GENDER MATTERS
A 501(c)(3) MINNESOTA NON-PROFIT CORPORATION
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DULUTH, MN 55803
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~ Building SELF-ESTEEM, SELF-CONFIDENCE, SELF-ASSURANCE, and SELF-ACCEPTANCE ~

April 28, 2016

Judy Gibbs, Trail and Bikeway Coordinator
Parks and Recreation Division
City Hall – Ground Floor
411 West Superior Street
Duluth, MN 55802

Dear Ms. Gibbs,

Attached you will please find material that we have prepared relative to vernal pools and how it relates to Hartley matters.

We want to be clear that we are **NOT** asking to stop all biking or all of the activities that might go on there. We are asking that someone get enough sense to understand that what you are doing to do is destroy a whole facility, a whole ecosystem, and materials that are important to our life in one full swoop by what is being proposed.

I would be glad to answer any questions or share any other information in an effort to help you understand that what is being proposed and what is going to be done if it is not stopped will destroy Hartley Nature Center in many of the very actually very important activities that it brings to our City.

Thanking you for your attention, I remain.

Kindest personal regards,

Daniel H. Mundt

Attachments
DHM/kkb

Dan Mundt, Director

Copies to:

- Lindsay Dean, Parks and Recreation Manager
- Mayor Emily Larson
- Duluth City Council Members
- Jeffrey Cox, City Clerk/Council Secretary
- Keith Hamre, City of Duluth Director of Planning and Construction Services
- Russ Conrow, Attorney for Gender Matters
- Chuck Frederick, Editorial Page Editor, Duluth News Tribune
- Budgeteer News
- Hartley Nature Center Corporation
- Dave Zentner (Izaak Walton League)
- Kerry Juntunen, Superintendent Hermantown School District
- Jim Balmer
- Theresa Lorentz
- Pat Miner
- Tom McCabe
- Jim Olson
- David Rutford
- Mike Seyfer
- Mark Signorelli

Comments for Parks and Recreation Public Meeting
Daniel H. Mundt, Gender Matters
April 28, 2016, 5:30-7:00 p.m.
Hartley Nature Center

Vernal pools are a vital resource for northern forests. They are unique wetlands that support diverse and valuable wildlife communities. Vernal pools have been difficult to identify because they vary in size and physical characteristics. But they have certain consistent attributes including temporary springtime ponding, isolation from a water source, a lack of reproducing fish populations, and the many wildlife communities that are adapted to these conditions. They supply vital programs to the ecosystem.

An extensive study by the Michigan Natural Features Inventory, P.O. Box 30444, Lansing Michigan, 48909-7944 entitled on "Vernal Pools" substantiates and justifies the necessity of vernal pools and is an example of how other states are quantifying and protecting vernal pools. This entire study can be found at (https://mnfi.anr.msu.edu/abstracts/ecology/vernal_pool.pdf). The overview of this study reads:

> "***Overview:*** *Vernal pools are small, isolated wetlands that occur in forested settings throughout Michigan. Vernal pools experience cyclic periods of water inundation and drying, typically filling with water in the spring or fall and drying during the summer or in drought years. Substrates often consist of mineral soils underlain by an impermeable layer such as clay, and may be covered by a layer of interwoven fibrous roots and dead leaves. Though relatively small, and sometimes overlooked, vernal pools provide critical habitat for many plants and animals, including rare species with specialized adaptations for coping with temporary and variable hydroperiods. Vernal pools are also referred to as vernal ponds, ephemeral ponds, ephemeral pools, temporary pools, and seasonal wetlands."*

In the past vernal pools, despite their importance to preserving bio-diversity, have not been identified and hence protected as wetlands because of their variety in size and physical characteristics. Recently researchers at the UMD Natural Resources Research Institute (NRRI) conducted a study entitled "Minnesota's Lake Superior Coastal Program: Evaluating Vital, Small Forested Wetlands". This project was funded in part under the Coastal Zone Management Act of 1972, as amended by NOAA's Office of Ocean and Coastal Resource Management, in conjunction with Minnesota's Lake Superior Coastal Program. Additional support came from the Natural Resources Research Institute and the University of Minnesota Duluth. The entire study can be found at (http://dcommons.dumn.edu/jspui/handle/107923/3185). The purpose of the study was to document existing vernal pools on public land, as an initial step to protect them with proposed project goals to: 1) Document the locations of vernal pools in the MN coastal zone. 2) Determine the level of impact earthworm invasions on vernal pool habitat quality, persistence, and sustainability. 3) Raise awareness about the value of vernal pools and increase momentum for conservation. We are including page 3 of this study, which illustrates the impact of vernal pools.

The study included one Duluth park: Hartley. Researchers confirmed the location of 21 vernal pools in Hartley Park. An additional 44 vernal pools were identified as possible pools but researchers were not able to evaluate these during the term of the study. The study's maps identify the location of confirmed, unchecked and those eliminated as vernal pool sites in Hartley.

At the same time the NRRI study on vernal pools was being finalized, the City of Duluth conducted an environmental assessment worksheet (EAW) of possible environmental impacts of implementation of the Hartley master plan, which anticipates, among other harmful items, trail building and logging.

Neither the assessment nor the plan mentioned vernal pools. NRRI published the vernal pool study on September 28, 2015, two days before the close of public comment on the Hartley EAW.

The activities the city intends to conduct will be a significant major impact on the confirmed vernal pools and likely unverified vernal pools at Hartley. The City needs to review the NRRI study, confirm the remaining suspected vernal pools and adjust its plans to protect these vital resources. Or the work of these researchers in Hartley will be wasted. Identification without protection serves no one. Again refer to the attached article dealing with the issues involved with vernal pools, which gives a full explanation.

Vernal pools are wetlands that have a temporary life expectancy in the spring of each year. They can be found in late winter and early spring as they form from snow melt or precipitation raising water areas. They usually appear for 3-4 months into mid summer. They are usually less than 40-50 yards and generally not more than 3-4 feet deep. Most of them have been formed as a result of thousands of years of irreplaceable geological history.

There is a vast amount of species that are important to nature in a large area in and around a vernal pool. The amphibians and other creatures that are not amphibians feed on the vernal pool that develops for growing a whole variety of insects and other creatures.

To maintain a life-giving vernal pool, it is absolutely critical that any effects of timber operations be kept to a minimum. Timber harvesting in a forest with vernal pools is the fastest way to destroy the vernal pool for a variety of reasons. Skid trails and landings that are common in logging should be kept out totally from the vernal pool or protected by a buffer area that cannot have any area within the pool itself.

We no longer have the right to charge ahead forgetting our responsibility to the delicate ecosystem of our northern forests such as Hartley Park. Vernal pools cannot be replaced. When they are gone, they are gone and with them a vital piece of the forest ecosystem.

The trend toward earlier and drier springs brought about by climate change is also predicted to severely degrade vernal pools and the habitat they provide by changing the spring timing when ponds fill and the water holding capacity. Changes in the timing and duration of water holding capacity of vernal pools will determine whether or not amphibians and aquatic insects are able to complete their life cycles. Therefore, loss or degradation of vernal pool habitats would ricochet through the food web in northern forests, potentially having large negative impacts on forest ecosystems (Figure 1).

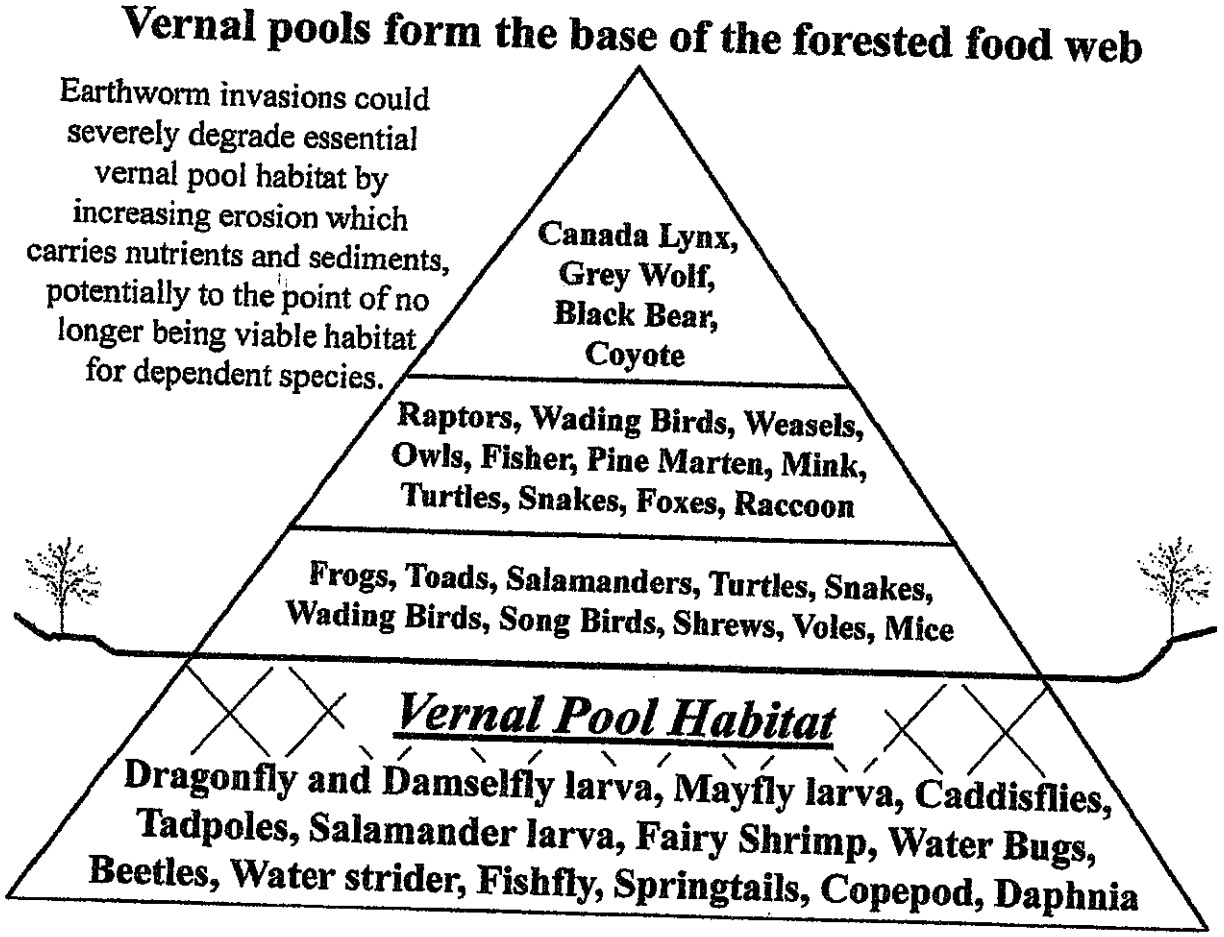

Figure 1. Diagram of species potentially supported by the production of amphibian and aquatic invertebrates that breed in vernal pools.

Despite the importance of vernal pools as vital breeding habitat for a large segment of the food base in forested ecosystems, vernal pools are often overlooked and underrepresented in wetland mapping efforts in Minnesota. While several other states afford legal protection for vernal pools, Minnesota lags behind in this effort due to lack of data on the pool locations and relevant characteristics for developing indicators to identify and assess condition of vernal pool habitats. Further, vernal pools are highly sensitive to disturbance, and assessments of the level of degradation to vernal pool quality resulting from invasive earthworms will be a critical component of habitat quality assessments.