

November 20, 2015

Mr. Roland Bartl, Director
Planning Department
Town of Acton
472 Main Street
Acton, MA 01720

RE: Application for Special Use Permit and
Application for Site Plan Special Permit
Nagog Pond Water Treatment Plant
Acton, Massachusetts

Dear Mr. Bartl:

On behalf of the Town of Concord and its Water/Sewer Division of Concord Public Works, Environmental Partners Group, Inc. is submitting an Application for Use Special Permit and an Application for Site Plan Special Permit association with the proposed Nagog Pond Water Treatment Plant and appurtenant facilities. These two applications/submittals have been prepared in accordance with the Acton Zoning Bylaw, and include the following attachments:

- Attachment A – Application for Use Special Permit
- Attachment B - Application for Site Plan Special Permit
- Attachment C - Certified Abutters List
- Attachment D – Existing and Proposed Use Description
- Attachment E – Other Variances and Permits
- Attachment F – Property Plans and Deeds
- Attachment G – Stormwater Drainage Calculations
- Attachment H - Water Balance Calculations
- Attachment I – Earth Removal Calculations
- Attachment J - Permitting Design Plans

Project Description

The Town of Concord is proposing to make comprehensive improvements and upgrades to its existing public water supply system infrastructure located in Acton. The proposed project includes replacement of the existing 16-inch cast iron intake pipe into Nagog Pond with a new 16-inch HDPE intake pipe, replacement of the existing Ozone Disinfection Facility with a new Water Treatment Plant for the production of potable water, and the construction of an accessory solar photovoltaic (PV) array field to power the new facilities. Detailed descriptions of these improvements and upgrades are found in the attached documents, in particular Attachment D - a description of the existing and proposed site uses and Attachment J – permitting design plans.

The proposed Nagog Pond Water Treatment Plant includes the demolition of the existing ozone disinfection facilities, construction of the new water treatment plant facilities on the existing developed site and construction and installation of a solar photovoltaic array field adjacent to the

new water treatment plant. Construction of the PV system is an essential accessory use and public benefit to power the proposed facilities. Installation of the PV system will require clearing within the 50 foot wetland buffer, and this approach is under review by the Conservation Commission. The project also includes the installation of additional underground utilities (natural gas, water, and cable TV), fencing, parking areas, stormwater drainage and handling systems, and widening of the existing access road to meet Fire Department access requirements. The construction Contractor(s) will be required to maintain Concord's proposed project phasing and sequence of work.

Request for Waiver (Traffic Study)

Section 3.10 of the Site Plan Special Permit Rules and Regulations require the completion of a traffic impact study for proposed uses that will likely produce an additional 30 trip ends per peak hour or an average of 400 additional trip ends per weekday based on the most recent edition of the Institute of Transportation Engineers' (ITE's) publication "Trip Generation". The Land Use Code (LUC) in the 9th Edition of the Trip Generation Manual that is closest to a water treatment plant is LUC 170-Utilities, which is defined as "free-standing buildings that contain electromechanical or industrial space/equipment." Not only is the appropriateness of this LUC classification debatable, the small number of data points that serve as the basis for its trip generation and the number of anticipated employees falling outside of ITE's range of data would likely result in inaccurate results in this case.

Therefore an empirical approach has instead been used to estimate trip generation for this project. The staffing plan for the building has not yet been approved by the Massachusetts Department of Environmental Protection but comparable water treatment buildings are typically staffed by three employees in rotating shifts during a 24-hour period, generating 6 trip ends per day. Seven chemical deliveries per month are anticipated with no more than two deliveries per day. A conservative 4 trip ends per day has been anticipated for chemical deliveries. Therefore a total of 10 trip ends per day are anticipated to be generated by the water treatment plant, far below the daily and even the hourly thresholds that would trigger the need for a traffic impact study. Therefore the Town is requesting a Traffic Study Waiver for the Site Plan Special Permit for the proposed water treatment plant.

Request for Waiver (Outdoor Lighting Plan)

The Town is also requesting a waiver from completing an Outdoor Lighting Plan as described in Section 3.9.10 of the Site Plan Special Permit Rules and Regulations. The outdoor permitting design plans included in Attachment J of this application show the proposed locations of outdoor lighting fixtures and security cameras for the facilities. The outdoor lighting will include low-level site lighting with motion sensors for security and high-level lighting for unplanned night time maintenance activities, operated by manual switches only when required. All outdoor lighting at the proposed building will be pointed downward to minimize neighborhood glare. It should be noted that the proposed building is a public building, not a typical commercial building. The design intent of the outdoor lighting is to prevent "nuisance lighting" by incorporating fixtures that contain cutoff visors so that light spillage is prevented. Cut sheets of the exterior lighting fixtures can be submitted once the architectural fixture schedules are completed.

Environmental Protection Measures

In order to mitigate potential impacts to wetland resource areas during construction activities, the following environmental protection measures will be provided within the project area:

- Erosion and sedimentation control devices (i.e. filter sock, hay bales, and silt fence) will be installed along the limits of work as shown on the project design sheets. These measures will control sedimentation and erosion in the upland areas and also serve to define the upland limits of work. Erosion and sedimentation control devices will be inspected and maintained daily during the construction period.
- Silt sacks will be installed in all catch basins within and immediately adjacent to the work zone.
- Stockpiles of excavated material and aggregate materials (gravel, sand, and stone) are not anticipated to be maintained on-site. It is expected that these types of materials will be delivered on an as-needed basis. However, if stockpiling is required, then suitable erosion control measures will be employed including perimeter silt fencing.
- During construction, disturbed areas will be kept to a minimum, and all disturbed areas will be restored to pre-construction conditions with pavement or loamed and seeded after construction.
- Any trench dewatering required during construction shall pass through dewatering bags as shown on design plans.

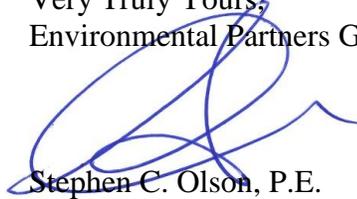
The submittal also includes two (2) full size sets of design plans, 2 copies of reduced plans (11"x17"), and a CD containing PDFs of the plans. The design plans are stamped, signed, and dated and have been prepared based on NAVD 1988.

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If you should have any questions or require additional information, please do not hesitate to contact me at (617) 657-0255. I can also be reached via e-mail at sco@envpartners.com.

Very Truly Yours,
Environmental Partners Group, Inc.



Stephen C. Olson, P.E.
Sr. Project Manager

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CC: Richard K. Reine, PWLF, Concord Public Works Director
Alan H. Cathcart, Superintendent, Concord Water/Sewer Division
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