



COMMUNITY AND ECONOMIC DEVELOPMENT

BUILDING

PLANNING

ZONING

CONSERVATION

MEMORANDUM

TO: Matthew Gardener, Chair, Natick Conservation Commission

FROM: Victoria Parsons, Conservation Agent/General Planner

CC: Jeremy Marsette, Director of Public Works
Conservation Commission
Jamie Errickson, Director of Community and Economic Development
Jim White, Director of Public Health
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DATE: February 13, 2018

RE: **Project Background Information; Proposed Dog Park, 111 West Central Street**

This memorandum is provided to inform the Conservation Commission (Commission) of the process taken to date by the Natick Planning Board and the Natick Conservation Commission on the Natick Dog Park proposed for the Middlesex Path – 111 West Central Street.

Over the past year, the Commission has completed an extensive review of the proposed Dog Park – from design and location perspectives. During this process, the Commission first reviewed the project with Town Counsel to understand if the use of the land (Middlesex Path), which is considered “Article 97” land under the control of the Commission, can be used as a dog park. After extensive research completed by MHTL (by John Flynn and Karis North), as well as many Commission members conducting their own research, the Commission was advised to conduct a public meeting in order to address this item. This public meeting was held on June 26, 2017.

The Commission was directed by Town Counsel that, in order to utilize the Middlesex Path for a dog park use, two votes or actions of the Board must be taken. The first vote must include a motion asserting that Commission members felt that the project and use of the property was in line with the mission of the Commission. The Commission voted with a majority in favor: four (4) in favor of this assertion and two (2) against.

The second vote must include a motion to approve the dog park project proposal being located at 111 West Central Street. The Commission voted with a majority in favor: five (5) in favor and one (1) against this motion, with the condition that the final design will be presented to the Commission, following approvals from other town Boards/Committees, for review and approval prior to any site work. Since the June meeting, Town Staff has worked through an extensive design process to ensure the design takes into account the many concerns, questions, items, etc. expressed to date by the public, Commission members, the Board of Health, and others.

During the Commission review process to date several questions were raised regarding the potential of soil contamination resulting from a dog park use on this property. Despite extensive research by staff and members of the Commission, to date no substantial research or scientific information showing adverse affects of a dog park on soil conditions has been presented to staff or the Commission.

In an effort to further research this topic, Town Staff also sought and received scientific based information from the Board of Health, Director, Jim White and a colleague of his, Peter Fletch - a highly regarded soil scientist in New England. Through this research, Staff learned that the best infiltration on a site such as the Middlesex Path for a use like a dog park comes from the first layer of soil, known as "the A horizon". This information led to some design changes, including the utilization of wood chips as the material for the dog park area, to be placed on top of the A horizon. For reference, the original design proposed to scarify the first several inches of the A horizon and add septic sand to help with infiltration. Ultimately, this approach was not recommended by Mr. Fletcher nor the BOH Director.

Additional research on the topic showed that using wood chips in a dog park further supported this design consideration because wood chips are a natural material for the removal of nitrogen. In conjunction with this design consideration, the Town also conducted soil tests on site (observed by the BOH Director), which showed a very large separation between the surface to groundwater in the area of the dog park. This further supported the current design being presented.

The link below is an article about how woodchips are being used to treat nitrogen in the agricultural parts of the Midwest.

<http://www.engineersjournal.ie/2016/07/26/woodchip-bioreactor-biological-nitrogen-removal/>

Several aspects of the design and use of the space are worth mentioning:

- The solid waste will be required to be picked up by users and bags will be provided on site.
- The design includes rainwater runoff control measures incorporated into the site (two storm water basins) for all additional parking areas, walking areas, and access road.
- The design process incorporated/investigated several measures to prevent contaminants from entering the abutting Lake Cochituate. The use of wood chips, proven to remove nitrogen, is one of the measures being used to address these concerns. Woodchips are actually being used to treat nitrogen in agricultural area in the Midwest.
<http://www.engineersjournal.ie/2016/07/26/woodchip-bioreactor-biological-nitrogen-removal/>
- The thick A horizon in this area (which will not be disturbed) will also provide contaminant prevention from entering the Lake by way of biological infiltration.
- The dog park is also located lower in elevation than the adjacent landscape (specifically train tracks) towards the Lake, so surface water-runoff is therefore flowing away from the Lake.
- The Town conducted soil tests to see where ground water is in order to understand if enough separation to groundwater is provided. After review and discussion with the Health Director, Jim White, there is (min) 7.5 + feet of groundwater separation - most likely more as you go further into the dog park area given grades – which more than exceeds the required separation for a proposed septic system located in similar proximity to the Lake.
- As informed by Director of Public Works, Jeremy Marsette, the groundwater well supplies at the Springvale Water Treatment Plant are greater than one mile from the proposed location of the dog park. He stated to me that these groundwater wells are not under the influence of surface water, they do not receive water directly from the Lake. The drinking water wells pump ground water from the aquifer. These wells are regularly tested for potential contaminants, including E. Coli. The ground water is also filtered, treated, and disinfected prior to distribution into the potable water system.

- As currently designed, the project does not trigger any formal permit review by the Board of Health. However, CED Staff has consistently worked with Jim White, Health Director, throughout the design process to inform and shape the current design.
- As currently designed, the project does not trigger thresholds for a filing under the State Wetlands Protection Act, Town Wetlands Protection Bylaw, the Land Disturbance Permit.
- The current design has been extensively reviewed by DPW and the Engineering Department. Comments from these departments have been incorporated into the current design. A copy of the design was also provided to the Public Health Director, Police Department and Fire Department.
- The Planning Board has issued conditional site plan approval pending Conservation Commission review as well as Planning Board review of the APD special permit.
- While the Dog Park has been deemed, by Dave Gusmini, Building Commissioner, to not be a prohibited use under the Aquifer Protection District Bylaw, the Planning Board requested an APD special permit application be filed. The Planning Board would like the Conservation Commission's input on the project before issuing a special permit.

- **Hours of Operation & Rules**

The design proposes to follow suit with the general trend of dog parks in Massachusetts and set dawn to dusk hours of operation.

The General Rules and Regulations are:

1. All dogs must be legally licensed and have proof of current rabies vaccination.
2. All dogs must be leashed upon entering and leaving the dog park.
3. Dogs in heat or younger than 4 months are not allowed in the park.
4. No more than three (3) dogs allowed, per owner or custodian, at one time.
5. Dogs must be removed at first sign of aggression to other dogs or humans.
6. The owner or custodian of the dog must remain in the dog area with the dog.
7. Dog feces & trash must be cleaned up by the dog owner or custodian.
8. Holes dug by dogs must be filled by the dog owner or custodian.
9. No pronged training collars or choke collars allowed.
10. No smoking, glass containers or food of any kind are permitted in the park.
11. No dog treats or toys are permitted in the park.
12. Dog handlers must be at least 18 years of age or older.
13. Children under the age of 12 are not permitted in the park.
14. No large dogs (greater than 25 lbs) are permitted in the small dog enclosure.
15. Owners or custodians are responsible for all actions of their dogs.

- **Rule Enforcing Agent/Body**

The Town proposes to have the Conservation Commission and their Agent is the enforcing body for general, non police related, questions or concerns.

- **Maintenance Schedule , O &M Plan**

In addition to the stormwater O&M Plan the design proposes:

Trash- the dog park shall be regularly inspected for trash and excrement. These shall be disposed of immediately.

Walkway- The pathway to and into the dog park shall be regularly swept of mulch and other debris to maintain ADA accessibility.

Snow removal will be completed by the Town of Natick pursuant to their snow removal policy already in place at this location will include the additional areas as noted on the plans.

Lawn Areas- will be completed by the Town of Natick pursuant to their grass cutting policy already in place at this location and will include the additional areas as noted on the plans.

In November of each year, seasonal items such as rakes, brooms, and hoses shall be removed from the Dog Park and stored in the shed. The water service shall be turned off so that the pipe doesn't freeze. The storm water facilities shall be inspected and maintained. Aside from the water line maintenance, FIDO shall hold a volunteer work day to accomplish these tasks.

- **Baseline Testing (related to water quality)**

Per Planning Board discussions, we have investigated baseline water quality testing at the site where the dog park is being proposed. There are two options for water quality testing. One would be a testing of groundwater directly within the dog park, option 1. The other would be in Lake Cochituate, option 2. After discussing with the Public Health Director, Jim White, the testing to be done as best indicator for animal waste by product(s) would be fecal coliform & nitrogen, both of which could be influenced by some other source(s) other than the dog park. The following options were discussed in detail with Jim White.

Option 1 has some logistical constraints. One restraint is that, after discussing with Jim White the Health Director who conducted soil tests at the site this past summer, there will be difficulties in collecting groundwater for testing. The soils are such that it was difficult to reach groundwater for sampling through a deep hole test. The groundwater is relatively deep at this site. The soils consist largely of course to medium coarse sand and gravel. Digging to groundwater by conventional method of backhoe would be difficult and potentially dangerous. The hole would need to be deep and the soils would interfere due to continually collapsing. We are also unsure if a backhoe would have the capability to dig deep enough to encounter the groundwater. The best method would be to drill to groundwater by a licensed drill company which would be rather expensive.

Option 2 has some concerns. This is the testing of water quality at the Lake. No matter where at the Lake we are testing, there are several environmental factors that will play a role in affecting water quality testing at any given time. These include temperature, geese, septic system failure, and heavy rain runoff. These all have the capability to affect the water quality of the Lake in its entirety and if a baseline test were to be conducted they would have to be taken into account as potentially impacting a change in the water quality down the line. In essence testing the water quality of the Lake would not allow us to definitively point a finger at the dog park as a culprit. Please also note that the Lake on the opposite side of the railroad tracks are utilized by a ski club during the summer months for water skiing and swimming which could also act as an influence on test results on a smaller scale.

- **Flooding Potential Impacts.**

The area is outside of the most up to date FEMA 100 year flood zone. There has been some documentation provided by neighbors showing that portions of the existing parking area have flooded once in the past. DPW has provided input as well indicating that the street near 111 West Central Street flooded once during the two back to back 50 year storm events in 2010. Other than these isolated events, the area has not been known to flood. The pre and post construction elevations indicate that the entire site will not be subject to flood zone inundation.

Attachments.

Thank you.

Cc: Director of Public Works
Conservation Commission
Director of Community and Economic Development
Board of Health
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