



**ZONING ISSUES:
PROPOSED CONCORD WATER TREATMENT PLANT
AT NAGOG POND, ACTON, MA**

BY CAROLYN KIELY
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THERE ARE OPTIONS

- For Concord:
 - MWRA hook-up through Bedford (existing)
 - Present approach
 - Treat ozone at Nagog
 - Perform remaining treatment at 2A facility
 - “Finished water” flows from 2A facility now
 - Water conservation
 - Move facility downstream/in Concord
- For Acton:
 - Chris Allen, Acton Water District Manager: 1,400 feet (approx) short of pipe to serve 2A customers
 - Two weeks to add pipe and service 2A

Concord's Intentions

- DEP:
 - “Concord has tended to use Nagog Pond in recent years on a limited basis to meet peak seasonal demand.”
 - 2014 – “Nagog Pond provided only about 4% of Concord’s water supply.”
 - The new facility “will give the Town more flexibility in management of its water sources. Concord is likely henceforth to use Nagog Pond more often as a water source ... which in turn means that it will likely withdraw less from its municipal wells.”
 - Meaning – 365 days/year withdrawals (vs. seasonal)

Noise

- DEP Noise Policy – no more than a 10 decibel increase over background levels
- Pre-June 2016 – ozone facility only
 - Quiet
- June – One “trailer” added to the site
 - Noise
- Late June/Early July – Second “trailer” added
 - Significant noise
 - Heard at property boundary & conservation land
- Trailers – augment failing equipment

Trailers at Ozone Plant



Noise (continued)

- July 28th – Sound testing
- Technician – measuring background to determine the increased sound from generators
 - “This is not background”
 - “Trailers are temporary. Can’t be used to determine background”
 - “Background is ZERO – before temporary trailers added”

Noise (continued)

- Property line walked
 - Technician: “The dominant sound was the trailer sounds at the property line – even over air conditioners of adjacent homes”
- Concord’s findings:
 - Baseline -- “principal sound sources were **the WTP operations**, aircraft flyovers and insects”
 - Generators -- “an increase of 1.5 dBA **to 9.2 dBA** above existing night-time ambient sound levels is predicted.”
- IF BASELINE WAS TAKEN WITHOUT THE TRAILERS OPERATING, **CONCORD WOULD EXCEED 10 dBA!!**
- **New test needed without trailers operating.**

Acton's Zoning Bylaws: Special Use Permit

- Section 10.3.5: You have ***affirmative findings*** that you must make in order to issue the special permit.
 - 10.3.5.1: Is consistent with the Master Plan
 - 10.3.5.2: Is in harmony with the purpose and intent of this Bylaw
 - 10.3.5.3: Will not be detrimental or injurious to the neighborhood in which it is to take place
 - 10.3.5.4: Is appropriate for the site in question
 - 10.3.5.5: Complies with all applicable Bylaw requirements

10.3.5.1 – Consistent with Master Plan

- Concord: “the Master Plan recognizes Nagog Pond as a natural resource ... that should be preserved.” (references Acton 2020)
- Inconsistencies:
 - 2020 Objective 2.3: “Reduce emissions of carbon dioxide and other greenhouse gasses”
 - Concord’s generators: “the net change in CO2 emissions is an *increase* of 308.6 to 317.1 tons/year.” (DEIR, Appendix L)
 - 2020 Strategy 2.3.1: “Encourage use of cleaner energy sources”
 - 2020 Strategy 2.3.6: “Continue planning for reducing Acton’s carbon footprint” using “joint community and town effort to use less fossil fuels.”

10.3.5.1 (continued)

- Inconsistencies (continued):
 - 2020 Goal 2: “Protect the quality and quantity of Acton’s water,” ... taking “surface water into account”
 - 365 surface water withdrawals does not protect water “quantity” especially with drought
 - 2020 References Open Space and Recreation Plan (OS&R):
 - State’s scenic landscape inventory – Nagog Pond and its shoreline

10.3.5.1 (continued)

– 2020/OS&R:

- “Broad wildlife corridor ... connects the Nashoba Brook Basin with Lake Nagog ...”
 - Fence – inconsistent with wildlife corridor referenced in 2020/OS&R
- Nagog Brook “meanders, forming a series of deep pools ... & broad floodplains. This is a prized area for fishing and is populated by both beaver and otter”
 - Dewatering – only occasional water added to Nagog Brook. Concord’s plan is against the 2020/OS&R due to harm to fish

10.3.5.2 – In Harmony with Purpose/Intent of Bylaw

- Concord:
 - “The project satisfies the purpose of the bylaw”
 - “... drinking water and fire protection to ... customers along the Route 2A corridor...”
 - “... designed to preserve and utilize the important natural resource of Nagog Pond ...”

10.3.5.2 (continued)

- Inconsistencies:

- Zoning bylaw purpose – “to conserve the value of land and buildings”

- Property values of surrounding homes diminished:

- 9,338 square foot industrial treatment plant in a residential neighborhood
- Noise increase of up to 9.2 dBA is just .8 shy of the “nuisance” standard of DEP Noise Policy. No one wants to hear this noise 24 hours/day
- Fence at property line – unsightly
- Truck traffic through residential neighborhood/kids
- Chemicals driven through residential neighborhood/kids

10.3.5.2 (continued)

- Inconsistencies (continued):
 - Zoning bylaw purpose – “to protect and enhance the quality and quantity of Acton’s surface and groundwater resources”
 - Concord is reducing the quantity of Acton’s surface water source – Nagog Pond
 - 365 days/year withdrawals (vs. seasonal)
 - Pond fed by run-off – recharge may be insufficient
 - Drought/water levels declining without increased withdrawals
 - Potential harm to ecosystem and wildlife

10.3.5.2 (continued)

- Inconsistencies (continued):
 - Zoning bylaw purpose -- “... including ... the prevention of blight and pollution of the environment”
 - Project – “an increase of 308.6 to 317.1 tons/year” of CO2 emissions
 - Zoning bylaw purpose – “to lessen congestion in the streets”
 - Truck and other traffic (with chemicals) through residential neighborhood, estimated at “10 to 15 trip ends per day”

10.3.5.3 – Detrimental or Injurious to the Neighborhood

- Concord:
 - “The WPT will not be detrimental or injurious to the neighborhood.”
 - The project “provides sufficient mitigation of any potential noise associated with the” generators
- Inconsistencies:
 - 9.2 dBA noise increase is only .8 below DEP standard!
 - Traffic through neighborhoods – potentially injurious to residents/children
 - If travel over private road, owners of road harmed financially
 - Fences at property line – detrimental to neighborhood
 - Property values decreased

10.3.5.4 – Appropriate for the Site

- Concord:
 - “ ... this specific area has accommodated a water treatment facility for over 20 years.”
- Inconsistencies: The WTP:
 - 552% size increase in building footprint
 - 1,297 sq. ft. now; 7,165 sq. ft. proposed
 - 530% size increase in building floor space
 - 1,760 sq. ft. now; 9,338 sq. ft. proposed
 - Additional external noise of up to 9.2 dBA
 - Increased CO2 emissions of 308.6 to 317.1 tons/year at the site (in a residential neighborhood)
 - Fence – cuts off wildlife corridor and pedestrian traffic through a parcel that connects to conservation land

10.3.5.5 – Complies with Bylaw Requirements

- Concord: Silent/not addressed
- Does not comply with:
 - 10.3.5.1 (consistent with Master Plan)
 - 10.3.5.2 (in harmony with Bylaw purpose and intent)
 - 10.3.5.3 (detrimental or injurious to neighborhood)
 - 10.3.5.4 (appropriate for site)
- Because you can't make findings that the project complies with these bylaw provisions, this project must be denied.

Acton's Zoning Bylaws: Site Plan Special Permit

- Section 10.4.5: You need to find that the site plan:
 - 10.4.5.1: Is consistent with the Master Plan
 - 10.4.5.2: Protects the neighborhood & Town against seriously detrimental or offensive uses, or adverse effects to the natural environment
 - 10.4.5.3: Provides for convenient and safe vehicular and pedestrian movement
 - 10.4.5.6: Protects surface water & groundwater
 - 10.4.5.7: Complies with all applicable Bylaw requirements

10.4.5.1 – Consistent with Master Plan

- Concord:
 - “the public drinking water supply treatment facility is consistent with the Master Plan”
- Inconsistencies:
 - Provided already in 10.3.5.1
 - Significant greenhouse gas emissions (up to 317.1 tons/year)
 - Decreases the quantity of surface water
 - Nagog Pond is listed on the State’s scenic landscape inventory and the vista/water level must be preserved
 - Wildlife corridor impacted by fence
 - Dewatering will harm Nagog Brook

10.4.5.2: Protects Neighborhood & Town

- Bylaw Text: “Protects the neighborhood & Town against seriously detrimental or offensive uses, or adverse effects to the natural environment”
- Concord:
 - The design “will protect the neighborhood and the Town against seriously detrimental or offensive uses...”
- Inconsistencies:
 - The following are seriously detrimental to the neighborhood & will cause a drop in property values:
 - Noise increase of up to 9.2 dBA (.8 below max)
 - 9,330 square foot industrial treatment plant in a residential neighborhood (552% increase – footprint, 530% increase – floor space)
 - Fence at property line
 - Truck traffic/chemicals through residential neighborhood
 - Adverse effects to the natural environment:
 - Harm wildlife habitat
 - Noise impacts – prevent bird nestings
 - Decrease in water quantity; Pond level decrease and bank exposure

Fence – Jan (red), Sept. (blue)



10.4.5.2: Convenient and Safe Vehicular and Pedestrian Movement

- Concord:
 - On-site parking and access road “provides for convenient and safe vehicular movement”
 - Access road “is appropriate”
 - “**Some fencing**” is added – called an “**enhancement**”
 - Nothing said about traffic through the neighborhood (employees, trucks, chemicals)
- Inconsistencies:
 - Fence – cuts off pedestrian movement to conservation land and pond
 - Traffic and chemical deliveries to facility is through a residential neighborhood – an unsafe condition

10.4.5.6: Limit Adverse Effects on Surface and Groundwater

- Concord:
 - Because we comply with 10.3 Special Permit requirements, we comply with this
- Inconsistencies:
 - Reduced quantity of Acton's surface water
 - Pond fed by run-off; recharge may be insufficient
 - Drought/water levels declining

10.4.5.7 – Complies With All Site Plan Special Permit Requirements

- Concord:
 - “The WTP project complies with all applicable requirements of the Acton Zoning Bylaw.”
- Inconsistencies:
 - Does not comply with:
 - 10.4.5.1 (consistent with Master Plan)
 - 10.4.5.2 (protects against seriously detrimental effects)
 - 10.4.5.3 (safe vehicular & pedestrian movement)
 - 10.4.5.6 (protects surface water resource)
 - Because you can't say make findings that the project complies with these Bylaw provisions, you can not issue a Site Plan Special Permit

We Shouldn't Be Here

- Variance
 - Concord needs a new Variance
- Conservation Commission
 - Significant changes with in the 100' buffer zone
 - Wildlife concerns

Variance

- Present variance – 1994
- 1994 Findings:
 - “The location of the treatment building is **isolated** and **remote** from any other active land use ... the only abutting private property (Palmer) is undeveloped ...”
 - “The project site is located in woods at a location that currently lacks vehicle access. The property also lacks frontage on a public way ...”

Variance -- continued

- Permit application – “Concord relies on the 1994 Variance”
 - Not seeking a new variance
- Caselaw: When a building is originally permitted under a variance, it CAN NOT then use the special permit process for future expansion.

Leading Case

- “Variances are difficult to obtain ... by comparison, the special permit power presupposes the allowance of certain uses...”
- Variances are issued “grudging and restricted”
- Special Permits are “anticipated and flexible”
- “We do not think the Legislature intended ... to authorize the expansion of uses having their genesis in a variance pursuant to the more generous standard applicable to a special permit.”

Case (continued)

- “ ... it would be analogous if a variance, by its nature sparingly granted, functioned as a launching pad for expansion as a nonconforming use.”
- Zoning matter / zoning lawyer needed.

Article 97

- State issue – not your issue