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December 18, 2015

TO: Tom Tidman, Director, Town of Acton Natural Resources

FROM: Carolyn Kiely 

SUBJECT: Conservation Commission Request for Questions for a Possible Peer Review of the Nagog Pond Water Treatment Plant NOI

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At the December 2, 2015 Conservation Commission hearing on the above-referenced NOI, the Commission requested the submission of suggested questions for a possible peer review of the project. A list of suggested questions is attached. Also attached is a draft scope of work for a possible peer review.

Please note that Concord Water informed us today during the MEPA site visit that the plan is changed, and includes moving the solar panels outside of the 100' buffer zone. We have therefore removed most of the solar panel questions from the attached materials.

Please provide these questions and draft scope of work in the package of materials provided to the Commission members in advance of the January 6<sup>th</sup> public hearing. If you would like to receive these documents electronically, please contact Barry Elkin at 978-263-8410 or [barry.elkin@outlook.com](mailto:barry.elkin@outlook.com). Thank you.

Cc: Bettina Abe

Notice of Intent:  
Nagog Pond Water Treatment Plant

**Suggested Questions for Peer Review<sup>1</sup>**

Submitted by:  
Carolyn M. Kiely  
On Behalf of the Quail Ridge Residents

1. Are any additional waivers needed from the Conservation Commission (other than those requested in the Notice of Intent - NOI) for the proposed project? If yes, explain.
2. Is the newly proposed building in compliance with Acton's Wetland Protection Bylaws, and Rules and Regulations? Specifically:
  - a. The 100' buffer zone (Bylaw Section F3.5)
  - b. The 50' setback for undisturbed natural vegetation (Rules & Regulations 3.2.2)
  - c. The 75' no-build setback to the edge of driveways, roadways, and structures (Rules & Regulations 3.2.3)
  - d. The 100' setback for underground storage of gasoline, oil, or other fuels and hazardous materials (Rules & Regulations 3.2.5)
3. The plans show a 400' arc from Nagog Pond's bank. This presumably is the reduced development area required for lands within 400' of a surface water source in accordance with state regulations governing Surface Water Supply Protection Areas.
  - a. How is a building that is 442% larger in gross square feet than the original building allowable in a "reduced development area?"
  - b. How is a large portion of the solar array allowed within a portion of the 400' arc of a surface water source, which is a "reduced development area?"
4. The existing building houses an Ozone Disinfection Plant. According to the NOI, the new building is proposed to include: ""The proposed Nagog Pond WTP will utilize state of the art drinking water treatment technologies for the consistent production of high quality drinking water for Concord's water system customers in both Concord and Acton. The new Nagog Pond WTP

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<sup>1</sup> We are not questioning the delineation boundaries of the Bordering Vegetated Wetlands (BVW) and pond bank, and therefore questions regarding delineation are not included here.

(Waste Treatment Plant) will incorporate several physical and chemical water treatment processes, including: pre-oxidation with potassium permanganate; coagulation with polyaluminum chloride; two-stage, tapered flocculation; clarification using dissolved air flotation (DAF); primary disinfection using ozone; filtration using granular activated carbon (GAC) media; pH adjustment using potassium hydroxide; corrosion control using zinc polyphosphate; secondary disinfection using sodium hypochlorite; and fluoridation using sodium fluoride.”<sup>2</sup> Attachments to the proposal before the Board of Selectmen include the permit applications for the original Ozone Disinfection Facility. All permits were only granted solely for a “drinking water disinfection facility” and for a “disinfection facility with associated parking.”<sup>3</sup> It should also be noted that the Environmental Notification Form (ENF) filed with the state describes the project as “replacement of the existing Ozone Disinfection Facility with a new Water Treatment Plant for the production of potable water.”<sup>4</sup>

- a. Will the principal use of the site remain the same? It is now a properly permitted Ozone Disinfection Facility. Is “the provision and treatment of public drinking water...” an “Ozone Disinfection Facility” (as the proponents claim), or a significantly additional principal use of the site? Explain.

5. With regard to the existing Ozone Disinfection Facility:

- a. Is the existing Ozone Disinfection Plant on the property a nonconforming structure? Explain.
- b. Will expansion of this present building “increase the degree of ‘non-conformance’ of those structures” as prohibited in Sentence 1 of Rules & Regulations 3.3? Explain.
- c. Does the new building, and the expansive list of uses that will be conducted within the building, fit the definition of “existing like activity or structure,” according to Acton Rules & Regulations Section 3.3 and Section 1.4 (“Like Activity” definition<sup>5</sup>)?
- d. If the Ozone Disinfection Plant is nonconforming, and if the new building fits the definition of “existing like activity,” does Acton’s Rules & Regulations Section 3.3 only allow the Commission to permit “new like Activity or structures as close to the Wetland Resource Area as the existing like Activity or Structure,” meaning that the new

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<sup>2</sup> Source: Notice of Intent

<sup>3</sup> Source: Attachment D of the Application for Special Use Permit and Application for Site Plan Special Permit filed with the Board of Selectmen.

<sup>4</sup> Source: ENF cover letter (dated November 25, 2015), page 1.

<sup>5</sup> “Like Activity” is defined as “any activity similar in nature, purpose and extent (emphasis added) as that activity currently occurring on the site of the proposed work.”

building can't be any closer to the resource area than the existing building? Explain.

6. Does the Stormwater Management Plan address the runoff from the significantly increased impervious surfaces throughout the project site?
7. A proposed 1,500 gallon septic tank is proposed to be located within the 100' buffer zone. Is the leach field shown on the map? Is Board of Health approval required for this septic tank and leach field? Does the Conservation Commission have jurisdiction over the septic tank and leach field (the NOI and ENF filings are silent as to this matter)? If yes to any of these questions, explain.

## **Suggested Peer Review Scope of Work<sup>6</sup>**

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Carolyn M. Kiely  
On Behalf of the Quail Ridge Residents

1. Review of NOI filing materials and the site plan, including the Stormwater Management Plan and all maps filed for the project.
2. Visit the site with Conservation Commission staff to become familiar with site characteristics.
3. Prepare a letter report that:
  - a. Answers the questions provided by the Conservation Commission.
  - b. Raise any other concerns with aspects of the project that are in noncompliance with Acton's Wetlands Protection Bylaw and its Rules & Regulations, and concerns about the proposed project in general.
4. Attendance at one Conservation Commission Hearing on this matter to present findings and answer questions.
5. Review of draft Orders of Conditions to comment on whether the Orders adequately address peer review findings, and to suggest additional language if necessary.

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<sup>6</sup> We are not questioning the delineation boundaries of the Bordering Vegetated Wetlands (BVW) and pond bank, and therefore draft scope of work provisions regarding delineation are not included here.