so we can use it in a new publication we're working on, *A Guide to the Natural Communities of the Huron River in Ann Arbor*.

To top this off, we're in the process of moving! The corner office at 415 W. Washington was a fine place from which to launch the NAP program, but we've quickly outgrown that tiny space. By the time you read these words, all the NAP staff should be re-united in our new headquarters at the Leslie Science Center at 1831 Traver Road. This marks a new beginning for us - one that we hope you will be a part of. Please join us for any of the events listed in our rather lengthy calendar in this newsletter. I think you'll find something there to suit your taste!

-Dave Borneman, Natural Area Preservation Coordinator

NAP-penings

Stewardship Field Day - The NAP staff was proud to host the first gathering of a new network of professional natural area managers in Southeast Michigan. Representatives from MDNR, The Nature Conservancy, U of M, Washtenaw County and other land management organizations and agencies met May 22nd to see our work at Furstenberg Park, and to discuss the finer points of invasive species control. This network will be very helpful as we plan future stewardship projects. (By the way, attendees were very impressed with all the work done at Furstenberg. Kudos to the staff and volunteers who made it happen!)

Plant Rescue! NAP is in the planning stages of developing a Plant Rescue program. This program will give 'rescuers' permission to access a site slated for development, and take native plants from there to their home gardens. The program's purpose is to allow the native plant seed source to continue in Ann Arbor, and to provide a source for native plants for home landscaping. Again, this program is in the planning stage. It is important that participants follow the guidelines being established to respect the rights of the property owners and maintain the program's integrity. If you would like to be a part of this network please contact the stewardship hotline at 996-3266. We hope the program will be up and running soon.

NAP-penings

NAP Seed Garden - The Natural Area Preservation garden is a collection of plants native to Ann Arbor. The plants here will demonstrate the beauty of native plants and serve as a seed source for future plantings. *Native* means that according to historical records these species were growing here before European settlement. Seeds and plants for this garden were gathered from within Ann Arbor's parks or "rescued" from sites that were going to be developed. Volunteers and staff have been working hard to preparing the site and we will plant at the June 1 workday. If you would like to become involved with the garden please join us or call 996-3266. As the season progresses, we urge you to walk through our garden and get a sense of the wonderful diversity of plants from our part of world.

Marshall Park will be the site of a lot of activity throughout the spring, summer and fall. Eagle Scout Barry Stiefel is coordinating a resource conservation project at Marshall, focusing on invasive species removal. Barry has already conducted a very successful workday and another is planned for mid-June. Barry is working towards the BSA William T. Hornaday Award for Distinguished Service to Natural Resource Conservation.



Park Focus: Dolph Park

by Deb Paxton

While driving on the west side of Ann Arbor, along Wagner Rd. or Jackson Rd., few people realize that they are near one of Ann Arbor's most beautiful parks: Dolph Park. Besides housing the only natural lakes in Ann Arbor, Dolph Park is a Nature Preserve and a local hot spot for birdwatching. The marshes, and lakes found in Dolph Park are ideal habitats for many wetland birds such as: Great Blue Herons, Green Herons, and Marsh Wrens. The trails running through Dolph Park are situated to offer fantastic views for birdwatching without disturbing the wildlife. On any misty summer morning, a stroll through the park will offer stunning colors and wildlife, accented by echoing birdsong.

Also to be seen on misty mornings are fishermen, busily casting off from either a dock or boats carried to the lake from an access street. The lakes in Dolph Park, the First and Second Sister Lakes, are home to freshwater fish such as: bluegill, largemouth bass, yellow perch, and black crappie. While the fish may not be prize-winning size, fishing at Dolph Park is a peaceful and worthwhile way to spend an afternoon. Some diehard fishermen have been known to ice fish in the winter.

First and Second Sister Lakes are the crowning jewels of Dolph Park. These lakes are "kettle lakes"; they were formed from huge chunks of ice left behind when the Wisconsin Glacier receded thousands of years ago. The ice chunks were subsequently covered by soil and melted to become lakes. The lakes contribute to the uniqueness of Dolph Park. Without the lakes and their surrounding marshes, the fish, birds, and other wetland dependent wildlife would not be there.

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Fading Embers

by David Mindell

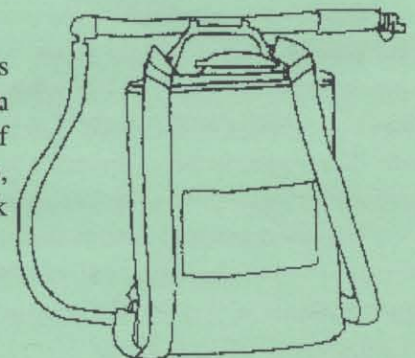
After two glowing months of igniting and extinguishing fires throughout Ann Arbor, the Natural Area Preservation Division's prescribed burn season has come to a close. Between March 18th and May 14th, we were able to complete 17 burns in 15 days, burning more than 110 acres of prairies, savannas, and woodlands.

The season was a great learning experience for all involved, as we continually improved our procedure for public notification, weather data collection, and burn crew briefing. While all those who participated in the burns were trained at the start of the season, there was no substitute for "flame on" experience in learning how best to work together and how best to complete the needed tasks. Early in the season our day of burn preparations took a long time, but we eventually streamlined our procedures and equipment and became a well-oiled machine.

With each burn we also gained a greater understanding of how humidity, fuel moisture, and wind speed affect the intensity of the burns within the varying ecosystem types. Follow-up evaluation at many of the burn sites has shown significant success in reaching our objectives. For example, on April 11th we conducted a burn at Barton Park. This was a 75 degree, 30% humidity day. The fire was extremely hot and complete (we burned virtually 100% of the intended area). One month after the burn, we see extensive top-kill of all types of shrubs in the burned area. It is clear that we are well on our way to pushing back the encroaching shrubs, and setting the stage for an open prairie community. While most other burns were not as intense as Barton, there was a significant reduction in the shrub coverage and excellent blackening of the ground to stimulate wildflower or prairie-type grass growth.

We received invaluable assistance from many volunteers, all of whom were able to come to our burn sites in the middle of the day, with very little notice. Leading the way, and the recipient of our Statue of Liberty ("a torch in the hand is worth two fires in the bush") award was Jan Wolter who became an honorary NAP staff member by attending all but three of the burns. Hardhats off to Jan! Thanks to the assistance of all our Burn Crew volunteers; Karen Lombard, Barbara Powell, Jacqueline Courteau, Rick Witten, Chris Lehr, Lisa Brush and David Fox. Staff members from The Nature Conservancy also assisted us at one of the burns. The Ann Arbor City and Township Fire Departments and Conrail staff were all extremely helpful in coordinating the burns with us. Finally, the program's success was made possible with assistance and equipment from many in Park and Recreation's Forestry Division. Many thanks to all.

While the fires are over for this season, we plan to continue burns again this fall (though not as many). And of course, there's always next spring. So, every time you see smoke, be sure to think of your friends at NAP.



NAP Volunteer Stewardship

By Catriona Mortell

Volunteering is truly giving of yourself

That's what my fortune cookie said. I thought it kind of strange to have gotten that cookie. I could have taken the other one which said something about procrastinating, but perhaps there is some twist of fate connected with those cookies. The fortune means a lot to me and I wanted to pass it on to you. We hope you know just how much we appreciate the time spent volunteering with Natural Area Preservation.

Huron River Day will be held July 14th. The celebration at Gallup Park will have canoe races, children's activities, information from local environmental groups and music. The grand opening and dedication of Furstenberg Park will also take place on this day. The theme this year for Huron River Day honors the volunteer. Natural Area Preservation volunteers have participated in 9 workdays at Furstenberg Park, and have put in 217 hours there. If you were part of the planning stages of Furstenberg Park, or if you have participated in the workdays there, please join the park dedication at noon at the Gallup-to-Furstenberg bridge. We'd like to publicly thank you for your help with the new park.

We have lots of events this summer - hands in the dirt and eyes to the sky-workdays and walks. If you missed the kickoff sessions of the **Natural Features Inventory** for Butterflies or Birds don't fret! Mike Kielb welcomes your assistance in inventorying nesting birds, and butterflies found in the parks. Give him a call at 995-4357, or join one of the walks and start counting! A note about the walks: Bird walks will be held rain or shine unless weather is severe. Butterfly walks may be canceled due to inclement weather.

Workdays are your chance to get mean and dirty with those horrible invasives that are pushing out the native plants. We really need your help on these days. While the NAP staff can make some impact, we need the support of the community and our volunteers to really make a difference in the parks. Three hours on a Saturday and all the bagels and 'nutter butters' you can stomach - *what more fun can you have?* So the plea goes out - Please try to join us at least one Saturday a month! We do need your help. Spread the word to your co-workers and neighbors too! This summer we will be all over town: At our new garden site at the Project Grow garden at the Leslie Science Center, on the northeast side of town at Dhu Varren, Oakwoods, and Marshall Parks, on the west side of town at Hansen and Dolph Parks, on the south side of town at Brown Park, and along the river at Argo Park.

NAP is also considering a few weekday **evening work sessions** at some of the smaller neighborhood parks. We have gotten calls from park neighbors expressing concern for their neighborhood gems. Some of the parks we are considering include: Kimberly Colony, Maryfield Wildwood, and Greenview Parks. Can you let us know if you are interested in weekday evening work sessions during the summer? We expect to work two to three hours doing the usual stuff.

Finally if you still haven't sent in the volunteer information profile, found on page seven of the last newsletter, please do! The profile gives us a bit more information about you and the types of projects you are interested in. If you need a form, please call 996-3266.

Other Volunteer Stewardship Opportunities:

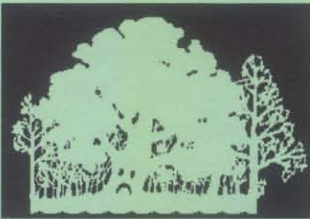
Join the prairie restoration at **UM Nichols Arboretum** workdays July 13 and August 17, from 9 - 12 noon. For more information contact: Susan Letz at 763-5832

The **Nature Conservancy** will have volunteer stewardship days at the Ives Road Fen Preserve near Tecumseh. Work will include removing shrubs, and pulling garlic mustard and controlling purple loosestrife on the floodplain. June 22, 29; July 13, 27 (9am to 1pm). Please call Julie Taylor at the Lansing office at 517 - 332 - 1741 if you plan on attending. A more local project, in Ypsilanti, will take place this fall.

The **Huron River Watershed Council** has many volunteer opportunities including the Stream Monitoring program. Get your feet wet and adopt a stream. Call Joan Martin at 769-5971.

Froggie went a courtin'

This year marks Ann Arbor's second annual frog survey, relying on volunteers to obtain the bulk of the data. We have more than thirty volunteers spreading out across the city to identify frog and toad species in over one hundred sites. To date, our volunteers have found numerous spring peepers, chorus frogs, and scattered wood frogs. In the past few weeks, the same wetlands have been taken over by American toads and gray tree frogs. Leopard frogs have also been found. We look forward to hearing more green frogs and bull frogs as the summer progresses. We are interested in cataloging other *herp* species as well, if you come across a snake, turtle, or salamander please call our herpetologist, Bridget Fahey, at 930-0364. Join us on June 12th for a frog survey drive!



NAP VOLUNTEER CALENDAR SUMMER 1996



June

1 Saturday 10 - 1:00 pm
Garden Party Workday! Soil turning and seed sowing. Join us at the Project Grow site at the Leslie Science Center.

8 Saturday 8 - 10:00 am
Natural Features Inventory **Bird Walk** with Mike Kielb.
and 10 - 12 noon
Natural Features Inventory **Butterfly Walk** with Mike Kielb.
For both meet at Foster Prairie in Barton Park. Located 0.3 mile NW of the Barton Dam parking lot.

11 Tuesday 5 - 6:00 pm
Natural Features Inventory **Butterfly Walk** with Mike Kielb.
and 6 - 8:00 pm
Natural Features Inventory **Bird walk** with Mike Kielb.
Both at Maple/M14, meet along Maple, north of M-14.

12 Wednesday 8:30 - 10:30 pm
Natural Features Inventory **Frog Survey** drive with Bridget Fahey. Meet at the Leslie Science Center parking lot to join the frog van.

15 Saturday 10 - 1:00 pm
Workday at Marshall Park! It's a garlic mustard pulling day, co-coordinated by Eagle Scout Barry Steifel. Meet at the Marshall Park parking lot, off Dixboro Rd., just north of Plymouth Rd.

22 Saturday 8 - 10:00 am
Natural Features Inventory **Bird Walk** with Mike Kielb.
and 10 - 12:00 noon
Natural Features Inventory **Butterfly Walk** with Mike Kielb.
For both meet at Brown Park, meet at the Verle St. entrance, West of Platt Rd.

29 Saturday 10 - 1:00 pm
Workday at Dolph Park! We will be removing invasives and doing trail work.

July

2 Tuesday 5 - 7:00 pm
Natural Features Inventory **Butterfly Walk** with Mike Kielb. Meet at Pioneer High School parking lot on 7th street, to walk Pioneer H.S. grounds and Greenview Park.

3 Wednesday 6 - 8:00 pm
Natural Features Inventory **Bird Walk** with Mike Kielb. Meet at Pioneer High School parking lot on 7th street, to walk Pioneer High School grounds and Greenview Park.

10 Wednesday 5 - 7:00 pm
Natural Features Inventory **Butterfly Walk** with Mike Kielb, at Barton Park. Meet at the parking lot by the dam on Huron River Dr.

11 Thursday 6 - 8:00 pm
Natural Features Inventory **Bird Walk** with Mike Kielb, at Bird Hills Park. Meet at the parking lot on Newport Rd.

13 Saturday 10 - 1:00 pm
Workday at Hansen Park. Join us in removing invasive plants. Meet at the parking lot north of the Church lot, on Maple Rd. between Liberty and Pauline.

14 Sunday 8:30 - 5:00 pm
Huron River Day at Gallup Park!
Join the fun and receive recognition as a *Natural Area Preservation Volunteer*. and walks are scheduled at:
10:00am **Birding** through Gallup/Furstenberg with Mike Kielb as part of the Natural Features Inventory.
12:30pm General **Stewardship** walk through Furstenberg Park.
2:00pm **Butterflies** in Gallup/Furstenberg with Mike Kielb as part of the Natural Features Inventory.

20 Saturday 10 - 1:00 pm
Workday at Dhu Varren Park, removing invasives. Meet on DhuVarren Rd between Nixon and Pontiac Trail.

23 Tuesday 6 - 8:00 pm
Natural Features Inventory **Bird Walk** with Mike Kielb at Black Pond Woods. Meet at the Leslie Science Center parking lot, on Traver Rd.

24 Wednesday 5 - 7:00 pm
Natural Features Inventory **Butterfly Walk** with Mike Kielb, at Furstenberg Park. Meet at the parking lot on Fuller Rd.

28 Sunday 8 - 10:00 am
Natural Features Inventory **Bird Walk** with Mike Kielb.
and 10 - 12:00 noon
Natural Features Inventory **Butterfly Walk** with Mike Kielb.
Both are at Forest Park and Parker Mill. Meet at the Parker Mill parking lot on Geddes Rd. (East of US 23)

August

3 Saturday 10 - 1:00 pm
Workday at Argo Park. Trail work and removing invasives. Meet at the Argo Park lot, east of the canoe livery on Longshore Dr.
There will also be a floating (canoeing) workday, sponsored by the Professional Volunteer Corps (PVC) on the Huron River side of Argo Park: 8:30 - 11:30am PVC members must sign up in advance, and will meet at the Argo Canoe Livery.

24 Saturday 10 - 1:00 pm
Workday at Oakwoods Park, removing invasives. Meet at on Green Road, between east Nixon

September - Many more events to come! Beginning Saturday September 7th from 10 - 1pm with a workday at Brown Park.

Please call the volunteer stewardship hotline for updated information on any of these events and for directions to these spots: **996-3266**. There is a taped, updated message on ext. 1 of this number - call any time.

Restoration Technique: Herbicide Use in Our Landscape

by David Mindell

Despite their widespread negative image in the environmental community, herbicides have proven to be an invaluable tool in restoring degraded ecosystems. When used sparingly, the application of an herbicide to unwanted invasives can kill the targeted plants, often with less damage to the surrounding site than other manual removal techniques.

The Natural Area Preservation Division uses a variety of herbicides, tailoring their use and type according to the season and the specific needs dictated by the area in question. The most widespread pests that NAP deals with on a regular basis--common and glossy buckthorn, honeysuckle, and privet--all resprout from the base of the plant quite vigorously if the roots themselves are not killed or removed. This means that simply cutting the plant with loppers or a chain saw will result in a dense growth of that same plant during the next growing season; where there once was a single stem, five to fifteen might spring up.

Rather than cutting, we might try to "grub out" the offending plant--using digging tools to uproot the shrub. While we actively use this approach in many parks, in some circumstances (depending on the type of soil and plant communities growing there), it can be very disruptive to nearby plants or seeds.

All herbicides are applied only by applicators licensed by the State's Department of Agriculture. Prior to application, we call all neighbors within 500 feet who have asked to be notified, and we post signs throughout the site indicating the type of herbicide being used, its hazard rating, the date of application, and the number to call for additional information. The signs are posted for 48 hours.

To date, NAP has used three different types of herbicide, all of which are "systemic," meaning that they are absorbed and move through the plant internally, killing it at the roots. All three are painted directly on the stem or cut surface, minimizing its movement to "non-target" plants. When we are able to apply the herbicide immediately after cutting the brush, we use *Roundup*. This product is painted onto the cut surface with a sponge-like applicator. Cutting the plant essentially creates a break in a vacuum within the plant--the pressure is higher in the surrounding air than in the plant, so the herbicide is quickly absorbed. Of available herbicides on the market, *Roundup* (actually the active ingredient glyphosate) has been shown to be the least damaging to surrounding plants, since it breaks down very quickly once it comes into contact with the soil.

When we are unable to apply the herbicide so quickly after cutting (for instance at volunteer workdays when people are in the site) we often use a product called *Garlon 3A* (triclopyr). This is also painted on the cut surface. Since it does not break down in the soil quite as quickly as *Roundup*, we use this more sparingly, when there are few native species close to the "target" plants.

During late fall and winter, we often use an herbicide called *Chopper* (isopropylamine salt of imazapyr). This product has an anti-freeze component, making it convenient when the others might freeze too quickly. Like *Garlon 3A* (though less toxic), *Chopper* remains active longer than *Roundup*, but we apply it during a season when few natives are susceptible to its toxic effect.

Until our natural areas are returned to a pristine condition, we plan to continue using herbicides as a restoration tool. Used in a responsible manner, herbicides are a safe, effective technique for re-establishing diverse, native landscapes.

Research Projects

by Jacqueline Courteau

I am a graduate student in ecology at the University of Michigan. My dissertation research addresses the impact of invasive non-native shrubs - autumn olive, buckthorn, and honeysuckle - on native plants in Michigan natural areas. In particular, I am interested in whether invasive shrubs are interfering with the natural processes of regeneration and succession in forests and old fields. I am also interested in how effective different management strategies (prescribed burns, cutting and herbiciding) are in controlling invasive shrubs, and in whether native plants return following management. My research plots are located in Furstenberg, Barton and South Pond Parks.



by Dave Warners

Many of you have probably noticed different colored flags in wet areas of some of the city parks. These flags are part of a research project that I am conducting in several sites across southern Michigan, including Furstenberg Park, Gallup Wet Prairie, and Barton Park. I'm evaluating how controlled burning influences the vegetation in sedge meadow wetlands. Sedge meadows are herbaceous wetlands that are home to a variety of rare plant and animal species. Ninety-five percent of sedge meadows have been converted to agricultural or urban landscapes. In the remaining 5%, invasive shrubs are a problem. Fire is beginning to be used in sedge meadows to discourage woody species and promote the success of native herbaceous plants. My research documents which species are affected by fire and what aspect of fire stimulates these responses.

Dolph Park

Unfortunately, these wildlife refuges are in trouble. First Sister Lake, whose watershed is more developed than that of Second Sister Lake, is being contaminated by road salt, pesticides, and nutrients from lawn fertilizers. These pollutants are washed from lawns and roads by rain and carried to the lake through storm sewers. Also contributing to the nutrient levels in the lake is a nuisance Canada Goose population. These geese stay year-round at the lakes and are in such numbers that their waste is a source of pollution.

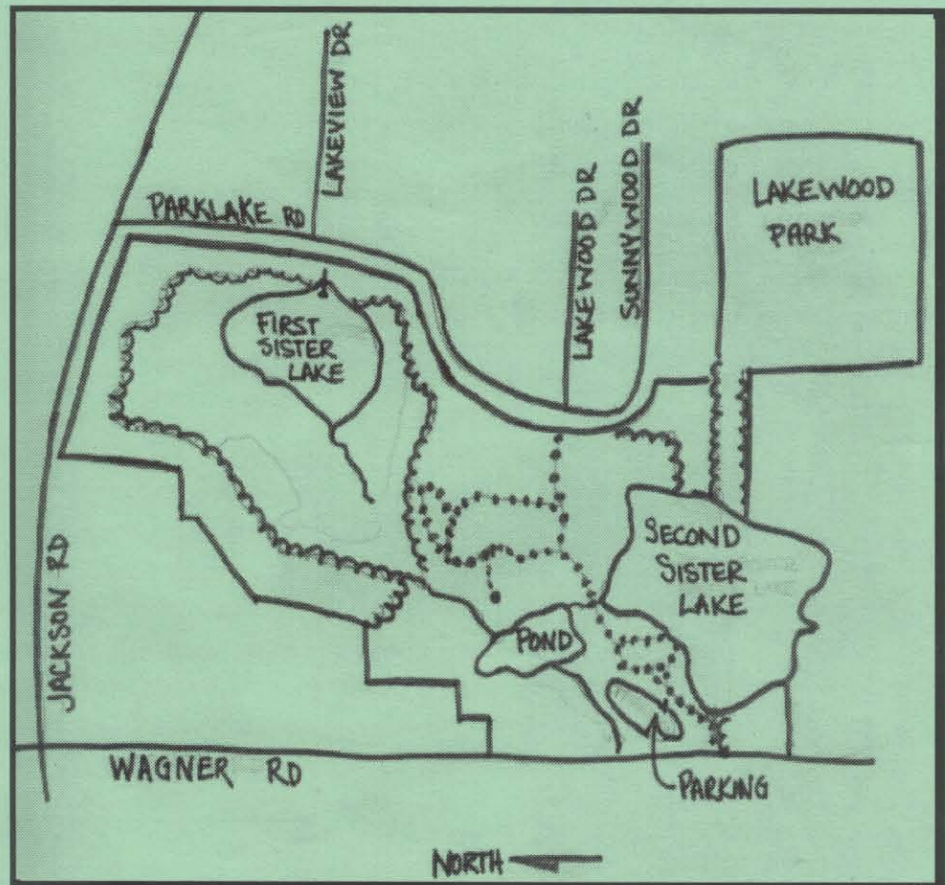
The higher levels of nutrients in the lake results in lowered oxygen levels and more plant life. The lower oxygen levels threaten fish populations, while the increased plant life is slowly filling in the lake and turning it into a marsh. Lawn fertilizers affect unwanted water plants the same way they affect lawns: they stimulate growth. With all the nutrients in First Sister Lake, the lake is becoming so clogged with plants that it's becoming a marsh.

In 1994, the City of Ann Arbor Parks and Recreation Department was awarded a grant from the US EPA. That grant was geared for the restoration and preservation of the Sister Lakes. It consisted of contracting with an environmental consulting firm to study the condition of the lakes and propose measures to clean and restore them. Proposed measures include: retrofitting a stormwater basin draining into the lakes to reduce nutrient runoff, treating the First Sister Lake with alum to reduce the levels of nutrients already in the lake, and redirecting the storm drain which flows directly into the lake.

The City of Ann Arbor has applied to the US EPA for a follow-up grant to actually implement some of the measures. Meanwhile, an interim action plan is in effect to reduce the amount of pollutants entering the lakes. Crucial to this plan is citizen cooperation, the Sister Lakes Association, a neighborhood group that has been active in the subdivisions around Dolph Park for over 20 years, has formed a Watershed Task Force. This group is developing an impressive plan for locally curtailing new pollution. Their plan involves petitioning for more frequent street sweeping within the watershed in order to reduce the amount of debris washed into the lakes, monitoring construction sites within the watershed to make sure the companies are complying with anti-pollution standards, and educating families and businesses within the watershed about how human activities affect the lakes.

Of all the components in the Watershed Task Force's plan, the education of watershed residents will be the most important and difficult. Residents must be informed of their impact on the lakes and taught how they can alter their behavior to preserve the Sister Lakes.

Hopefully, with the City, private businesses, and citizens all involved and working to preserve the Sister Lakes, the lakes can continue to be a refuge for birds, birdwatchers and stressed-out anglers.



Native Species Challenge:

By Cara Rockwell

Big bluestem *Andropogon gerardii*

"The country was what is termed 'rolling,' from some fancied resemblance to the surface of the ocean when it is just undulating with a long 'ground swell.' ... The prairie alluded to was one of those small, natural meadows, or pastures, that are to be found in Michigan, and may have contained four or five thousand acres of open land."

From "Oak Openings" by James Fenimore Cooper, 1843.

The tall grass prairie regions of the Midwest, captured in our imaginations by childhood stories of the American frontier, have long since been reduced from thousands of square miles to a few remnant areas. The pre-European settlement prairies were dominated by grasses - in particular, Big bluestem, *Andropogon gerardii* - but also included numerous sun-loving forbs. Their abundant diversity maintained by raging prairie fires, blanketed the richest soil on the continent.

Today, Big bluestem is still the most widely distributed of all prairie grasses. It flourishes in a wide range of soils, from wet clay to dry, bare sand, in which the root system may extend to depths of 12 feet. In addition to its impressive height, three to eight feet, its coloration is one of its most distinguishing features. The nodes of the plant are bluish in appearance, hence the name bluestem, as are the leaves which can also be flushed with purple. After the first frost, the leaves and stem turn a pleasing coppery hue that provides a colorful backdrop for the prairie landscape.

In the past, Big bluestem was used as a medicine for indigestion and stomach pains by the Chippewa and as a decoction made from its leaf blades to treat fevers by the Omaha. In more recent times, early settlers used it for prairie hay and as an indicator of rich sites to plant corn.

To get a glimpse of this beautiful and beneficial plant, one may visit a number of Ann Arbor parks, including Barton, Leslie Science Center and Gallup.

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