



20 July 2007

Ms. Suzanne Beck, Executive Director
Greater Northampton Chamber of Commerce
99 Pleasant Street
Northampton, MA 01060

RE: Review and Assessment of Proposed Northampton Wetland Ordinance
Vernal Pool Sections

Dear Suzanne:

As requested by the Greater Northampton Chamber of Commerce, please find a preliminary discussion of the proposed Conservation Commission Wetland Ordinance as it relates to the protection of vernal pools. I am a Professional Wetland Scientist, and I have over 25 years of experience. I have worked on wetland and vernal pool assessments in Northampton, and throughout the Commonwealth, and I have a good working knowledge of both State wetland regulations, and vernal pool regulations in many different cities and towns. A copy of my resume is attached.

I am not neither for nor against the proposed wetlands Ordinance. I am providing this review so that the Chamber is clear on how these changes will influence future land use and permitting in Northampton. My understanding from speaking with you is that the Chamber is not opposed to the protection of vernal pools and wildlife habitat, but that proper Ordinance language and a full understanding of jurisdiction changes needs to be evaluated.

I have reviewed the proposed ordinance language and have several comments which may be useful in the discussion for the protection of vernal pools, and the implementation of the Ordinance. I have also several comments on similar efforts by other municipalities in Massachusetts who have implemented vernal pool protection language into their wetland Bylaws and Ordinances.

The current Northampton Wetland Ordinance protects vernal pools. The proposed Ordinance revision expands both the definition of vernal pools and regulated areas around the pools.

1. Summary of Ordinance Vernal Pool protection:

- | | |
|-------------------------|---------------------------------|
| • Central Business- | Vernal Pool and within 100 feet |
| • Business Park- | Vernal Pool and within 100 feet |
| • Water Supply Overlay- | Vernal Pool and within 200 feet |
| • All other areas- | Vernal Pool and within 200 feet |

Comments: Depending on the biology, some pools need more of a setback then others. For instance, mole salamanders breed in vernal pools, but spend most of their life underground with





forested areas. The protection of sufficient forested habitat will be the key to protect these species. Vernal pools may also be inhabited by non-migratory invertebrates (e.g. snails, beetles, fairy shrimp, etc) which do not require large areas of undisturbed habitat around the pool.

2. Definition of Vernal Pool

- As defined by the Massachusetts Wetlands Protection Act
and
- Any area which could potentially be a vernal pool.

Comments: It seems reasonable to use the wetland protection act definitions, but the Ordinance also includes areas which are not necessarily vernal pools, but which may potentially be a vernal pool. Basically, instead of determining whether or not an area of standing water (see below) is a biological vernal pool, the Ordinance presumes that all areas of standing water over 200 square feet are vernal pools, and leaves the burden on the landowner or applicant to prove otherwise. There are several other towns which have similar language which has led to many conflicts, appeals, time delays, and significant costs to overcome the presumption.

3. Boundaries

- a. Presumed to existing for any confined basin or depression not occurring in:
lawns; gardens; landscaped areas or driveways.
- b. Extending from the mean annual high water line defining the depression
- c. 200 foot area is a vernal pool "resource area"

Comments. The boundary measuring from the mean annual high water line is in compliance with customary practices and is fine. The 200 foot area surrounding a vernal pool is now a wetland resource area, not just a buffer area. This results in several acres of surrounding land that may, or may not be a functioning biological vernal pool. This acreage will now be a "wetland resource area" in an area which is likely to be an upland area, not presently regulated by the Conservation Commission. The burden will be on the landowner to prove that an area is not a vernal pool. The vernal pool Resource Area may extend property boundaries, across a road, or in other areas which may not support appropriate habitat (such as a field). Proving that an area is not a vernal pool requires a 3 out of 5 year period to prove after a presumption is made.

4. Functional Definition

- 200 feet of cubic water
- Free from adult predatory fish
- Provides essential breeding and rearing habitat functions for amphibian, reptile or other vernal pool community species
- Does not need to be certified by Natural Heritage & Endangered Species Program

Comments: vernal pools do not need to be of a particular size or volume to be functional, but 200 cubic feet is a very small area and could be contained within a percolation test pit which was not filled in. No adult predatory fish follows the State definition. The section of providing





essential breeding habitat is good, but this conflicts with other sections in the Ordinance which presumes all basins are vernal pool habitat. My primary criticism with the language in the Ordinance is that it ignores vernal pool biology, and instead seeks to protect all vernal pools equally (I would argue they are not equal). I think that the Ordinance needs to be written so that only pools which provide essential breeding habitat are protected as vernal pools, and not to presume this function for all basins. Under the present Wetlands protection Act, a Conservation Commission may protect an area as a vernal pool, even if it has not previously been certified, by requiring a wildlife habitat evaluation. Section 10.60(2)(c) of the state wetland regulations outlines the importance of vernal pools, but also allows for rebuttal of these presumptions. Likewise under the Isolated Land Subject to Flooding section of the wetlands protection act at 10.57(1)(b)(4) describes the protection of essential breeding habitat for vernal pools.

5. Work within Vernal Pool Resource Area

- No adverse impact on vernal pool
- No work within vernal pool
- Linear projects OK, but not with the actual vernal pool
- Avoid and minimize work and disturbance
- Driveways within the 100'-200' area OK with permit
- Maintenance work OK for existing structures as long as no Vernal Pool impacts

Comments: The Ordinance as written makes presumptions on standing water being significant rather than the biology of vernal pools, and does not appear to allow for rebuttal for presumptions of significance (as does the wetlands protection act). For instance, a vernal pool in a wooded area which supports wood frogs may need to protect the surrounding forested habitat; whereas a vernal pool located in a field which supports only non-migrating invertebrates will not require the 200 foot protected area. Some towns allow for a wildlife habitat evaluation of the vernal pool and surrounding vernal pool habitat to make specific recommendations based on the biology of the pool. Also, a mitigation plan may be permitted, such as in the town of Hanover, which also protects the area surrounding a vernal pool as vernal pool habitat, but which allows vernal pool mitigation/and restoration.

I also have concerns about the inability to do maintenance work on existing structures if there are vernal pool impacts. The Ordinance needs to make certain that there is an ability to repair, say a broken water line, sewer line, drainage line, etc. or other facilities if it passes under or near a vernal pool.

6. Vernal Pool Habitat

- All basins presumed to be vernal pools
- Presumption can be overcome
 - does not hold standing water for 2 months in most years
 - evidence that vernal pool species do not breed in the ponded area
 - must be determined during suitable time of the year
 - City will "certify" pools on private property for a fee as a resource area





determination.

Comments. The presumption that all basins are vernal pools unless proven otherwise will create significant cost and time delays to make this determination. My understanding is that this Determination by the Conservation Commission will be in the form of a Notice of Resource Area Determination. Under the present wetland protection act regulations, a conservation commission who reviews a project which may include a vernal pool has the ability to request additional information about the pool. Presently, there is a procedure where data on vernal pools are submitted to the NH&ESP for vernal pool certification. There is no State program to determine that an area is not a vernal pool. I can envision potential conflicts between a City and a State vernal pool certification process. My suggestion: the City should not be in the business of certifying vernal pools. The City could collect the data and send this to Natural Heritage for their "official" certification and mapping. The Conservation Commission may make specific determinations that a depression is not a vernal pool.

7. Other Towns

According to the Massachusetts Association of Conservation Commission database, there are at least 25 communities which protect Vernal Pools, and at least five communities which protect wetland resource areas greater than 100 feet.

Summary

There are presently known certified vernal pools in the City, and a number of identified "potential vernal pools" it is difficult to estimate the total number of vernal pools in Northampton which may be certifiable, but based on my knowledge of the wetlands within the City, and the number of vernal pools identified in other municipalities, there are likely to be several hundred vernal pools in the City which could be certifiable.

I suggest that there should be several modifications in the Ordinance language: delete the presumption that all depressions greater than 200 cubic feet are vernal pools; strengthen the section on biological indicators, and specific wildlife habitat evaluations (this already exists in the wetlands protection act); include a section on mitigation, restoration or enhancement on a case by case basis; and include a compliance coordination with the Massachusetts Endangered Species Act (MESA). Under MESA, there may be rare vernal pool species which the State will require 500 or 600 feet of protection around a vernal pool.

I hope that these comments are helpful to you and the Chamber.

Sincerely,
New England Environmental, Inc.



NEW ENGLAND ENVIRONMENTAL, INC.

ENVIRONMENTAL CONSULTING SERVICES



Michael J. Marcus
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MJM/s

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